Sitta von Reden (ed.)
Handbook of Ancient Afro-Eurasian Economies
Volume 3: Frontier-Zone Processes and Transimperial Exchange

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Edited by
Sitta von Reden

In cooperation with
Mamta Dwivedi, Lara Fabian, Kathrin Leese-Messing,
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Sitta von Reden is Professor of Ancient History at the University of Freiburg, Germany. Her research concentrates on classical Greek and Hellenistic history with special emphasis on Egypt. She has widely published in Greek and Roman economic history, including *Money in Ptolemaic Egypt* (CUP 2007), *Money in Classical Antiquity* (CUP 2010), *Die Antike Wirtschaft* (de Gruyter 2015), and as editor *The Cambridge Companion to the Ancient Greek Economy* (CUP 2022). Together with Kai Ruffing she is also editor of the de Gruyter *Handbuch Antike Wirtschaft* (published in 2023). She was Principal Investigator of the BaSaR project.

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Transliteration and Orthography

In developing standards for orthography and transliteration for this volume, we have tried to strike a balance between readability and consistency, while also preserving standard practices in the diverse disciplines from which the research emerges.

For Chinese, Hanyu pinyin is used, with texts transliterated according to other systems standardized according to this system. For Indic languages, the conventions of the *International Alphabet for Sanskrit Transliteration* have been used, and diacritics retained. Modern place names within the South Asian region, however, have been rendered without diacritics, following conventional English-language spellings (thus Sanchi rather than Sāñcī). Cyrillic names and terms are transcribed according to the widely used modified ALA-LC Romanization system without diacritics (e.g., piatichlenka instead of p͡iatichlenka).

Personal names, toponyms, and terminology from the ancient world are generally rendered in forms that preserve their original orthography as much as possible (e.g., Antiocheia rather than Antioch; Dionysos instead of Dionysus). However, in cases where a word has a generally accepted English spelling, we have followed that convention (Carthage rather than Karthago; Cyrene rather than Kyrene). We have also allowed multiple spellings of certain names and terms, where cross-disciplinary consistency clashed with disciplinary conventions. Thus, we kept Śaka alongside Saka and Kuṣāṇa alongside Kushan.

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Abbreviations

Ancient literary works from the Greek and Latin corpora are cited in full upon first reference, and then abbreviated according to the conventions of the Oxford Classical Dictionary, third edition. Corpora of epigraphic and numismatic evidence are abbreviated using the same conventions. Papyri, ostraca and tablets are cited according to the Checklist of Greek, Latin, Demotic and Coptic papyri, ostraca and tablets (https://papyri.info/docs/checklist).

Ancient transmitted works from the Chinese tradition are cited according to Sinological norms, such that *Shiji* 15.685 refers to *Shiji* chapter 15, page 685 in the Zhonghua shuju edition. These sources are listed under the title of the work in chapter bibliographies.

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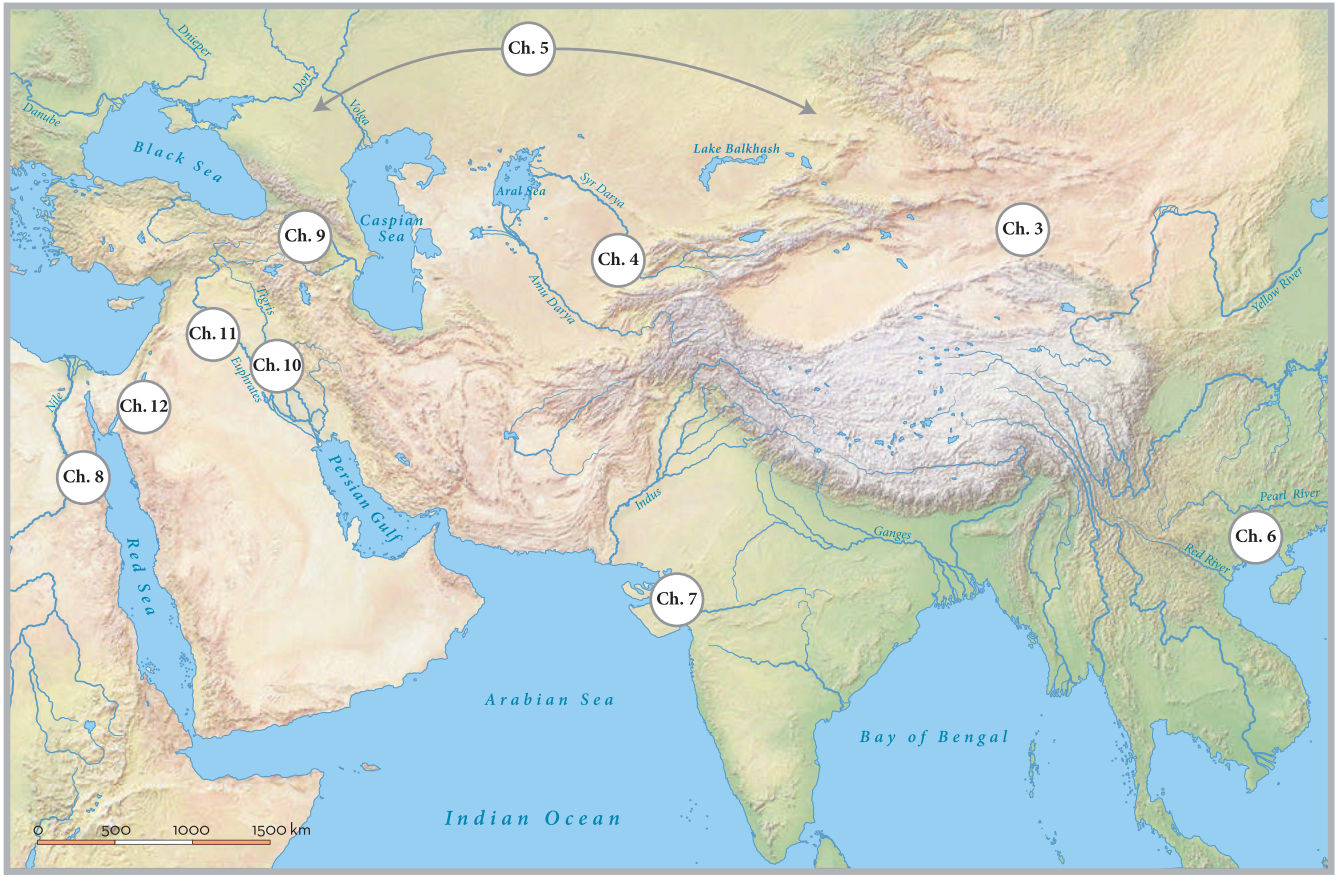

Map 1: Afro-Eurasian region showing the frontier zones treated by the chapters of this volume. © Peter Palm.

Sitta von Reden

Introduction to the Third Volume

The third volume of this handbook analyzes frontier zones as particular landscapes of encounter, development, and economic network formation. Frontier zones have been recognized as spaces of intense violence, imperial appropriation, exploitation, and resource extraction, but also of negotiation, mediation, and economic opportunity.[1] While the second volume concentrated on economic structures and developments that allowed resources, goods, and capital to circulate within local, regional, and empire-wide networks, the chapters of this volume focus on spaces where networks interconnected. Given the fluctuating reach of imperial cores and the involvement of frontier-zone actors in adjacent imperial orbits, frontier zones are both theoretically and empirically sites of transimperial network formation and institutional innovation.[2]

Frontiers also form along and across the open boundaries between agrarian, pastoral, and coastal communities, as well as along and across ecologies that require different economic and social strategies.[3] Again, ecological frontiers (ecotones) cause friction and require negotiation, which can affect their affordances positively.[4] Cooperation and network formation across ecological boundaries tend to develop over long periods, while rapidly changing political circumstances affect them in complex temporal structures.[5] The economic consequences of frontier-zone relationships and networks, their long-term development and negotiation, and their potentially abrupt transformation under changing political circumstances require more complex analyses than the Silk Road model of connected empires suggests.

The chapters offer problematizing approaches to frontier-zone processes at the edges of and beyond empires, with the goal of better understanding how and why goods and resources moved across the Afro-Eurasian region. The cases selected are shown on map 1. The first three chapters (part 1) discuss the Hexi corridor, Sogdiana, and the Eurasian steppe (chs. 3, 4, and 5) that according to Silk Road narratives were important transit zones located on its eastern section from the Han Chinese capitals Chang'an and Luoyang to Central Asia. Yet as the chapters insist, they were not just transit zones of trade. Local politics, consumption and relationships shaped the connections created in these spaces. The chapters of the second part consider port towns and their hinterlands in the Indian Ocean exchange network and its often-neglected

1 Ristvet 2018; Schröder 2018; Hoo, ch. 2, this volume; von Reden, ch.1, this volume.

2 Sahadeo 2011; and von Reden vol. 2, ch. 2, II.4.

3 Stek and Düring 2018; for the use of borderland and frontier-zone terminology, see Hoo, ch. 2, this volume.

4 Kidd and Stark 2019; and von Reden, ch. 1, this volume.

5 Weaverdyck et al. vol. 2, ch. 7.

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reach into Southeast Asia. Key regions were the southern Chinese coast between the East- and Southeast-Asian exchange systems, the bay of Khambhat at the northwestern edge of the Indian subcontinent, and the Egyptian Eastern Desert along the western Red Sea coast (chs. 6, 7, and 8). The chapters show that port towns and their environs were connected to their local and regional hinterlands in different ways, which in each region led to network dynamics of rather different character and scales. The results of these chapters emphasize recent claims to anchor maritime trade more firmly in the histories of port communities and their relationships than has been done in the past.[6] The third part deals with frontier regions and kingdoms in middle eastern and western Asia. Selecting from a range of potentially relevant regions, the chapters concentrate on the Armenian highlands, not only straddling the boundaries between the Roman and Arsakid imperial orbits, but also entertaining contacts with the steppe confederations in the north; the frontiers of the Arsakid Empire toward the west, south, and east; and the Nabataean kingdom located within the triangular zone between Syria, the Arabian Peninsula, and Egypt (chs. 9, 10 and 12). These chapters approach Afro-Eurasian connectivity by emphasizing local identity-formation processes as factors of economic network formation, and reveal relationships that spanned mountains and deserts in various directions, including from north to south. Chapter 9 on Dura-Europos draws attention to how archaeological research, map-making, and historiography have combined to make this frontier garrison town a 'caravan city' whose prosperity and entangled material culture resulted from its location along an (unproven) long-distance caravan route.

Each chapter provides contextualized analyses of the chosen spaces rather than forcing parallel demonstrations for immediate comparative purposes. Given the diverse historiographical traditions, different quality and quantities of evidence, and different amounts of research each frontier region has received, this would not only have impaired the investigations required for frontier-zone research, but also erased local variations and pathways that are crucial to emphasize. Nevertheless, in developing this volume we have asked a common range of questions that each chapter addresses in ways appropriate to its material and historiographical context. (1) How can the region be described as an economic system with particular patterns of consumption, production, and exchange? (2) What changes, if any, can be observed under changing political circumstances? (3) How did the region develop in terms of settlement and urbanism, and how did settlement and urbanism relate to either imperial socio-political influence or local/regional economic development? (4) In what ways did the region participate in long-distance trade or exchange, and how did this interlock with its local economy? And (5), were there particular institutions (or network tools) that mediated frictions of exchange either within the frontier zone itself or in

6 Pearson 2003, 5; Ray 2021.

its relationships with the imperial and transimperial networks of which it became a part?

The chapters illuminate local processes often overlooked in popular Silk Road models and show the potential of frontier-zone research for understanding the ancient Afro-Eurasian region as a connected space. We have decided to devote two chapters to the Central Asian region of Sogdiana/Kangju where the contextualizing history necessary for understanding this region is not readily available. The largely archaeology evidence for Sogdiana in the period under discussion depends on still ongoing research that requires careful contextualization and discussion in order to speak to the broader questions addressed in this volume. Chapter 4.A offers these contexts, whereas chapter 4.B deals more specifically with Sogdiana as an economic frontier zone. The final chapter on the Nabataean kingdom, too, is divided into two parts. While chapter 12.A takes a more familiar approach to the kingdom's role as a frontier zone, chapter 12.B explores the potential of quantitative research and digital technology for analyses of long-distance trade in relation to the Nabataean agrarian economy. That part provides an example of the promise of scientific methods for frontier-zone research, even more so as larger and better datasets become available now and in the future.

In the course of the research leading to this volume, new questions have emerged. As expected, there were dense local- and regional-scale networks within frontier zones. These networks were critical for moving goods across frontiers not only because they facilitated the formation of ties with adjacent imperial cores, but also because of their own internal consumption, production, and local or regional redistribution. Furthermore, a variety of exchange mechanisms structured the movement of goods across these frontier-zone networks. Sometimes commercial exchange played a major role, but in other cases, the primary drivers of movement were social and political relationships such as tribute and diplomatic gift-giving. Yet, more surprisingly, our research revealed that these networks and the movements they engendered were not dependent on contact with imperial cores in any simple way. Indeed, in many cases the disappearance or retreat of imperial power seems to have unleashed greater political power and economic connectivity than was observed at the height of imperial influence in these regions. The rise of the empire of Axum (in modern-day Ethiopia) that strengthened economic connectivity between Lower Nubia, Upper Egypt, and southern Arabia when the Roman Empire fragmented is one example; the unprecedented economic connectivity of the cities in the Hexi corridor and the Taklamakan Desert after the demise of Han power is another. The growth of autonomous economic networks between southern China, Southeast Asia and the Bay of Bengal from the fourth century CE onward also raises questions about the long-term effects of empires on frontier zones in postimperial periods. Looking at the postimperial history of frontier zones qualifies notions of empire as enabling structures, however violently established, that stimulate transimperial exchange in frontier zones. Imperial cores shaped frontier-zone processes by both their strong and weak ideological, economic, military

and political presence, and they stimulated long-distance exchange in some cases directly, but in others just indirectly.[7] Migration and demographic shifts within and across frontier spaces played an important role in the transformation of frontier zones 'after empire' (ch. 3), as did various forms of socio-economic upward mobility set in train by inter-elite exchange (ch. 4.B). There were new forms and levels of consumption within frontier spaces gaining back autonomy after the retreat of empire, which affected both local and regional-scale exchange networks, but also those that reached over longer distances (ch. 6). Once again, our attention is drawn to local processes rather than broader trans-Eurasian narratives of transformation. In what ways, then, do local histories change our concept of empire as driving factor of the history of economic connectivity in the Afro-Eurasian region between 300 BCE and 300 CE? Chapter 2 suggests some answers.[8]

Much more research is needed, but we hope that this handbook will stimulate the interdisciplinary dialogue that is indispensable for investigating Afro-Eurasian connectivity in global terms. In order to facilitate future research and learning, an interactive map of the Afro-Eurasian region based on this handbook is available at www.basar.uni-freiburg.de.

References

Kidd, F. and S. Stark 2019. "Urbanism in antique Sogdiana." In C. Baumer and N. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids*, 163–183. Wiesbaden: Harrassowitz.

Pearson, M. N. 2003. *The Indian Ocean.* London: Routledge.

Ray, H. P. 2021. "Introduction: Anchoring the coast." In H. P. Ray (ed.), *The archaeology of knowledge traditions of the Indian Ocean worlds*, 169–174. Abingdon: Routledge.

Ristvet, L. 2018. "Negotiation, violence, and resistance: Urartu's frontiers in the Iron Age Caucasus." In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*, 175–205. Cambridge: Cambridge University Press.

Sahadeo, J. 2011. "The accidental traders: Marginalization and opportunity from the southern republics to late Soviet Moscow'. *Central Asian Survey* 30.3–4, 521–40.

Schröder, P. 2018. "The economics of translocality – epistemographic observations from fieldwork in(-between) Russia, China, and Kyrgyzstan." In M. Stephan-Emmrich and P. Schröder (eds.) *Mobilities, boundaries, and travelling ideas: Rethinking translocality beyond Central Asia and the Caucasus,* 263–288. Cambridge: Cambridge University Press.

Stek, T. D. and B. S. Düring 2018. "Towards a patchwork perspective on ancient empires." In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*, 351–362. Cambridge: Cambridge University Press.

7 Von Reden, vol. 2, ch. 2, II. 3.

8 See also the cautioning remarks on colonially driven narratives of empire formation by Dwivedi, vol. 1, ch. 3. II.

Preludes

Sitta von Reden

1 Beyond the Silk Road: Toward Alternative Models of Transimperial Exchange

I The Myth of the Silk Road

Since the Chinese government presented the Belt-and-Road Initiative or 'New Silk Road' to the world in 2013, museums and exhibitions dedicated to the ancient Silk Road have proliferated.[1] One example is the Lanzhou Planning Exhibition Hall in Gansu Province, which houses a walk-around Silk Road experience as part of the Lanzhou urban development plan.[2] Another is the Silk Road Museum in Jiuquan, also Gansu Province, a city founded – as the homepage proudly states – on the Silk Road in 111 BCE.[3] Connected to the museum is a grand Expo Park devoted to "the essence of the life and culture along the Silk Road as it existed in old times."[4] Anyone wishing to know more can read that from the first dynasties of China during the Bronze Age, the Xia and the Shang, the Chinese

> carried trade to the ancient civilizations such as Egypt, Babylon, Hindus, Rome and Greece. Following dynasties Zhou, Qin and Han continued in the footsteps of the Xia and Shang and spread trade throughout Eurasia, and Western Civilizations stretched their trade routes deeper into China. Multinational competition and wars between leading empires determined who controlled the Silk Route and its rich treasures that traversed the lands.[5]

This is an exciting glimpse into a global past, but little distinguishes it from a myth. Like a myth, its empirical foundation is no longer questioned. Chronology is suspended. It seamlessly links a very ancient past to the modern present and tells a story of age-old connectivity. Myths gain power through images in our minds: age-old trade routes through forbidding territories, caravans loaded with carpets and pearls, and pioneering merchants moving oriental luxuries from east to west. Several recent commentators have emphasized the profoundly modern agendas lying behind the invocation of the ancient Silk Road.[6] This should put us on alert. As the Egyptologist Jan Assmann puts it, history becomes myth not simply as fiction but as a narrative foun-

1 Winter 2022, appendix A on Silk Road exhibitions around the world since 2002, lists seven in 2019 alone, with a significant increase and novel concentration in the People's Republic of China, which hosted six of them in that year; see also Winter 2022, 114–135 for contextualization of this development.

2 Berta and Frassoldati 2019, 82–84.

3 See also Wikipedia s. v. Jiuquan, https://en.wikipedia.org/wiki/Jiuquan, accessed October 21, 2022.

4 http://www.silkroutemuseum.com/en/en_silkroute_expo.htm, accessed March 1, 2020. The park is still in the planning stage.

5 http://www.silkroutemuseum.com/en/history.htm, accessed March 1, 2020.

6 Winter 2022; Haines 2020; Rezakhani 2010, discussed below.

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dation of collective orientation, ideas, and self-positioning.[7] Across the world, the Silk Road has become just that: a foundational story of globalization, progress, connectivity, national pride, and economic ambitions.

In Pakistan, for example, the Silk Road – reborn as the Karakoram Highway – serves as an avenue into a new national identity away from Hindu South Asia toward Central Asia and China. Pakistani interest groups anchor present economic orientations in an ancient history where the region was at the crossroads of Asia, firing neoliberal dreams of global trade and tourism.[8] In Japan, the Silk Road became popular in a climate when the country aimed at distancing itself from Western influence in the 1960s. It provided a counternarrative of intra-Asian connectivity, common religious beliefs, and cultural dialogues between Japan, South Korea, China, Central Asia, and India.[9] Connected to these sentiments was a multinational UNESCO project, launched under the evocative title *The Integral Study of the Silk Roads: Roads of Dialogue* in 1988.[10] The project was instrumental in developing diplomatic ties in Central and East Asia and providing new orientation for Central Asian states after the dissolution of the Soviet Union. UNESCO once again was involved in the cultural politics of the region when conferring world-heritage status on 33 ancient sites in Kazakhstan, Kyrgyzstan, and northwestern China, calling these sites "the 5,000 km section of the extensive Silk Roads network, stretching from Chang'an/Luoyang ... to the Zhetysu region of Central Asia."[11] In the republics of the south Caucasus, most notably Georgia and Armenia, the Silk Road plays a massive role in their quest for economic growth. Alongside the initiative of the 'Transport Corridor Europe–Caucasus–Asia' (TRACEA), launched by the European Union in 1993, there emerged 'Silk Road' companies and 'Silk Road' banks connecting Georgia with Europe and Central Asia.[12] Armenia couches its economic aspirations within the traditional language of its location on the 'Silk Road,' its age-old carpet industry, and silk consumption.[13] In China, while masking rather more aggressive economic politics, the ancient Silk Road offers a template for Eurasian commercial connections, sharing one world and learning across cultures.[14] In the media and popular studies, the Silk Road inserts China into "an enduring world history of open empires instead of isolated civilisations."[15]

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7 Assmann 2018, 19, with reference to the Axial Age. Raschke 1978, e.g., 605; and Sartre 2000, 659 for the transcontinental Silk Road not having a basis in evidence; Graf 2018 for a counter-argument.

8 Haines 2020.

9 Winter 2022, 47–65; see also Rezhakani 2010, and below.

10 Winter 2022, 114–116 for this project and its Japanese connections.

11 https://whc.unesco.org/en/list/1442/, accessed on October 22, 2022.

12 Schewardnadse 1999 for this and further Silk Road rhetoric.

13 Western Silk Road National SWOT Analysis (Armenia) Report of the Russian Armenian University (2016) https://webunwto.s3.eu-west-1.amazonaws.com/2019-09/swotreportrau.pdf, accessed October 21, 2022; see also Fabian, ch. 9, this volume.

14 Chin 2013, 195 citing the official program overview of the Silk Road Project in 2012; also Winter 2022, 128–135.

15 Chin 2013, 195.

And what does the Silk Road mean to the Western world? Peter Sellars in Susan Whitfield's British Museum 2019 exhibition catalogue has captured the allure of an exploding field of popular interest well: "Silk Road studies take us deep into the heart of composite cultures, interdisciplinary ways of understanding, and populations in motion that bring us face to face with the complexities of the contemporary globalism unfolding with shocking speed in our own lifetimes."[16] Once again identity is at stake. The historical Silk Road offers a narrative for modern globalization – and, as we will see, its contradictions.

II The Silk Road as an Academic Field

In the academic world, the Silk Road is generally used as an umbrella term for the exchange and movement of ideas, languages, technologies, art forms, and religious beliefs at various times in history.[17] It is not mapped as a single road, but a network of routes that linked China, Central, Southeast and South Asia with the Mediterranean both by land and by sea. No single trader is assumed to have traversed the entire distance in antiquity, and trade was not the only reason people braved deserts, oceans, and high mountain paths.[18] Not just silks but many other goods such as food, wine, unguents, medicines, spices, carpets, and ordinary textiles as well as captured humans and animals are believed to have been traded, or to have been sent as tribute, across Eurasia.[19] It was mostly small groups that frequented the corridors and paths. The main routes are thought to have extended between Xinjiang and India via the Pamirs and Bactria, between Xinjiang and Iran via Fergana and Sogdiana, and a northern route to the Pontic region via the Syr Darya and the Caspian Sea.[20]

The Silk Road has also become popular among world archaeologists. Here it serves as an approach to material culture that in traditional scholarship is regarded as stylistically derivative or hybrid. By training, archaeologists start from fragmentary and often isolated pieces of material evidence that, if they are to be appreciated for more than their art historical significance, need to be put into a larger interpretative framework. The Silk Road accounts here for complex processes that archaeologists seek to understand: forms of cultural transmission, cultural entanglement, and a kind of aesthetics that is both locally and globally created. Sara Ann Knutson has summarized well what the Silk Road stands for in archaeological research:

16 Peter Sellars, Forword in S. Whitfield 2019, 10.

17 S. Whitfield 2015, 1–7 gives a helpful summary of current understandings of the Silk Road; more recently, Benjamin 2018, 3–6; Höllmann 2022, 17–21.

18 Again in place of a larger bibliography, Knutson 2021; Lerner and Shi 2020b; Chaniotis 2018, 388–395; Schulz 2016; and Honeychurch 2014, each with ample further literature.

19 De Romanis 2020; Spengler 2019; S. Whitfield 2018; Brown 2018; Evers 2017; Hansen 2017.

20 Honeychurch 2014, 50–53.

1. The connection of direct and indirect communications and exchange, that is, the possibility that objects circulate together with more intangible meanings and beliefs, technological knowledge, and skills that are appropriated with the objects themselves, though potentially in very different ways;
2. The recognition of multiscalar exchange phenomena, that is, the possibility that objects may have both a local and a long-distance exchange history, as well as having passed through many hands and contexts before reaching the destination where they are found;
3. Deterritorialization, that is, the recognition of the geographical spaces in which humans act and interact with each other and the material world not as demarcated or bounded, but dynamic, shifting, and dependent on landscapes that they inhabit and transform;
4. The integration of usually compartmentalized or separate archaeological fields for the study of world archaeological phenomena, and in particular Eastern European archaeology, which covers many of the regions significant for Afro-Eurasian (Silk Road) exchange.[21]

World history and Silk Road archaeology have greatly contributed to decentralizing history and creating an understanding of global exchange, global aesthetics, and global material culture.[22] Yet Silk Road thinking easily slips into the construction (or imagination) of a reified Silk Road (or network of routes) that is made to explain the phenomena that Silk Road thinking asks us to think about. Thus Susan Whitfield, an acclaimed Silk Road archaeologist, tells fascinating stories of the interdependence of people and object histories, their variable forms of interaction, and the transformation of meaning in changing contexts of object use and consumption.[23] The objects she discusses – silks, manuscripts, buildings, and slaves – were shaped by the mobility of many social groups (which she has discussed in a previous volume).[24] They show forms of cultural entanglement and heritage, which Whitfield expertly unravels. But the ways in which the Silk Road – in her own words "a topic too elusive and complex to enable a comprehensive history" – explains the object phenomenology she discusses remain equally elusive.[25] Silk Road studies and Silk Road archaeology operate with a slippage between the Silk Road as a term for particular phenomena and approaches and the Silk Road as a historical reality that explains these phenomena.

Even as a substitute for economic processes too complex to describe, the Silk Road cannot stand. There are great uncertainties as to when the processes fathomed

21 Knutson 2021; see also Billé, Mehendale, and Lankton 2022.

22 Pioneering: Bentley 1993; Chase-Dunn and Hall 1997; and more recently: Versluys 2014; Hodos 2017; Versluys and Pitts 2015; 2021 – all carefully avoiding Silk Road terminology.

23 S. Whitfield 2018.

24 S. Whitfield 2015.

25 S. Whitfield 2018, 4.

under its umbrella developed.[26] Extensive Bronze Age exchange networks across Afro-Eurasia apart,[27] long-distance Silk Road exchanges are said by some to have emerged in Xinjiang (western China), and by others further east in the Ordos loop; some date their onset to the fourth or third, others to the second or first centuries BCE.[28] Their first full east-western reach – with little evidence for individual routes – is dated either to the first centuries around the Common Era, or much later to the post-classical period.[29] Valerie Hansen, one of the most acclaimed Silk Road historians, states that during the Han period, Silk Road trade was no more than a modest trickle. In the early manuscripts from Xinjiang, there was no hint of significant commercial traffic between 200 BCE and 300 CE. Even in the later documents of the fourth century and beyond, the traders appear to have been involved above all in local trade.[30] They used local currencies, grain, and silk, rather than transimperially valid media of exchange such as silver or gold coins.[31] Their cargos were small and composed of local products. At no time did the texts mention any place west of modern Afghanistan and Pakistan. Most merchants moved in small circuits, traveling from their home towns a few hundred miles to the next oasis, and no further. Trade was mostly designed for local consumption, supplying the small agrarian communities spreading across the oases. The routes of trade were also not straight roads but a patchwork of drifting trails and unmarked footpaths chosen by local guides who knew their way through the desert territory. The first Roman coins in China are Byzantine *solidi* dated to the sixth century CE, and it is then that Iranian coins also appear in China in larger numbers.[32]

Despite such uncertainties, the Silk Road has turned into an historical agent, a 'prime mover' of world history from antiquity onward. Craig Benjamin writes:

> The most significant transregional exchange network of the premodern world was undoubtedly that created by the Silk Roads, a network that resulted in unparalleled levels of diverse intercultural communication and exchange. For big historians, this is precisely why the First Silk Roads Era was so important. Silk Roads exchanges created a revolutionary 'goldilocks' moment that helped shape the future course of global history. As we unfold the story of the Silk Roads, then,

26 See also Winter 2022, 10.

27 Christian 2000; Parzinger 2008; Mishra 2020.

28 Honeychurch 2014, 50 (second century BCE); Frankopan 2015, 10 (119 BCE); S. Whitfield 2015 (third century BCE); di Cosmo 2020 contextualizes the beginning of "regular, sustained, and large volume trade between China and the Steppe" with the northern expansion of the Warring States during the fourth and third centuries BCE.

29 Curtin 1984, 90–91; Christian 2000, 5–6; Benjamin 2018; Graf 2018, 483 for an early dating around the Common Era; Hansen 2012; 2017; di Cosmo and Maas 2018; Wen 2023 for a late onset of transcontinental Silk Road exchange; Rezakhani 2010 for the general vagueness of locating and dating the Silk Road system; see also further below.

30 See also Leese-Messing, ch. 3.V, this volume for this and further discussion.

31 Leese-Messing, ch. 3.V, this volume for an alternative interpretation of the role of these currencies in long-distance trade.

32 Hansen 2012, 5–8; cf. 2017, 5–7.

> we also explore one of the great revolutionary episodes in the history of humanity, an episode that helped facilitate a gear shift that led eventually toward modernity.[33]

For Benjamin, the first Silk Road era was a catalyst for a new stage in history leading to our modern global world. Despite situating his research within the relatively recent academic field of 'big history,' its trajectory is quite traditionally teleological. History developed toward globalization since antiquity. In Peter Frankopan's successful *The Silk Roads: A New History of the World*, the road also appears as a framework for a new history of the world. Frankopan recenters this history from Europe to the Middle East, showing how its cultures and multilateral connections impacted the growth of empires, religious beliefs, and nation states in Eurasia. From the 'birth' of the Silk Road in 119 BCE to the New Silk Road in the twenty-first century, the road explains change through connectivity: religion, knowledge, food-supply systems, warfare, and more. It is an evocative but elusive story. More seriously, the Silk Road is made an historical agent whose agency never changed over many centuries.[34] Lerner and Shi aim at slightly greater precision when defining the Silk Road as "an exceptionally creative intersection of peoples, goods and ideas" and "a series of social networks connoting power and commerce." They employ the Silk Road as a "recognizable representation of past events" and an "analytical instrument to describe past actions".[35] Yet again, what events the Silk Road represents, and how it works as an analytical instrument to understand transformation over a period of more than 2,000 years, is still not explained.

III The Origins of the Silk Road

And the Silk Road comes with heavy ideological baggage. Ferdinand von Richthofen's description of a Silk Road was part of the emerging discipline of *Erdkunde* (geography) that in nineteenth-century Europe reimagined the relationship between civilized and tribal cultures (*Kultur*- and *Naturvölker*) in a climate of colonial expansion.[36] His research on China's westward orientation in antiquity was fueled by the competitive initiatives for commercial railroad construction at a time when the Qing government still opposed foreign railways in China.[37] Von Richthofen's accounts of a geomorphologically isolated China, which after its imperial expansion established routes into

33 Benjamin 2018, 7–8.

34 Frankopan 2015, 10.

35 Lerner and Shi 2020b.

36 Marchand 2009, xxiii–iv. It is important to note, however, that this was only one, albeit salient, aspect of von Richthofen's research, expressed in lectures and personal communication. For a full account of von Richthofen's research agenda and the intellectual context in which it developed, Osterhammel 1987; Waugh 2007 and 2010.

37 Marchand 2009, 196.

Central Asia and the Mediterranean, was integral to his conviction that China could and should be colonized.[38]

Von Richthofen visited China in a four-year expedition between 1868 and 1872, surveying the inner parts of the country.[39] He was one of the founding fathers of geography and cartography as academic disciplines developing in close connection with the economic and intellectual appropriation of the colonial world.[40] While von Richthofen's research was driven by a serious scientific impetus and had profound academic impact, it was not politically neutral. Already at the beginning of his expedition in 1868, von Richthofen recommended to Otto von Bismarck to appropriate Jiaozhou since it could serve as a suitable base for the German fleet.[41] Von Richthofen's multivolume survey eventually masterminded the German seizure of Jiaozhou Bay and its harbor Qingdao (Jinan Province) in 1897. A year after the tenancy contract was signed between Germany and the Chinese emperor, he wrote a popular book propagating the economic advantages of the region for mining as well as its connections to Xi'an from where transcontinental railroads were planned. Such plans were not realized in von Richthofen's lifetime, but China's potential for westward connections in spite of its isolation and backwardness loomed large in his research.[42]

China and the Far East did not interest just German scholars, but the emphasis on geography and connectivity rather than languages, religions, and culture was typical for German research at that time.[43] Von Richthofen introduced the ancient Silk Road, so named by previous scholars including his teacher Carl Ritter (who never visited China), early in the first volume of his six-volume *Ergebnisse eigener Reisen und darauf gegründeter Studien* (1877).[44] In chapter 10, he presents a historical narra-

38 Osterhammel 1987; Gräbel 2015, 41.

39 The results of the journeys together with a historical and cultural introduction in volume 1 were published in von Richthofen 5 vols. 1877–1912. A first journey in 1860 had taken von Richthofen as geological adviser of the Prussian East Asian mission to Thailand, Japan, and China, which had led to a series of trade agreements with these countries. In the intervening years, he worked in California as independent geologist locating gold fields; Osterhammel 1987, 168–169.

40 Osterhammel 1987, 300–304; Wardenga 2007; Sandner and Rössler 1994, 116–117 for the educational purpose of geography in late nineteenth-century German schools and universities; Marchand 2009, 21–22 for the intellectual and cultural contexts that stimulated research on China beyond its colonial agenda. As with any paradigm shift, von Richthofen's methodological direction was not undisputed; Kreutzmann 2008, 340–341 for critical voices.

41 Von Richthofen 1898; see also Gräbel 2015, 42; Chin 2013, 196 and 214.

42 Von Richthofen 1877a, 728.

43 Marchand 2009, 372. Research on the Asian empires had begun to flourish in the eighteenth century, foremost among Jesuit scholars. Furthermore, von Richthofen's account of Han Chinese expansion, exploration, and trade with the West was indebted to the French sinologist Jean-Pierre Abel Rémusat (1788–1832) and the German-Italian orientalist and sinologist Joseph Hager (1757–1818). The geographical school that established *Erdkunde* as a discipline in Germany and Europe was pioneered by Carl Ritter (1779–1859), von Richthofen's teacher, and popularized by Sven Hedin (1865–1952), von Richthofen's student; see further Waugh 2007, 3; Mertens 2019; and Winter 2022, 1.

44 For von Richthofen's predecessors, including Ritter, see Mertens 2019.

tive of both overland and maritime contacts between China and western Asia from the beginning to the present, forming an essential part of his project to connect geology and geomorphology with economics and human behavior.[45] A large portion of this chapter is devoted to the Chinese expansion into Xingjian during the Qin and Han periods. Central to these periods was the discovery and foundation of sites that von Richthofen located on the basis of geographical probability and ancient texts. Von Richthofen's account stimulated numerous cartographers, archaeologists, and travel writers in following decades; and it still serves as a framework for historical and scientific research.

Subsequent generations propagated the Silk Road to a wider academic and non-academic audience. While research on long-distance trade between Rome and China had attracted several learned works, the cartography of precise routes was unprecedented.[46] Albert Herrmann, another German geographer, took up von Richthofen's project, publishing in 1910 a detailed discussion of the *Ancient Silk Roads between China and Syria* based on a critical reading and rereading of the Chinese literary sources. He had more translated Chinese texts at his disposal than von Richthofen, which led him to contest several of von Richthofen's assumptions, without, however, questioning their premises. The work was originally planned in three volumes, of which the first was devoted to Chinese historiography, the second to South and western Asia, and a third to the Graeco-Roman geographers Marinus and Ptolemy. Only the first volume appeared, and one might suspect that the meticulous scholar Herrmann felt challenged by reconstructing the road networks in South Asia and the Middle East on the basis of chronologically disparate Indic and Graeco-Roman sources.[47] In 1915, however, he presented a lecture on the Silk Road from China to Syria to the Geographical Society of Vienna, which was published in the Society's *Mitteilungen.* In 1922, he published two maps as *Trade routes between China, India and Rome in around 100 AD,* prefaced by an unannotated account of the paths from China through Central Asia, Iran, and Syria, combined with the maritime connections across the Indian Ocean. A simpler version of Herrmann's road network appeared in 1935 in the authoritative *Commercial and historical atlas of China* published in English. This map was the foundation of later maps of the Silk Routes to the present day.[48]

45 Salomon 2013; von Richthofen 1877a, 726–733; the Han period of western expansion was part of von Richthofen's third period of Chinese western orientation, which he dates from 212 BCE to 619 CE (beginning of the Han to the Sui dynasty).

46 A precedent was Hager's *Route d'une caravanne grecque de la Chine* published as part of his *Description de médailles chinoises du Cabinet Impérial* (Paris, 1805) and translated as an independent monograph into German.

47 Herrmann 1910, *Preface,* on the planned volumes; the Persepolis Fortification Tablets, so vital for reconstructing the nature of the Achaemenid royal road system, had not been discovered.

48 Herrmann 1935; for several historical attempts to map the Silk Road and its ancient 'predecessors,' see P. Whitfield 2019. The volume, unfortunately, skips post-von Richthofen mappings of the Silk Road.

Yet Silk-Road enthusiasm reached its zenith in the course of the international competition over Xinjiang archaeology that was sparked by the first manuscript and textile finds in the oases of the Tarim Basin.[49] From that time, the archaeology of western China became a crucial part of the Great Game, in which Russia and Britain fought over control and hegemony in Central Asia.[50] Archaeological expeditions, sponsored by a host of public authorities and business companies worldwide, were amply documented in public media and gained a reach that Herrmann's scholarly discussions never could have dreamed of achieving.[51]

The competition to discover and loot hidden treasures in the Taklamakan Desert was not yet fueled by the romance of the Silk Road imaginary, but came to work toward it. The archaeological fever attracted von Richthofen's student and admirer Sven Hedin (1865–1952) who was a self-made geographer and never fully recognized as a professional by von Richthofen.[52] His worldwide fame, which gained him numerous honorary doctorates including from Oxford and Cambridge, was built on his limitless network of contacts that included the Persian shah, the Russian tsar, and kings of Sweden, Germany, and Austria. He had a great ability to write and to sketch evocative drawings of native people and landscapes. With his adventure stories from the desert, he captivated academic, popular, and young audiences alike.

In 1895, Hedin had launched his first scientific mission to Xinjiang in search of the Khotan river. Almost dying from thirst, and losing two of his men, he returned prematurely. But returning in the same year, he discovered the ruins of Dandan Uilik on the southern rim of the desert between the Khotan and Keriya rivers. Another expedition followed, leading to the discovery of the oasis town Loulan on the Lop Nor. This was the first archaeological identification of a site mentioned in the *Shiji* records of the journeys of Zhang Qian. The groundbreaking discovery was widely reported in international newspapers and caught the attention of the enterprising

49 Werning 2007 with further literature and excavation reports; Marchand 2009, 471 for the considerable looting of the sites by European researchers; Mertens 2019, fig. 1, charts a 10-fold increase of the mention of the German term Seidenstraße and its variants on Google Ngramms between 1930 and 1940.

50 For the competitive context of early twentieth-century archaeology, Ikle 1968 (though rather uncritically); Kreutzmann 2008; Morin 2012. For the geopolitical conflicts over Central Asia, commonly referred to as the Great Game, Hopkirk 1980; Meyer and Blair Brysac 1999; Osterhammel 2008.

51 Waugh 2007, 6. Waugh 2001 for the wide range of languages, including Japanese and Chinese, into which Hedin's numerous publications were translated. Hedin's collection of newspaper clippings concerning his expeditions extended over several meters of archival shelf space (Waugh 2010, 16).

52 Letters from von Richthofen to Hedin, Tiessen 1933, 74–77, 100–101; see also Waugh 2007. Hedin, born in Stockholm, had studied geology and mineralogy in Stockholm and Uppsala but relocated to Berlin to study with von Richthofen in 1889. In 1892, he completed a doctorate on the geology of an Iranian mountain range at the University of Halle. Hedin (1925) 2003, 15–24; Marchand 2009, 371; Kish 1984; Wennerholm 1978; Brennecke 1986.

Hungarian archaeologist Aurel Stein, who followed in Hedin's footsteps, validating archaeologically many of Hedin's surface explorations.[53]

Hedin's expeditions into the Taklamakan Desert had antecedents, but his discovery of oasis towns was unprecedented. It was indeed not until Hedin returned with tangible evidence of ancient cities in the sand that other Western states sent their archaeological teams to the desert to discover more artifacts and documents. Langdon Warner (1881–1955), Aurel Stein (1862–1943), Paul Pelliot (1878–1945), Albert von le Coq (1860–1930), and others not only greatly advanced Xinjiang archaeology but also spearheaded the international competition for archaeological leadership in Central Asia.[54] Yet while these scholars were driven by the search for sites mentioned in ancient texts, none of them was as committed to finding the Silk Road as Hedin was.

Hedin believed that Silk Road trade thrived because of a period of wetter climate in the Tarim Basin. According to his observation, the Lop Nor had changed its size and location several times in the past millennia, before it finally desiccated in the 1930s. At the beginning of the Han period, he argued, Lop Nor was a large lake, but it decreased in size at the end of the Later Han era. Hedin argued that the greater moisture in the Former Han period allowed towns like Loulan to grow together with the roads that connected them.[55] The Chinese scholar Ban Guo (32–92 CE) described the kingdom of Loulan as a flourishing oasis with intensive irrigation, farming, and grazing.[56] When the water level of Lop Nor dropped, towns, farmland, roads, and trade also declined. Hedin also suggested that the changing location of the Lop Nor was the result of significant climate change, a supposition that was investigated later as part of further research on the Lop Nor region.[57] Recent geological and archaeobotanical research at Lop Nor has confirmed that on the west bank of the lake there once had existed a large area of farmland capable of supporting a substantial agrarian population.[58] Over the past few years, moreover, international climate-research teams have established that climate change might have affected the eastern Taklamakan Desert at some point and thus stimulated Silk Road trade. Yet the dating of such climatic events is still rather imprecise, and scientists have to be careful not to be trapped in circular arguments.[59]

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53 Morin 2012; Ikle 1968 for a vivid account of Stein's career as explorer, archaeologist, linguist, and geographer; Stein's exploits were frequently reported in the London *Times* (Wang 2002).

54 Ikle 1968, 147; Morin 2012; on some patterns in writing on deserts, Haynes 2019.

55 Hedin 1905; popular summary in Hedin 1940.

56 *Hanshu* 92.

57 Forêt 2008 on Hedin; Bergman 1939 for later research around Lop Nor.

58 Qin et al. 2011 suggest that a cultivable area of more than 5,000 ha supported "tens of thousands of people," although different parts of the region may have been cultivated at different times. Pollen records suggest that vines were cultivated alongside grain.

59 Liu et al. 2016, 172, observe slightly wetter conditions between ca. 2.4 ka and 1.8 ka (ca. 780 BCE–ca. 210 CE), the beginning of these conditions thus predating the Han period by 500 years; Qin, Liu, Jia, et al. 2011, with no better evidence, date the wetter conditions to the Han period; Mischke et al. 2019, contextualizing the local data within the wider hydrological situation in the Northern Tarim

IV Politics of the Silk Road

The Silk Road as a romantic image of global connectivity before globalization does not quite explain its recent success. As Tim Winter argues, the Silk Road has become a geoculture in our current way of thinking.[60] Geocultures circulate in everyday life and academic research as ways of thinking about oneself and others topographically and topologically. They order the world into nations or empires, into East and West, civilizations and stateless people, and other such things. Geocultures do not develop arbitrarily as imagined geographies. They are constituted through social practices, economic flows, political coalitions, and a whole array of institutions (political, economic, state, or nongovernmental) that both rely on and construct geocultural realities. Most importantly, the way in which people, their practices, and ideas arrange themselves, or get arranged, over territories and maps involves "reconstructing the past in the present to envision and proclaim certain futures."[61] The historical Silk Road and its rebirth in politics, museums, and academia do just that. We saw how various nations link identity politics, economic aspirations, and international coalitions to a Silk Road history, and how these aims were supported by institutions such as UNESCO, by banks, scholarship, and museums. In present-day historiography and archaeology, the Silk Road paradigm is in the process of rewriting national histories, the relationships between Europe and Asia, and the ways smaller and larger populations and states participate in world history. Silk Road thinking may have done away with a lot of imaginary boundaries, national insularity, and eurocentrism in World History, but it is in danger of creating a new vision of global connectivity and transnational collaboration that is up for political and neoliberal grabs.

Twenty years ago, David Christian criticized Silk Road studies for being enmeshed with Western cultural prejudices. Steppe civilizations and other prehistorical societies that had not left any written records had little place in Silk Road history. In almost all Silk Road accounts, China and Rome were the driving forces of transcontinental exchange. Their capitals were the two poles of trade routes that connected the demand of the one with the supply of the other. The focus on imperial China and Rome not only ignored the intense exchange networks that since the Bronze Age crisscrossed the great territorial expanse along the Steppe corridor and between east and western Asia but also reduced nonliterate populations to noncivilizations. The Silk Road story neglected its long prehistory in the Bronze Age, it ignored transecological

region, argue for man-made reasons for the desiccation of several lakes at the foot of the Tien Shan mountain range. It is interesting to note that Aurel Stein rejected climatic explanations for the purported decline of trade in the region, arguing that changing political conditions and changing forms of agrarian exploitation caused irrigation to decline and sites to be abandoned at the end of the Han period; see Ikle 1968, 151.

60 Winter 2022, 12–17, with Hannerz 2009; 2016.

61 Winter 2022, 12.

exchange, it ignored the grassland territories from Mongolia to the Black Sea and the products moving along long-distance trade, and it ignored the role of mobile populations in the transmission of goods, ideas, technologies, and languages, thus preventing scholars from approaching the Afro-Eurasian region as a system of different but connected socioeconomic formations.[62] Modern globalization itself was a product of connections across ecological zones. Since Christian, further research has firmly integrated Steppe populations into Silk Road history.[63] Yet the allure of the Silk Road still forestalls the development of new models of agro-pastoral interactions.

But a more fundamental assault on the Silk Road was launched by the Iranian historian Khodadad Rezakhani. The Silk Road, he argued, had no anchor in historical reality, geography, or record. The alleged start and end points of the Silk Road (never in antiquity described in full) ignored large stretches of territory and huge empires that played a significant role in Eurasian history, most notably the empires of Iran.[64] Rome was constructed with no convincing evidence as the pull factor of silk trade, whose destination in Chinese sources went no further than Central Asia.[65] With equally unconvincing evidence, silk was singled out as the major commodity along the Silk Road, while Pliny, Strabo, and other Roman authors mention far more frequently items such as spices, pearls, and glassware that circulated widely in Central Asia and had origins other than China. Rezakhani concludes:

> The concept as a whole tends to ignore realities such as geography and ecology, as well as political units, facts that become lost among the more potent romantic notions. While itineraries are presented at some length, *actual places are forgotten* [my emphasis] and it is supposed that a conventional 'beginning' in China and a vague 'destination' somewhere along the Mediterranean are enough. On the way, places such as Transoxiana, the Pamirs, Iran, and indeed the whole of the Near East are simply brushed aside and not much discussed. The Silk Road has

62 Christian 2000, esp. 5, 7–14, and 26; Parzinger 2008 and Mishra 2020 for the prehistory of Afro-Eurasian connectivity in the Bronze Age. Parzinger's survey shows that Eurasian cultural and economic interaction can be described much more fully without the road metaphors that dominate the historiography of later periods.

63 Di Cosmo 2002; 2020; Honeychurch 2015; Brosseder 2015; generally Knutson 2021.

64 Significantly, Sven Hedin, the great popularizer of Silk Road trade between China and Syria, concentrated on the eastern parts of the alleged trade route; Hedin never extended his expeditions beyond Iran; Albert Herrmann devoted only a single short article, a map, and the preface of an atlas to discussing the long section of Silk Routes between Afghanistan and Syria (Herrmann 1915; 1922; 1935); and Stein never excavated in the Middle East and Syria.

65 It is now widely known that the provenance of silk and silk-like textiles is very difficult to identify. Fine textiles that can hardly be distinguished from Chinese silk were produced in the island of Kos throughout antiquity, while in Egypt very fine linen (*byssos*) was produced as a luxury product. Thus, only those remains that carry Chinese letters can be clearly provenanced. Just two tower graves in Palmyra have been found to contain inscribed silks: no. 40 dating to 40 CE and no. 46 dating to the mid-second century CE. Von Falkenhausen 2000; Schmidt-Colinet, al-As'ad, and al-As'ad 2016; Henning 2001; for additional Palmyrenean silks finds, Zuchovska 2016. For the problems of reconstructing the provenance of silken textiles, Hansen 2017.

then become a grand narrative that serves mostly to obscure important details and sometimes even more.[66]

The Silk Road began as a colonial concept grounded in an orientalizing and colonial West but was revived, according to Rezakhani, in the 1980s and 1990s when the fall of the Soviet Union brought the need for new identity histories in Kazakhstan, Uzbekistan, Tajikistan, and other Central Asian states. Much of the archaeological and documentary research on Central Asia henceforth was presented as Silk Road history, financed by Chinese and supranational organizations, and carried out by local archaeologists (in principle to be applauded). In Western scholarship, the Silk Road was divided into several routes and sections, but magically continued to remain a single, reified concept of long-distance trade dominated for centuries by Mediterranean and Western European states.

Chad Haines has rightly pointed to the contradictions of the Silk Road. On the one hand, it serves as a powerful symbol of interconnectivity, cultural exchange, and ethical cosmopolitanism. It offers an idea of the longue durée of movement and interaction, of the connection of disparate corners of the Old World across a rich diversity of landscapes and routes which we like to think lie "at the heart of human history."[67] On the other hand, the concept is laden with contemporary political, geostrategical and economic interests, nation-state formation processes, historiographies of difference and exclusion, and particularist global aspirations. Under the shadow of the war in Ukraine and its global consequences, which are unfolding while this chapter is written, one may regard the contradictions of the Silk Road as a reflection of the contradictions of globalization that are beginning to emerge.

V The Problem of Method

Not only have its politics rendered the Silk Road a model to be abandoned. The methodological positivism in which it was conceived bypasses any standard of historical, archaeological, and literary criticism that has developed since von Richthofen read ancient texts in translation.[68] Chief among his ancient authorities was the ancient geographer Claudius Ptolemy (mid-second century CE), an Alexandrian scholar who constructed the first scientific map in the form of a grid of geographical coordinates on which places across Eurasia were located.[69] Ptolemy, like most ancient geog-

66 Rezakhani 2010, 420.

67 Haines 2020, 197.

68 See esp. the profound criticism of Silk Road and world historiography from the perspective of their uses of ancient literary texts by Chin 2013; 2014; 2016.

69 Von Richthofen studied all ancient texts in translation only, and of course, was not a historian by training. For the imperial intent of Hellenistic geography on which Ptolemy's work was based, Kosmin 2017.

raphers, had never traveled in Asia himself but had gathered his information for the location of places from another geographer, Marinos of Tyros, an almost contemporary of Ptolemy, whose work is now lost. Marinos had obtained his knowledge from a person involved in long-distance trade, Maes Titianos, allegedly a Macedonian but more likely a Syrian who financed trade.[70] Maes, on his part, had the details from one of his merchants who traveled regularly to the Far East.[71] Any scholar vaguely familiar with ancient literature is aware that multiple transmission leads to multiple errors, misunderstandings, and the transmission of mistaken concepts. Ptolemy himself argued that merchants often exaggerated distances out of boastfulness (*Geog*. 1.12). Taking literary traditions at face value is highly positivistic, if not outright fallacious.

Another source for von Richthofen was the fourth-century historian Ammianus Marcellinus, who mentions "a very long road" (*iter longissimum*) along the foot of the mountains Ascanimia and Comedus. This road "recurrently" (that is, in the fourth century CE) led merchants past a place called the "Stone Tower" (*lithinos purgos*) to the land of the silk people (*seres*), whose rich and vast country was encircled by great walls.[72] Ammianus also never saw Central Asia himself and does not even preserve the source for his information. The Stone Tower, known both to Ptolemy's and Ammianus's sources, tempted von Richthofen and many others to venture into long discussions about the precise location of this significant landmark.[73] To this day, its location has been controversial, but readers will be pleased to hear that it can be visited near the city of Osh on the border between Uzbekistan and Kyrgyzstan.[74]

A third source for von Richthofen was Han historiography and chronicles, in particular the story of the envoy Zhang Qian who in the second century BCE led a 10-year expedition across the territory of the Xiongnu to the Western Regions, which were then the eastern parts of the early Arsakid Empire.[75] The records of western expansion in the *Hanshu* and *Hou Hanshu* provided von Richthofen with valuable place names, along with the political history of expansion, conflict, and outside connections. But these texts do not offer open windows onto the past. They are loaded with conventional descriptions and very specific cultural meanings.[76] The identification of places and geographies mentioned in the records is highly problematic, and still today rarely fully identified by archaeological work. None of the chronicles, more-

70 It has become a commonplace to mention that Maes Titianus was probably not Macedonian but Syrian by origin, without questioning any other aspect of his biography and knowledge.

71 Ptolemy *Geographia* 1. 11. 6–7. Benjamin 2018, 137–138.

72 Ammianus Marcellinus 23. 6. 60, for discussion, Kolb and Speidel 2017, 31; the identification of the *seres* and their metropolis had been under debate when von Richthofen wrote these pages.

73 Von Richthofen 1877a, 498–500; Stein 1928, 847–851; Piankov 2015; Dean 2015; 2022.

74 Dean 2022.

75 Leese-Messing, vol. 1, ch. 4, 172–175.

76 Chin 2010, 312.

over, mentions trade as the prime motivation of contact with the Western Regions, which reached no further than Central Asia.[77]

Von Richthofen's Silk Road was a series of sites mentioned across dispersed pieces of single references and fragmentary evidence often centuries apart. None of the ancient geographers from which the passages were taken linked the sites and routes they mentioned to a trade network. The idea of an *iter longissimum* on which trade moved along a mountain range (yet to be identified) belongs to the postclassical period when von Richthofen believed the transcontinental routes were already in decline.[78] It should be conceded that von Richthofen used the term Silk Road – a term made popular by his pupil Sven Hedin – sparingly. But his frequent deployment of road terminology (main road, northern road, trade road, etc.) leaves no doubt that he imagined physical roads to have stretched all the way from China to the Mediterranean.[79]

VI Ancient Roads and the Silk Road

It cannot be denied that roads and routes were important tools of long-distance communication and exchange in Eurasian antiquity. What is more, ancient authors, too, were very interested in long-distance routes and roads either as physical ways of transport or as symbols for imperial connectivity.[80] The origin of a cross-Asiatic road network is generally attributed to the time of the Persian Empire (ca. 550–ca. 330 BCE). The estimated 8,000 miles of road and routes are likely to have incorporated earlier paths and were probably developed in close cooperation with the local *satrapies*.[81] The network immensely impressed the Greek historian Herodotus, who also provides the first account of it.[82] He gives precise itineraries, distances between way stations,

77 Lewis 2007, 143; Schulz 2016, 391–398; Leese-Messing, vol. 1, ch. 12.A, II. 5; Rezakhani 2010, 428–431; Chin 2014, 145–150; see further Leese-Messing, ch. 3, this volume.

78 Von Richthofen 1877b; more recent research shows that cross-Asian exchange increased from the fourth century CE onward; see esp. Waugh 2007; Hansen 2012; di Cosmo and Maas 2018.

79 Maritime connections between India and Rome, which von Richthofen explored in the following section of chapter 10, were according to von Richthofen more important than the land routes for East–West connections, a conviction developed explicitly on the basis of modern comparison. Waugh 2007, 4 for von Richthofen's use of the term Silk Road; Waugh 2010, n. 16 for his attempt of reconstructing physical routes.

80 In the latter respect, Neelis 2011; 2012.

81 Graf 1994; Briant 2002, 357–377; Briant 2012. Neelis 2011; 2012 for road systems along the Indian subcontinent. Roman roads have been studied intensely both regionally and empire-wide; see most recently Kolb 2019.

82 Herodotus 5. 52–53. Graf 1994 gives the most comprehensive list of sources for the directions and location of the roads, while Briant (2002 and 2012) cites additional passages in Greek and Aramaic texts that offer insights into the conditions of travel.

length of sections, duration of travel, and information about the main function of the roads. Most of the main routes were "wheelworthy" (*hamaxitoi*, Hdt. 7. 200; Arr. *An.* 3. 18. 1), and even paved around the larger cities. The route that interested him most started at Persepolis and via Susa led through the Zagros Mountains, along the plains east of the Tigris through Kilikia, Kappadokia, and Phrygia, until it reached Sardis. Herodotus immensely admired the royal roads (*basilikai hodoi*, often mistakenly rendered in the singular as 'the Royal Road' or 'the King's Road' even) as a means of creating cohesion in an imperial space that had never before been so large. Armies could be drawn together and moved to different places quickly, tribute gathered, and messengers sent with a speed that made the empire hard to conquer.[83]

The Persian *Travel Rations* texts, dating to a few years around the turn of the sixth century BCE, confirm the importance of the road network for the military, administrative, and ritual control of the empire. The capital cities – Pasargadae, Persepolis, Susa, Babylon, and Ekbatana – were linked by main roads, and they in turn to all of the administrative subunits (*satrapies*) by secondary roads that branched out into smaller local paths.[84] The larger roads were equipped with way stations that provided supplies according to a tightly controlled licencing and voucher system. Apart from itineraries and destinations, the *Travel Rations* texts in combination with other epigraphical and literary evidence show the degree of logistics, maintenance, and protection the roads required: they had to be surveyed, constructed, and kept clear, and so did the relay stations and fortresses that were built at regular intervals. The posts had to be guarded and supplied with spare horses and food and drink for the travelers and pack animals. The operation of the system seems to have been controlled by central administrative order, but the execution of tasks was left to the local *satrapies*. These were in charge of looking after the roads and stations, controlling the dispensation of rations according to the traveler's rank, and keeping accounts that recorded the supplies and outgoings (for the latter, still Ps.-Arist. *Oik*. 2. 3. 34 and 38 describing the last decades of the Achaemenid Empire).[85] Travelers came from many different regions. Apart from the king, his family and entourage, soldiers, elite guides and servants, particular occupational groups, people with special skills (masons, goldsmiths, stonemasons or herders), but mostly general workers (*kurtaš*) traveled along the roads.[86] Most likely because the *Travel Rations* texts were official documents, no traders are mentioned in them. But their absence, given the licencing system is still striking.

Post-Achaemenid accounts add detail about the conditions of travel along the trails: hot, difficult, exhausting, dangerous, and often impossible to find without a guide (e.g. Arr. *An*. 26. 2; Diod. 19. 19. 2; 19. 19. 6). Lack of imperial supervision led to

83 Colburn 2013.
84 Briant 2002, 358; Graf 1994, 173–175.
85 Briant 2012, 189–194.
86 Briant 2012, 191.

abuse and decay. A Hellenistic inscription from Didyma refers to a section of an old Persian road that local peasants had used for cultivation (*OGIS* 225; *IDidyma* 492; *SEG* 37 878; *RC* 20). Herodotus finds it worth emphasizing that a road Xerxes had used for marching through Thrace was still undamaged, because the Thracians held it in reverence, never plowing it up or sowing crops on it (Hdt. 7. 115).[87] Diodorus, describing the campaign of Antigonos through Media in 317 BCE, reports that there were difficult and dangerous passes, "for the locals who were familiar with the region … kept rolling great rocks in quick succession upon the marching troops" (19. 19. 3). Polybios tells us how Antiochos III had to cross into Hyrkania through the difficult territory of Mount Labos. Making the mountain passable required fighting off the mountain dwellers. By royal order, he had then a road driven through the harsh landscape in order to make it accessible (10. 29). Social and ecological reasons prohibited travel in uncharted countryside. If no longer in use, stretches of road did not readily stay intact. For roads to function as a network required large amounts of supervision and maintenance and good communication between central government and local *satrapies*, which only worked when the emperor was strong.

The Seleukids inherited the Achaemenid road network, yet they transformed its orientation and main corridors for their own imperial purposes. Like their predecessors, the kings controlled the empire by means of the administration of provinces, movement of troops, diplomatic journeys, and royal ritual, which included itinerant festivals. Paul Kosmin has demonstrated how the Seleukids marked their territory by diplomatic boundary controls and the movement of courts and court personnel, as well as scientific geography. The mobility such forms of imperial control required relied once again on physical infrastructure, surveys, and the scientific control of the space. Roads were charted by specialist *bematists* ('measurers of distance'), signposted by milestones, and maintained by (forced) labor.[88] Yet the Seleukids did not just take over the Achaemenid routes and pass them down to the Romans. Rather, they created their own political geographies. Some routes were maintained, others abandoned, and new ones created or improved. The political and economic focus of the Achaemenids was on the Persian homeland, Media, and the Far Eastern provinces, despite Herodotus' special interest in the connections to Lydia. The Seleukids, by contrast, oriented their realm westward toward the Mediterranean, and their most important capitals and cities were in Northern Syria and Asia Minor.[89] As a result, the roads most frequently mentioned extended from Seleukeia-Tigris to Antiocheia-Daphne, and from Antiocheia to the Greek towns in Asia Minor and the capital of Sardis.

The *Parthian Stations* compiled in the Arsakid period under the name of Isidoros of Charax shows the survival of some sections of the Seleukid road system.[90] But it

87 Briant 2002, 361.

88 Kosmin 2014, 167–169.

89 Kosmin 2014, 183–208.

90 For a reassessment of the nature and function of the treatise, Hauser 2017; cf. Wiesehöfer, vol. 1, ch. 11, 486–487.

also suggests change. Isidoros starts his account at Zeugma, where the route crossed the Euphrates into Arsakid territory. Thirty-one way stations are mentioned along a distance of some 900 km. The road did not pass by the important town of Edessa, but rather along some "abandoned places" until it reached Nikophorion in Parapotamia, again on the west bank of the river. From there, the route meandered along both sides of the Euphrates past Dura-Europos to a place called Neapolis, also on the west bank of the Euphrates. There it crossed the river and reached Seleukeia, some 50 km to the east.

The Arsakids controlled a much looser imperial commonwealth than their predecessors.[91] It is likely therefore that they did not tailor roads to their changing imperial needs.[92] The Roman geographer Strabo, writing around the same time as Isidoros, disparaged the lack of imperial control over the route along the Euphrates: stopping places and cisterns were unequally supplied, and merchants had to expect variable rates of tolls and taxes. Whereas the rates of the *skenai* (pastoralists) were moderate, the rates of the *phylarchs* (regional rulers) were steep (16. 1. 27).[93] It was difficult, he adds, "among so many and such stubborn people for a common measure to be set which benefits the people." Such a comment, of course, was written with the glorious model of the Augustan road system in mind.

The *Parthian Stations* gets much fuzzier beyond Seleukeia (2–19). On the much longer stretch of some 3,000 km from the former Seleukid capital to Alexandria in Arachosia (present-day Kandahar), only 34 stations are mentioned, many of them only as stations in villages. From Ekbatana in Media through to the Kaspian Gates, Hyrkania, Margiana, and Aria, the account becomes an enumeration of regions, dotted with occasional cities including Antiocheia-Margiana (Merv) and Alexandria-Aria (Herat). This is no longer an itinerary but a list of locations which we cannot even be sure whether they were linked by a continuous road. Whereas the first part of the *Parthan Stations* confirms the Seleukid route from Antiocheia to Seleukeia still to exist, the second part is a regional survey like many others that were told as *periegeseis* (tours) moving from place to place.[94] That part has now also been shown not to be by Isidoros himself. It was a later compilation of treatises produced before, under, or after the Arsakid period. In contrast to numerous allegations to the contrary, the *Parthian Stations* does not confirm a route from Antiocheia via Seleukeia to Kandahar, nor does it mention trade.[95] It was not even a suitable guide for any traveler, trader, or soldier, as has also been assumed.[96]

The Romans took a different approach to road building. In contrast to the Arsakid routes and pathways that trailed through territories where social conditions allowed,

91 Fabian, vol. 1, ch. 6.

92 For the advantages this created for local (non-Roman) traders, Gregoratti, ch. 10, this volume.

93 Strabo 16. 1. 28 for *phylarchs* of the Arabs; Cameron 2019, 236–243 for discussion of these passages.

94 Von Reden, vol. 1, ch. 10.B, 469.

95 Most recently, Daryaee 2020; further examples in Hauser 2017.

96 E.g., Schuol 2017; further bibliography again in Hauser 2017.

they constructed roads with taxes and toll stations according to a functional plan.[97] Numerous regional studies have investigated orientations, functions, distances, milestones, forts, relay stations, and construction of Roman roads. Not only was the Roman road network by far the most extensive (totalling an estimated 48,500 km in the early second century CE), but longer stretches of roads became paved, better maintained, better supplied, and more suitable for year-round travel. We have much evidence for the care the Romans invested in provincial roads, especially when they led through borderland territory.[98] While older sections were incorporated into the new network, destinations and lines of communication were designed and redesigned for Roman military and economic purposes, which at times could even reach beyond provincial borders.[99] Roman imperial writers tend to emphasize long-distance connections, but regional or provincial circuits were equally, and in many cases more, important reasons for the local upkeep of roads.[100] But just as in other empires, neither imperial road networks nor local trails remained unharmed without state or local maintenance, which could change quite radically over time.[101] Roman imperial control never reached beyond the River Euphrates for any length of time. Arsakid control of roads, from the little we can tell, was limited.

As the previous section has revealed, roads like other infrastructure and institutions are never permanent, nor indeed independent of the polities and empires that control and supply them. The use of roads, and safe transit, were dependent on a host of factors, such as regular maintenance, protection against predators, way stations that supplied humans and animals, methods of payment accepted for the remittance of fees, and much more. Transiting cultural and political spheres by road or path required nodes of connectivity, either by political interference or social practices, and it is to these nodes that I will now turn.

VII Alternatives to the Silk Road

Routes and roads offer only a limited access to the development of Afro-Eurasian economic connectivity. In establishing alternatives, this handbook has developed a

97 Speidel 2019.

98 By way of example, see Sidebotham 2011, 125–174 and Paprocki 2019 for the road system in the Eastern Desert. Roads required fortification, protection, and supply stations and, like Achaemenid royal roads, were controlled by a licencing and voucher system for travelers.

99 Hitchner 2012, 232–234 for a brief survey of the imperial purposes of Roman roads; Alcock 1993, 120–122 for Roman Achaia; Mitchell 1999, 19–22 for Asia Minor; Speidel 2019, for Roman interests in roads beyond direct provincial control.

100 Cameron 2019, 231–280 discussing the Northern Mesopotamian region.

101 Well studied in the Eastern and Arabian Deserts; for which Sidebotham 2011; Adams 2012; Paprocki 2019; and Speidel 2019.

richer perspective. Not only does it take into consideration the diverse and complicated source material to be considered when studying Afro-Eurasian exchange systems, it also approaches economic connectivity in a wider analytical perspective. In volume 1, we outlined the nature of the empires that shaped and transformed the Afro-Eurasian region in the period between 300 BCE to 300 CE. We aimed at demonstrating the fluidity of the sociopolitical contexts within which ancient long-distance exchange needs to be approached over a period of 600 years. In volume 2, we looked in detail at imperial economies, which we approached as networks whose resources, goods, and capital were mobilized by various actors and their tools. This approach has opened up a space for inquiry that takes these networks into border regions where they overlap with other networks, actors, and their tools. Though often remote from imperial centers and poorly documented, the frontier zones and their development in imperial and post-imperial circumstances offer important insights into the (changing) conditions of transimperial exchange and trade. Using theoretical insights of frontier-zone research, the chapters of this volume investigate development and change in frontier zones with a particular focus on the frictions that characterized these zones. We argue that the negotiation and possible dissolution of different kinds of friction offered spaces for economic activity that stimulated long-distance exchange and trade.[102]

VII.1 Frontier Zones and Trade Diasporas

The negotiation of frictions in intersecting networks of exchange was first addressed by Philip Curtin as a key to understanding cross-cultural trade.[103] The earliest institutional arrangement for facilitating cross-cultural trade was what he called trade diasporas. These were settlements or sites of exchange, sometimes segregated and protected, where merchants traded in culturally alien and potentially hostile foreign lands. Here they could settle, learn the language, the customs, and the values of their hosts. Subsequently, the pioneers became cultural brokers, facilitating contacts between their home and the host culture. As a result, trade and trade networks grew:

> Cross-cultural trade and communication pose special problems. People with different ways of life are strangers by definition; their ways of life seem unpredictable, and the unpredictability is probably dangerous as well. Communication itself is difficult. Even after an appropriate medium comes into existence, like a second language in common, understanding is hard to come by. Strangers may appear not to be hostile, but they are still not to be trusted. These problems in cross-cultural understanding in general have meant that cross-cultural trade has almost always been carried out through special institutional arrangements to help the mutual security of the two sides.[104]

102 See vol. 2, ch. 8, as an introduction to the chapters of this volume.

103 Curtin 1984.

104 Curtin 1984, 1.

Trade diasporas occurred in different forms and locations, but typically they were settlements along rivers and coasts where trade was most ubiquitous. The relationship of the members of trade diasporas with their host communities could also vary. Some trade settlements were autonomous communities, remaining neutral in their social and political contexts. In other cases, traders were a 'pariah caste' to be exploited at will and tolerated only because they were useful. At the other extreme, there were the European empires in Asia from the sixteenth century onward that built trading enclaves under their own military protection and used coercion to control Asian trade and to shift its terms in their favor. Crucial, however, was the recognition that cross-cultural encounters of trade and exchange were never unproblematic but required an institutional framework for bridging differences and frictions.

The concept of trade diasporas had much in common with Karl Polanyi's model of the port-of-trade – a tolerated, state-controlled emporium where the government of the host country admitted certain traders and excluded others, maintained law and order, fixed prices, and directed the flow of goods in its own interest.[105] Yet Curtin's was a more flexible model, giving room for social practices beyond state control. Nevertheless, it was still part of an evolutionary narrative with a view toward modern global trade. As a result, it lacked precise historical location. Curtin describes trade diasporas as typical for 'early' cross-cultural trade. But examples come from stateless prehistorical societies as they do from states in the ancient and medieval periods, and colonial Europe. Trade diasporas emerge in Curtin's account as part of an evolutionary scheme of world history. Despite the impressive empirical detail Curtin provides, the trade diaspora is a dehistoricized and deterritorialized model in a culturally unspecific course of world history.

Curtin's model is still popular among scholars who investigate premodern trade in world perspective, as it successfully broke away from the idea of an unproblematic development of global markets across cultures.[106] It participated in a wider intellectual trend that felt dissatisfied with neoclassical market models ignoring the cultural constraints of market development.[107] Yet as local studies become more fine-grained and culture-specific, totalizing global narratives like Curtin's have become less persuasive.[108] What is more, the trade-diaspora model, with its focus on institutional arrangements that facilitate communication and exchange, underrepresents the way in which trade networks are usually part of wider, multilevel networks of exchange in which political, economic, social, and religious ties contribute to the flow of goods both within and across communities and states. In its single focus on independent traders as the main actors of cross-cultural exchange, the trade-diaspora model is limited.

105 Von Reden, vol. 1, ch. 17, 706 for Karl Polanyi and the port-of-trade model; cf. Dwivedi, vol. 1, ch. 15, 660.

106 E.g., Trivellato 2014; Morris, ch. 4 this volume.

107 Von Reden, vol.1, ch. 17, 705–707.

108 Trivellato 2014, 2.

VII.2 Approaching Frontier Zones

Rather than focusing on merchants or states acting in or upon peripheral regions, frontier-zone approaches put emphasis on regions as contested spaces of multiple actors and their multilevel networks.[109] The concept of the frontier zone goes back to Jackson Turner, who in 1893 delivered a seminal lecture to the meeting of the American Historical Association. It is worth considering the origins and transformation of the concept over several decades in order to capture its resonances, and potential for transimperial economic network building.

For Turner, the frontier was a phenomenon particular to American history. It was a mobile line where people of different cultures – 'Indians' and Europeans – met and negotiated their cultural and economic differences with profound historical consequences. In its gradual movement toward the west of the continent, the frontier was the outer edge of a wave – the meeting point of what he calls savagery and civilization.[110] The frontier was a civilizing force that created a new type of political actor "tamed by wilderness" and eventually formed a democratic constitution that was unequal to any of those of the colonizers' homelands. Evolutionism, racism, and ecological determinism aside, Turner gave a name to the possibility that frontiers were not barriers, but sites of opportunity: not just for resource exploitation and a cheap labor force, but for mixing and learning among socially, economically, and ethnically different groups.

In subsequent decades, the frontier-zone model was adopted by numerous scholars analyzing colonial encounters, with a strong emphasis on asymmetries: land-grabbing colonizers and expanding empires creating, mostly by means of violence and coercion, hierarchical orders between the colonizers and the colonized. In Jürgen Osterhammel's magisterial book, frontiers are a historical characteristic of the nineteenth century. No longer was the main socioeconomic divide that between city and countryside, but the moving boundaries of resource exploitation on the peripheries of expanding empires. Osterhammel emphasizes that the frontier was both a reality and a concept that could be applied to a wide variety of contexts and historical circumstances. It was a space and a social constellation whose outcomes are open to a wide range of interpretations:

> Should the frontier be regarded as a space that can be demarcated on a map? There is much to be said for the alternative view of it as a special social constellation. This would give us the following definition, sufficiently broad but not too woolly: a frontier is an extensive (not simply local) situation or process where, in a given territory, at least two collectives of different ethnic origin and cultural orientation, usually under the threat or use of force, maintain contacts with each other that are not regulated by a single overarching political and legal order. One of these

109 Cooper 2022; Fabian 2021; for a discussion of frontier-zone theory in the contexts of globalization and postcolonial theory, see Hoo, ch. 2, this volume.
110 Turner 1999 (1893).

> collectives plays the role of the invader, whose primary interest is in appropriating and exploiting land and/or other natural resources.[111]

Osterhammel's definition owed much to Owen Lattimore who had identified world historical frontiers in quite different parts of the world: that between China and the Mongolian Steppe and between the central Chinese districts and the southern countries beyond the Pearl River.[112] They were meeting points of people who used to live under very different jurisdictions and norms, as Lattimore put it, and they became zones of particular growth and development. Any frontier zone might once have contained a territorial stopping line, such as a river or mountain range, but in the process of development, this line transformed into one of communication, equipped with bridges and paths that allowed exchange and transport.[113] The outer barbarian frontier toward Mongolia was much more difficult to integrate than the inner one in the southern countries, and any territorial gain in that region was likely to be transitory. Yet the mixed frontier communities developed their own identity, and the Chinese newcomers adopted economic practices that were more similar to their new environment than to those in the core. Interestingly, Lattimore also observed that the Chinese institutional system in premodern times was too rigid ever to fully integrate the communities along the Steppe frontier. Yet, with the advent of industrialization, when both sides industrialized their economic systems, the political integration of the northern frontier also became successful.[114]

Despite the violence of Chinese imperial expansion, the asymmetries that so far had been built into the frontier-zone concept were much reduced in Lattimore's model. Reciprocity and community building were far more important aspects of frontier-zone development, which profited from the marginality and frontier status. Moreover, frontier spaces provided fertile ground for comparative research in which different kinds of frontier processes could be compared. There were weaker and stronger, greater or lesser differences between the social groups that met, and the processes of social integration or political incorporation were more or less successful. Different forms and degrees of integration, different feedback effects on the cores of the empires, and different frontier-zone developments could now be analyzed in specific areas of the world in different times of history.

Frontier-zone research gained further dimensions through Richard White's notion of the middle ground.[115] A middle ground, according to White, developed in locations where natives and newcomers intermingled over longer periods of time. It was not so much the clash of cultures and their consequences that were the most

111 Osterhammel 2014, 326.

112 Korolkov, ch. 6, this volume.

113 Lattimore 1962, 469–500.

114 Lattimore 1962, 89.

115 White 1991; see also Osterhammel 2014, 323 and Feuer 2016, 22 for discussion. White responds in the introduction to White 2011 to the critique his work received.

important phenomena to be analyzed, but the processes by which differences were mediated, the negotiation of common ground, and the outcome of joint interests. In the introduction to the 20th anniversary edition of the original 1991 publication, he wrote:

> A middle ground is the creation, in part through creative misunderstanding, of a set of practices, rituals, offices, and beliefs that although comprised of elements of the group in contact is as a whole separate from the practices and beliefs of all of those groups.[116]

White's places of investigation – the Great Lake region in the sixteenth to nineteenth century – were marked by profound social and political asymmetries and involved high levels of violence and force. Imperial or state regimes of the European conquerors met with nonstate forms of social organization among the Native Americans. Yet the processes of mediation and the innovative outcome of situations of misunderstanding and hostility helped to open up important new lines of investigation.

Comparative frontier studies inspired ancient historian Richard Whittaker, who developed a new approach to the Roman *limes*, which so far had been studied mostly as a military defense line. Whittaker's work is discussed in other places in this handbook.[117] Yet one of the most important contributions to frontier-zone studies was his emphasis on the role of the Roman army as an institution and social group acting within and across frontier zones. The army not only created infrastructure such as roads, bridges, forts, settlements, wells, and markets, in which members of the army and local populations mixed, exchanged, and sometimes intermarried; soldiers also brought their families, monetary stipends, and lifestyles to the frontiers, not as pioneers, administrators, or missionaries, but as people who shaped frontier zones in very different ways (either violently or by mediating a middle ground).[118] Whittaker also emphasized the interrelation between the frontiers and the core, and thus the growth of the Roman Empire as a whole. The growth of the empire and its transformation from Republican to Imperial times, which involved a substantial transformation of provincial administration as well, changed the perception and nature of frontiers in the course of the empire's history. Frontiers had a role to play, and played that role, in the cosmology of imperial rule, which emphasized harmony, order, accessibility, and regularity. Economically and administratively well-integrated frontiers gradually became inner frontiers or semiperipheries. Their borders came to be marked by the location of permanent armies, and their communities liable to regular taxation. There were, furthermore, outer frontiers that were not tributary parts of the empire, but their inhabitants were made allies and friends of the Roman Empire. These frontier zones were much fuzzier, less possible to control, and not accessible for cultivation

116 White 2011, xii.

117 Gregoratti, ch. 10, this volume; von Reden and Speidel, vol. 1, ch. 17, III. 2.

118 Whittaker 1994; 2004.

and surveying by the Romans. How much, however, could these zones still be characterized as meeting points of confrontation and difference?

Lattimore already had come to the conclusion that a frontier was just an imaginary space, invented by academic preconceptions. Only once it was considered as a zone of confrontation did it become a historical reality for the people inhabiting it. From here, it was only a small step to Nicola di Cosmo's grand response to Lattimore's frontier-zone concept. In the Han period, di Cosmo argued, the frontier between the Xiongnu and Chinese was to a large degree an imperial construct of Han historiography with little grounding in the social reality of the people.[119] It was a narrative of a civilizing mission told by Han scholars, subsequently taken over by modern historians who studied these texts. If one looked more closely at the archaeological record, and read Han historiographical texts against the grain of what they aimed to tell us, a far more entangled history of the Han Chinese and Xiongnu emerged. In order to understand the connected history of the Han and Xiongnu in antiquity, and of mobile pastoral and settled agrarian communities more generally, a three-dimensional approach was thus required: one that describes the relationships and conflicts between pastoralists and agriculturalists, while at the same time being aware of the preconceptions of ethnic difference constructed both in antiquity and in modern scholarship.

VII.3 Encounter and Friction

Di Cosmo's work cautions against the idea of frontier zones as quintessential sites of cultural confrontation. Differences might be more construed than real, might serve some particular imperial purpose, or a civilizing mission. For all the problems of delineating frontier zones on a map, it is best, therefore, to return to frontiers as particular socio-geographical spaces, rather than as containers of processes that play a particular role in history. In this volume, we locate frontier zones at the edges of and in between empires, as well as along ecotones.

There is often a long history of interaction (hostile or cooperative) in frontier zones. We will see in chapter 8 that the relationships between mobile populations living in the Eastern Desert of Egypt and sedentary populations along the Upper Nile valley went back to before the time of state formation in Old Kingdom Egypt.[120] There was violent confrontation, shifting alliances, and changing forms of cooperation between these two societies. They were themselves composite and competitive, so that different bodies of these groups could act very differently. Thus, when the Greeks and, later, Romans became active in the Eastern Desert, interaction between the sedentary state and the mobile groups of the desert had a long history. The long-term negotiation of frictions in a socially and ecologically hostile environment rendered

119 Di Cosmo 2002; 2009; succinctly summarized in S. Whitfield 2018, 11–12.
120 Cooper 2022; and von Reden, ch. 8, this volume.

the Eastern Desert much more than an easy frontier zone of empire. Moreover, in their archaeological work in the Bukhara oasis (present-day Uzbekistan), Kidd and Stark have paid particular attention to the mixed agropastoral settlement practices before Sogdiana became a zone of exchange and trade between China and Central Asia.[121] Situated between the Amu and Syr Darya at the intersection of modern-day Uzbekistan, Turkmenistan, Tajikistan, and Kazakhstan, Sogdiana has received much attention as a transit zone of Silk Road trade. The region became a burgeoning commercial center from the fourth century onward.[122] Where did this dynamic come from? Kidd and Stark stress the local nature of Sogdiana's economic development prior to this period.[123] The evidence for the expansion of hydraulic infrastructure showed that canals and other infrastructure for local water management were dug and maintained by local communities that were ruled by what seem to have been pastoral elites rather than members of a sedentary state. The development of the area was agrarian in the first instance, marked by a particular kind of agropastoralism that did not suggest division and confrontation, but interaction and coexistence in different kinds of agropastoral settlement and mixed economic strategies.

Ocean shores and littorals, in contrast, have received relatively little attention as places of encounters and friction. Though maritime research has a long pedigree, dating back to Fernand Braudel's celebrated study of the Mediterranean, the ocean as a connecting space rather than the shore that separates and connects different economic actors and ecologies has attracted most research.[124] For understanding maritime connectivity, however, the social and economic frictions of littoral societies are just as crucial. Littorals quite rightly have been called frontier zones too.[125] Littoral societies live with frontiers in multiple directions: between people who go to sea and those who stay put; between foreigners who come from far away and the people who are local; between people who exchange with the hinterland and those who stay on the coast, and between those who inhabit cosmopolitan coastal communities and those who live in more secluded habitats. Questions of how such frontiers were negotiated in particular circumstances, and how they developed over time, offer important fields of research in the context of Afro-Eurasian maritime exchange.[126]

Andrew Bauer, for example, has emphasized the symbiotic socioeconomic relationships between coastal communities and the cities and communities in their hinterland in the Deccan of west-central India. Not only did coastal communities connect with their hinterland in order to get access to items for export, and vice versa, they

121 Kidd and Stark 2019.

122 See Leese-Messing, ch. 3, this volume.

123 Kidd and Stark 2019; Hansen 2012 on Sogdiana.

124 Wigen 2006; Horden and Purcell 2006.

125 Pearson 2006, also for laying out a field of research for littorals as frontier zones.

126 See Ptak 2007 on the East Asia coasts; Thomas 2012 on Berenike and Myos Hormos on the Red Sea; Bauer 2016 for coast–hinterland relationships in the southern Deccan; Seland 2013 on the network connections of Berenike.

also exchanged with the hinterland local products and resources that often were transformed and reworked there. Rather than being peripheral to either the inland or the ocean, local communities took an active part in shaping the commercial development both of the Deccan and of the Indian Ocean.[127] Behind the stories of interaction and exchange that frontier-zone research addresses, one discovers a number of frictions: between environments and the different socioeconomic practices afforded by them; between social groups that compete for dominance in the environment; and between humans and the environment, which might not lend itself to the use humans wish to put it to.

Frontier zones are never places of enduring difference and conflict. We prefer to approach them as places of encounters and potential friction: ecotones that afford different economic uses and strategies, inter-imperial zones where different economic networks meet and compete, or imperial borderlands where different economic actors negotiate different kinds of interests. We approach frontier zones not as static areas of separation and distinction, but as dynamic zones of economic interaction, competing interests, economic development, and institutional innovation. In the last decade, researchers working from a variety of disciplinary angles have called attention to frontier-zone processes in this way and have probed particular kinds of evidence, including coins, settlement structures, and documentary texts.[128] Using these theoretical and methodological insights, we aim to write economic histories of frontier zones that pay particular attention to the economic potentials and constraints these zones represent.

VIII The Transformation of the Frontier

Frontier zones are thus not immutable sites of resource extraction and transit controlled by imperial markets and states. They are landscapes of intense transformation that affects trade and exchange patterns over long distances. We argue, first, that because frontier zones are contested places among multiple actors whose networks stretch in multiple directions, the reasons for and effects of change are usually multiscalar: from very local or regional to long-distance. Changes in production, consumption, and exchange may be motivated by local political change or marketing possibilities, but their outcome affects exchange networks on a much larger scale and across cultural, political, and environmental borders. Conversely, local actors in a frontier zone might act in the name of changing emperors, or changing imperial structures, but their effects have above all local impact. To select single imperial factors as rea-

127 Bauer 2016.

128 Stark 2008; Alconini 2016; Feuer 2016; Beaule 2017; Düring and Stek 2018; Korolkov 2021; Fabian 2022.

sons for change in frontier zones is as insufficient as to insist on local or regional factors that are locked into parochial perspectives on the wider imperial world. Frontier zones are transformative sites because actors in them respond to multiple challenges created by the interaction of networks of extremely different scales.

Second, entanglement, mediation, appropriation, and reassembling lie at the heart of frontier-zone processes. Frontier zones emerge, thus, as central areas of innovation that affect both the frontier zones themselves and the wider global world. Frontier-zone change may surface in different ways: in the form of developing infrastructure, such as roads, forts, and irrigation networks; in the form of particular kinds of urbanization and settlement; in the form of demographic shifts that move new populations temporarily or permanently into the region; or in the form of new forms of production and consumption that respond to imperial and transimperial influences. Frontier-zone transformation can be prompted by imperial interference (e.g., settlement politics), local responses to imperial change (e.g., imperial expansion and armies in the area), local responses to imperial interference (e.g., changing forms of production as a response to a new fiscal demands), or a combination of all three. But we insist that frontier zones are not just peripheral transit zones, or passive addressees of imperial exploitation or demand, but themselves initiators and incubators of change and transformation.

Third, imperial transformation affects the power and connectivity of frontier zones. The project on which this handbook is built started from the contention that the growth of empires between 300 BCE and 300 CE created new spaces for inter- or transimperial exchange, network building, and trade. New ecologies were integrated into imperial orbits, becoming ecological frontier zones in the ways just described. It is interesting to note, however, that toward the end of our imperial period, when the main players in the Afro-Eurasian imperial space – the Han, Arsakid, and Roman Empires – began to decline or transform, many communities and polities in frontier zones emerged as particularly dynamic political and economic actors. The rise of the empire of Axum (in present-day Ethiopia) that united the kingdoms of Lower Nubia, Upper Egypt, and southern Arabia from the fourth century CE onward is one example (ch. 8, this volume); the unprecedented centrality of the Hexi Corridor after the demise of Han power is another (ch. 3, this volume). The growth of autonomous economic networks between southern China, southeast Asia and the Bay of Bengal after the decline of Han power in central China also raises questions about the long-term effects of empires on frontier zones in postimperial periods (ch. 6, this volume). Demographic shifts together with new religious orders, and new identity structures from the fourth century CE onward led to new degrees and changing directions of population movement, new forms of consumption, and changing exchange networks.[129] The transformation of the imperial world that is the focus of this handbook led to new

129 See above all Leese-Messing, ch. 3.V, this volume; di Cosmo and Maas 2018; and von Reden, vol. 1, Introduction, 3, with Fowden 1993.

economic geographies in which former frontier zones emerged as hubs in new Afro-Eurasian economies.

References

Adams, C. 2007. *Land transport in Roman Egypt: A study of the economics and administration in a Roman province*. Oxford: Oxford University Press.

Alcock, S. E. 1993. *Graecia Capta: The landscapes of Roman Greece*. Cambridge: Cambridge University Press.

Alcock, S. E., J. Bodel, and R. J. A. Talbert, eds. 2012. *Highways, byways, and road systems in the pre-modern world*. Malden, MA: Wiley-Blackwell.

Alconini, S. 2016. *Southeast Inka frontiers: Boundaries and interactions*. Gainesville, FL: University Press of Florida.

Assmann, J. 2018. *Achsenzeit: Eine Archäologie der Moderne.* Munich: Beck.

Bauer, A. 2016 "Provincializing the littoral in Indian Ocean heritage: Coastal connections and interior contexts in the southern Deccan." In K. Vatsyayana and H. P. Ray (eds.), *Bridging the gulf: Maritime heritage of the western Indian Ocean*, 101–119. Manohar: India International Center.

Beaule, C. D., ed. 2017. *Modelling cross-cultural interaction in ancient borderlands*. Gainesville, FL: University Press of Florida.

Benjamin, C. 2018. *Empires of Eurasia. The first Silk Roads era, 100 BCE–250 CE*. Cambridge: Cambridge University Press.

Bentley, J. H. 1993. *Old World encounters: Cross-cultural contacts and exchanges in pre-modern times.* Oxford: Oxford University Press.

Bergman, F. 1939. *Archaeological researches in Sinkiang: Especially the Lop-Nor region.* Stockholm: Bokförlags Aktiebolaget Thule.

Berta, M. and F. Frassoldati. 2019. "New urbanisation and 'go west' policies." In M. Bonino, F. Governa, and M. P. Repellino (eds.), *The city after Chinese new towns: Spaces and imaginaries from contemporary urban China*, 78–90. Basel: Birkäuser.

Biarnès, P. 2008. *La Route de la Soie: Une histoire géopolitique.* Paris: Ellipses.

Billé, F., F. S. Mehendale, and J. W. Lankton. 2022. "The maritime Silk Road: An introduction." In idd. (eds.), *The maritime Silk Road: Global connectivities, regional nodes, localities*. 11–23. Amsterdam: Amsterdam University Press.

Boozer, A. L. 2018. "The archaeology of imperial borderlands: A view from Roman Egypt and Sudan." In Düring and Stek (2018), 206–239.

Brennecke, D. 1986. *Sven Hedin: Mit Selbstzeugnissen und Bilddokumenten*. Hamburg: Rowolt.

Briant, P. 2002. *From Cyrus to Alexander: A history of the Persian Empire*. Winona Lake, IN: Eisenbrauns.

–. 2012. "From the Indus to the Mediterranean: The administrative organization and logistics of the great roads of the Achaemenid Empire." In Alcock, Bodel, and Talbert (2012), 185–201.

Brosseder, U. 2015. "Complexity of interaction and exchange in Late Iron Age Eurasia." In J. Bemmann and M. Schmauder (eds.), *Complexity and interaction along the Eurasian steppe zone in the first millennium CE*, 199–333. Bonn: Rheinische Friedrich-Wilhelms Universität.

Brown, P. 2018. "Charismatic goods: Commerce, diplomacy, and cultural contacts along the Silk Road in late antiquity." In N. di Cosmo and M. Maas (eds.), *Empires and exchanges in Eurasian late antiquity: Rome, China, Iran, and the Steppe, ca. 250–750*, 96–107. Cambridge: Cambridge University Press.

Brughmans, T. 2010. "Connecting the dots: Towards archaeological network analysis." *Oxford Journal of Archaeology* 29.3, 277–303.

Cameron, H. 2019. *Making Mesopotamia: Geography and empire in a Romano-Iranian borderland*. Leiden: Brill.

Chaniotis, A. 2018. *Age of conquest: The Greek world from Alexander to Hadrian*. London: Profile Books.

Chase-Dunn, C. and T. D. Hall. 1997. *Rise and demise: Comparing world systems.* Oxford: Oxford University Press.

Chin, T. T. 2010. "Defamiliarizing the foreigner: Sima Qian's ethnography and Han-Xiongnu marriage diplomacy." *Harvard Journal of Asiatic Studies* 70.2, 311–354.

–. 2013. "The invention of the Silk Road, 1877." *Critical Inquiry* 40.1, 184–219.

–. 2014. *Savage exchange: Han imperialism, Chinese literary style, and the economic imagination.* Cambridge, MA: Harvard University Press.

–. 2016. "What is imperial cosmopolitanism? Revisiting *Kosmopolites* and *Mundanus.*" In M. Lavan, R. E. Payne, and J. Weisweiler (eds.), *Cosmopolitanism and empire: Universal rulers, local elites, and cultural integration in the Ancient Near East and Mediterranean,* 129–152. Oxford: Oxford University Press.

Christian, D. 2000. "Silk Roads or Steppe Roads? The Silk Roads in world history." *Journal of World History* 11.1, 1–26.

Colburn, H. P. 2013. "Connectivity and communication in the Achaemenid Empire." *Journal of the Economic and Social History of the Orient* 56, 29–52.

Cooper, J. 2022. "Children of the desert. The indigenes of the Eastern Desert in the Pharaonic period and the longue durée." In Cuvigny, H. (ed.), *Blemmyes. New documents and new perspectives. Including O. Blem. 1–107.* 5–40. Cairo: Institut Français d'Archéologie Orientale.

Curtin, P. 1984. *Cross-cultural trade in world history*. Cambridge: Cambridge University Press.

Daryaee, T. 2020. "Arsacid economic activity on the Silk Road." In Lerner and Shi (2020a), 215–222.

Dean, R. 2015. "The location of Ptolemy's Stone Tower: The case of Sulaiman Too in Osh." *The Silk Road* 13, 75–83.

–. 2022. *The Stone Tower: Ptolemy, the Silk Road, and a 2,000-year-old riddle*. Sikanderpur: Penguin Random House.

De Romanis, F. 2020. *The Indo-Roman pepper trade and the Muziris papyrus.* Oxford: Oxford University Press.

Di Cosmo, N. 2002. *Ancient China and its enemies: The rise of nomadic power in East Asian history*. Cambridge: Cambridge University Press.

–. 2009. "Han imperial frontiers: Toward an integrated approach." *Journal of the American Oriental Society* 129.2, 199–214.

–. 2020. "The 'birth' of the Silk Road between ecological frontiers and military innovation." In Lerner and Shi (2020a), 11–20.

Di Cosmo, N. and M. Maas. 2018. "Introduction." In N. di Cosmo and M. Maas (eds.), *Empires and exchanges in Eurasian late antiquity: Rome, China, Iran, and the Steppe, ca. 250–750*, 1–15. Cambridge: Cambridge University Press.

Düring, B. S. and T. D. Stek, eds. 2018. *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*. Cambridge: Cambridge University Press.

Evers, K. G. 2017. *Worlds apart trading together: The organisation of long-distance trade between Rome and India in antiquity*. Oxford: Archaeopress.

Fabian, L. 2021. "Beyond and yet in-between: The Caucasus and the Hellenistic *oikoumene*." In M. Blömer, S. Riedel, M. J. Versluys, and E. Winter (eds.), *Common dwelling place of all the gods*, 357–397. Stuttgart: Franz Steiner.

Feuer, B. 2016. *Boundaries, borders and frontiers in archaeology: A study of spatial relationships*. Jefferson, NC: McFarland and Company.

Forêt, P. 2008. "Sven Hedin and the invention of climate change." In I. Oldberg (ed.), "Sven Hedin and Eurasia: Knowledge, adventure and geopolitics. Proceedings of a symposium in Stockholm, 10 November 2007." Special issue, *Östbulletinnen* 12.5, 29–34.

Fowden, G. 1993. *Empire to commonwealth: Consequences of monotheism in late antiquity*. Princeton, NJ: Princeton University Press.

Frankopan, P. 2015. *The Silk Road: A new history of the world*. London: Bloomsbury.
Gräbel, C. 2015. *Die Erforschung der Kolonien: Expedition und koloniale Wissenskultur deutscher Geographen, 1884–1919*. Bielefeld: Transcript.
Graf, D. F. 1994. "The Persian royal road system." In H. Sancisi-Weerdenburg, A. Kuhrt, and M. Cool Root (eds.), *Achaemenid history*. Vol. 8, 167–189. Leiden: Nederlands Instituut voor het Nabije Oosten.
–. 2018. "The Silk Road between Syria and China." In A. Wilson and A. Bowman (eds.), *Trade, commerce and the state in the Roman world*, 443–529. Oxford: Oxford University Press.
Gregoratti, L. 2020a. "The need for a Third Space, geographical and political spaces at the periphery of the Parthian and Roman empires: Some preliminary remarks." In I. B. Mæhle, P. B. Ravnå, and E. H. Seland (eds.), *Methods and models in ancient history: Essays in honor of Jørgen Christian Meyer*, 221–230. Athens: The Norwegian Institute at Athens.
–. 2020b. "Augustus and the Parthians." In C. Pimentel, A. M. Lóio, R. Furtado, and N. S. Rodrigues (eds.), *Augustan papers: New approaches to the age of Augustus on the bimillennium of his death*. Vol. 1, 79–94. Hildesheim: Georg Holms.
Haines, C. 2020. "Erasing the local, celebrating the local: Tracing contradictions of the Silk Road in Pakistan." In Lerner and Shi (2020a), 197–214.
Hannerz, U. 2009. "Geocultural scenarios." In P. Hedström and B. Wittrock (eds.), *Frontiers of sociology*, 267–288. Leiden: Brill.
Hansen, V. 2012. *The Silk Road: A new history*. Oxford: Oxford University Press.
–. 2017. *The Silk Road: A new history with documents*. Oxford: Oxford University Press.
Hauser, S. 2017 " Isidor von Charax Σταθμοὶ Παρθικοί: Annäherung an den Autor, den Routenverlauf und die Bedeutung des Werkes." In J. Wiesehöfer and S. Müller (eds.), *Parthika: Greek and Roman authors' views of the Arsacid Empire / Griechisch-römische Bilder des Arsakidenreiches*, 127–189. Wiesbaden: Harrassowitz.
Haynes, R. 2019. "Travel writing and the desert." In N. Das and T. Young (eds.), *The Cambridge history of travel writing*, 315–329. Cambridge: Cambridge University Press.
Hedin, S. A. (1925) 2003. *My life as an explorer.* A. Huebsch (trans.). New York, NY: Kodansha.
–. 1905. *Lop Nor: Scientific results of a journey in Central Asia (1889–1902)*. Vol. 2. Stockholm: Kungl Boktryckeriet PA Norstedt & Soner.
–. 1940 *The wandering lake*. F. H. Lyon (trans.). London: George Routledge and Sons, Ltd.
Henning, A. 2001. *Die Turmgräber von Palmyra: Eine lokale Bauform als Ausdruck kultureller Identität.* PhD diss., Universität zu Köln. Available online: http://kups.ub.uni-koeln.de/id/eprint/1325.
Herrmann, A. 1910. *Die alten Seidenstraßen zwischen China und Syrien*. Berlin: Weidmannsche Buchhandlung.
–. 1915. "Die Seidenstraßen von China nach dem Römischen Reich." *Mitteilungen der Geographischen Gesellschaft in Wien* 58, 472–488.
–. 1922. *Die Verkehrswege zwischen China, Indien und Rom um 100 nach Chr. Geburt*. Leipzig: J. C. Hinrichs'sche Buchhandlung.
–. 1935. *Historical and commercial atlas of China.* Cambridge, MA: Harvard University Press.
Hitchner, R. B. 2012. "Roads, integration, connectivity, and economic performance in the Roman Empire." In Alcock, Bodel, and Talbert (2012), 222–234.
Hodos, T. 2017. "Globalization: Some basics. An introduction to the Routledge handbook of archaeology and globalization." In Hodos, T. (ed.), *The Routledge handbook of archaeology and globalization*, 1–22. London: Routledge.
Höllmann, T. O. 2022. *China und die Seidenstraße: Kultur und Geschichte von der frühen Kaiserzeit bis zur Gegenwart*. Munich: Beck.
Honeychurch, W. 2014. "From steppe roads to Silk Roads: Inner Asian nomads and early interregional exchange." In R. Amitai and M. Biran (eds.), *Nomads as agents of cultural change: The Mongols and their Eurasian predecessors*, 50–87. Honolulu, HI: University of Hawaii Press.
Hopkirk, P. 1980. *Foreign devils on the Silk Road: The search for the lost cities and treasures of Chinese Central Asia*. Amherst, MA: University of Massachusetts Press.

Hordon, P. and N. Purcell. 2006. “The Mediterranean and the new thalassocracy.” *American Historical Review* 111.3, 722–740.

Ikle, F. W. 1968. “Sir Aurel Stein: A Victorian geographer in the tracks of Alexander.” *Isis* 59.2, 144–155.

Kidd, F. and S. Stark 2019. “Urbanism in antique Sogdiana.” In C. Baumer and N. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids*, 163–183. Wiesbaden: Harrassowitz.

Kish, G. 1984. *To the heart of Asia: The life of Sven Hedin*. Ann Arbor, MI: University of Michigan Press.

Knutson, S. A. 2021. “Archaeology and the Silk-Road model.” *World Archaeology* 52: 619–638.

Kolb, A., ed. 2019. *Roman roads: New evidence – new perspectives*. Berlin: De Gruyter.

Kolb, A. and M. Speidel. 2017. “Imperial Rome and China: Communication and information transmission.” In M. D. Elizalde and J. Wang (eds.), *China’s development from a global perspective*, 28–56. Newcastle upon Tyne: Cambridge Scholars Publishing.

Korolkov, M. 2021. *The Imperial network in ancient China: The foundation of Sinitic empire in southern East Asia*. London: Routledge.

Kosmin, P. 2017. “The politics of science: Eratosthenes’ geography and Ptolemaic imperialism.” *Orbis Terrarum* 15, 100–111.

–. 2014. *The land of the elephant kings: Space, territory, and ideology in the Seleucid Empire*. Cambridge, MA: Harvard University Press.

Kreutzmann, H. 2008. “Geographical research in Chinese Central Asia: Aims and ambitions of international explorers in the 19th and 20th centuries.” *Die Erde* 138.4, 369–384.

Lattimore, O. 1962. *Studies in frontier history: Collected papers 1928–1958*. Oxford: Oxford University Press.

Lerner, J. D. and Y. Shi, eds. 2020a. *Silk Roads: From local realities to global narratives*. Oxford: Oxbow Books.

–. 2020b. “Introduction.” In Lerner and Shi (2020a), 1–10.

Lewis, M. E. 2007. *The early Chinese empires*: *Qin and Han*. Cambridge: Cambridge University Press.

Liu, C., J.-F. Zhang, P. Jiao, and S. Mischke. 2016. “The Holocene history of Lop Nur and its palaeoclimate implications.” *Quaternary Science Reviews* 148, 163–175.

Marchand, S. L. 2009. *German orientalism in the age of empire: Religion, race, and scholarship*. Cambridge: Cambridge University Press.

Mertens, M. 2019. “Did Richthofen really coin ‘The Silk Road?’” *The Silk Road* 17, 1–9.

Meyer, K. E. and S. Blair Brysac. 1999. *Tournament of shadows: The Great Game and the race for empire in Central Asia*. Washington, D.C.: Counterpoint.

Mischke, S., C. Zhang, C. Liu, J. Zhang, Z. Lai, and H. Long. 2019. “Landscape response to climate and human impact in western China during the Han dynasty.” In L.-E. Yang, H.-R. Bork, X. Fang, and S. Mischke (eds.), *Socio-environmental dynamics along the historical Silk Road,* 45–66. Cham: Springer.

Mishra, R. K. 2020. “The Silk Road: Historical perspectives and modern constructions.” *Indian Historical Review* 47.1, 21–39.

Mitchell, S. 1999. “The administration of Roman Asia from 133 BC to AD 250.” In W. Eck (ed.), *Lokale Autonomie und römische Ordnungsmacht in den kaiserzeitlichen Provinzen vom 1. Bis 3. Jahrhundert*, 17–46. Munich: Oldenbourg.

Morin, E. 2012. “Fraternity on the Silk Road: The relationship of Aurel Stein and Sven Hedin.” In H. Wang (ed.), *Sir Aurel Stein: Colleagues and collections*, 1–5. London: British Museum Press.

Neelis, J. 2011. *Early Buddhist transmission and trade networks: Mobility and exchange within and beyond the north-western borderlands of South Asia*. Leiden: Brill.

–. 2012. “Overland shortcuts for the transmission of Buddhism.” In Alcock, Bodel, and Talbert (2012), 12–32.

Osterhammel, J. 1987. “Forschungsreise und Kolonialprogramm: Ferdinand von Richthofen und die Erschließung Chinas im 19. Jahrhundert.” *Archiv für Kulturgeschichte* 69, 150–197.

–. 2008. “Das Große Spiel in Zentralasien.” In C. Trümpler (ed.), *Das Große Spiel: Archäologie und Politik zur Zeit des Kolonialismus (1860–1940)*, 147–153. Cologne: DuMont.

–. (2009) 2014 *The transformation of the world*. P. Camiller (trans.). Princeton, NJ: Princeton University Press. Originally published as *Die Verwandlung der Welt*.

Paprocki, M. 2019. *Roads in the deserts of Roman Egypt: Analysis, atlas, commentary.* Oxford: Oxbow Books.
Parker, B. J. 2002. "At the edge of empire: Conceptualizing Assyria's Anatolian frontier ca. 700 BC." *Journal of Anthropological Archaeology* 21, 371–395.
Parzinger, H. 2008. "The 'Silk Roads' concept reconsidered: About transfers, transportation and transcontinental interactions in prehistory." *The Silk Road* 5.2, 7–15.
Pearson, M. N. 2006 "Littoral society: The concept and the problem." *Journal of World History* 117.4, 353–373.
Piankov, I. 2015. "Maes Titianus, Ptolemy and the Stone Tower." *The Silk Road* 13, 60–74.
Pitts, M. and M. J. Versluys, eds. 2015. *Globalisation in the Roman world*. Cambridge: Cambridge University Press.
Ptak, R. 2007. *Die maritime Seidenstraße*. Munich: Beck.
Qin, X., J. Liu, H. Jia, H. Lu, X. Xia, L. Zhou, G. Mu, Q. Xu, and Y. Jiao. 2011. "New evidence of agricultural activity and environmental change associated with the ancient Loulan kingdom, China, around 1500 years ago." *Holocene* 22.1, 53–61.
Raschke, M. G. 1978. "New studies in Roman commerce with the East." In H. Temporini (ed.), *Aufstieg und Niedergang der römischen Welt.* Part 2, vol. 9.2, 604–1378. Berlin: De Gruyter.
Rezakhani, K. 2010. "The road that never was: The Silk Road and trans-Eurasian exchange." *Comparative Studies of South Asia, Africa and the Middle East* 30.3, 420–443.
Salomon, B. 2013. *Sven Hedin im Auftrag der chinesischen Zentralregierung: Die Seidenstraßenexpedition 1933–1935.* Diplomarbeit, Universität Wien.
Sandner, G. and M. Rössler. 1994. "Geography and empire in Germany, 1871–1945." In A. Godlewska and N. Smith (eds.), *Geography and empire*, 115–127. Cambridge, MA: Blackwell.
Sartre, M. 2000. "Syria and Arabia." In A. K. Bowman, P. Garnsey, and D. W. Rathbone (eds.), *The Cambridge Ancient History*. 2nd ed. Vol. 11, 636–663. Cambridge: Cambridge University Press.
Schewardnadse, E. 1999. *Die neue Seidenstraße: Verkehrsweg ins 21. Jahrhundert*. Munich: Econ.
Schmidt-Colinet, A., A. al-As'ad, and W. al-As'ad. 2016. "Palmyra, 30 years of Syro-German/Austrian archaeological research (Homs)." In Y. Kanjou and A. A. Tsuneki (eds.), *A history of Syria in one hundred sites*, 339–348. Oxford: Archaeopress.
Schulz, R. 2016. *Abenteuer der Ferne: Die großen Entdeckungsfahrten und das Weltwissen der Antike.* Stuttgart: Klett-Cotta.
Schuol, M. 2017. "Isidor von Charax und die literarische Gattung der *stathmoi.*" In J. Wiesehöfer and S. Müller (eds.), *Parthika: Greek and Roman authors' views of the Arsacid Empire / Griechisch-römische Bilder des Arsakidenreiches*, 71–87. Wiesbaden: Harrassowitz.
Seland, E. H. 2013. "Networks and social cohesion in ancient Indian Ocean trade: Geography, ethnicity, religion." *Journal of Global History* 13, 373–393.
Sellars, P. 2019. "Foreword." In S. Whitfield (2019), 10.
Sidebotham, S. E. 2011. *Berenike and the ancient maritime spice route*. Berkeley, CA: University of California Press.
Speidel, M. 2019. "From Nabataea to Arabia: Some economic consequences of becoming a Roman frontier province." In D. Nappo and G. D. Merola (eds.), *Econonomia e Frontiera nell'Impero Romano*, 95–110. Bari: Edipuglia.
Spengler, R. N. 2019. *Fruit from the sand: The Silk Road origins of the food we eat*. Oakland, CA: University of California Press.
Stark, S. 2008. "Approaching the periphery: Highland Ustrûshana in the pre-Mongol period." In E. de la Vaissière (ed.), *Islamisation de l'Asie Central: Processus locaux d'acculturation du VIIe au XIe siècle*, 215–238. Paris: Association pour L'Avencement des Études Iraniennes.
Stein, A. 1928. *Innermost Asia: Detailed report of explorations in Central Asia, Kansu, and Eastern Iran carried out and described under the orders of H. M. Indian government*. Vol. 2. Oxford: Clarendon Press.
Stek, T. D. and B. S. Düring. 2018. "Towards a patchwork perspective on ancient empires." In Düring and Stek (2018), 351–362.

Thomas, R. I. 2012. “Port communities and the Erythraean Sea.” *British Museum Studies in Ancient Egypt and Sudan* 18, 169–199.

Tiessen, E., ed. 1933. *Meister und Schüler: Ferdinand Freiherr von Richthofen an Sven Hedin*. Berlin: Reimer.

Trivellato, F. 2014. “Introduction: The historical and comparative study of cross-cultural trade.” In F. Trivellato, L. Halevi, and C. Antunes (eds.), *Religion and cross-cultural exchanges in world history, 1000–1900*, 1–23. Oxford: Oxford University Press.

Turner, J. (1893) 1999. “The significance of the frontier in American history.” In J. M. Faragher (ed.), *Rereading Frederick Jackson Turner: “The significance of the frontier in American history,” and other essays*. 31–60. New Haven, CT: Yale University Press.

Versluys, M. J. 2014. “Understanding objects in motion: An archaeological dialogue on Romanization.” *Archaeological Dialogues* 21.1, 1–20.

Versluys, M. J. and D. Pitts. 2015. “Globalization and the Roman world: Perspectives and opportunities.” In Pitts and Versluys (2015), 3–31.

–. 2021. “Objectscapes: A manifesto for investigating the impact of object flows on past societies.” *Antiquity* 95, 367–381.

von Falkenhausen, L. 2000. “Die Seiden mit chinesischen Inschriften.” In A. Schmidt-Colinet and A. Staufer (eds.), *Die Textilien aus Palmyra: Neue und alte Funde*, 58–81. Mainz: Philipp von Zabern.

von Richthofen, F. 1877a. *Ergebnisse eigener Reisen und darauf gegründeter Studien*, Vol. 1. Berlin: Reimer.

–. 1877b. “Über die centralasiatischen Seidenstrassen bis zum 2. Jahrhundert n. Chr.” *Verhandlungen der Gesellschaft für Erdkunde zu Berlin* 4, 96–122.

–. 1898. *Schantung und seine Eingangspforte Kiautschou*. Berlin: Reimer.

Wang, H. 2002. “Introduction.” In H. Wang (ed.), *Sir Aurel Stein in The Times: A collection of over 100 references to Sir Aurel Stein and his extraordinary expeditions to Chinese Central Asia, India, Iran, Iraq and Jordan in The Times newspaper 1901–1943*, 13–25. London: Eastern Art Publishing.

Wardenga, U. 2007. “Ferdinand von Richthofen and the development of German geography.” *Die Erde* 138.4, 313–332.

Waugh, D. C. 2001. “A Sven Hedin bibliography.” Silk Road foundation. http://www.silkroadfoundation.org/bibliography/hedinb3.html

–. 2007. “Richthofen’s ‘Silk Roads’: Toward the archaeology of a concept.” *The Silk Road* 5.1, 1–10.

–. 2010. “Richthofen’s ‘Silk Roads’: Toward the archaeology of a concept” (updated version of Waugh 2007). University of Washington faculty web server. http://faculty.washington.edu/dwaugh/publications/waughrichthofen2010.pdf.

Wen, X. 2023. *The king’s road: Diplomacy and the remaking of the Silk Road.* Princeton, NJ: Princeton University Press.

Wennerholm, E. 1978. *Sven Hedin: En biografi*. Stockholm: Bonniers.

Werning, J. 2007. “Auferstanden aus dem Sand. Archäologie in Xinjang.” In A. Wiezorek and C. Lind (eds.), *Ursprünge der Seidenstraße*, 31–39. Mannheim: Reiss Engelhorn Museum.

Wigen, K. 2006. “Oceans of history: Introduction. [AHR Forum].” *American Historical Review* 111.3, 717–722.

–. 2007. “Introduction.” In J. H. Bentley, R. Bridenthal, and K. Wigen (eds.), *Maritime histories, littoral cultures, and transoceanic exchanges*, 1–20. Honolulu, HI: University of Hawaii Press.

White, R. 1991. *The middle ground: Indians, empires, and republics in the Great Lakes region, 1650–1815*. Cambridge: Cambridge University Press.

–. 2011 “Preface to the 20th anniversary edition.” In R. White, *The middle ground: Indians, empires, and republics in the Great Lakes Region, 1650–1815*. 2nd ed., xi–xxxiv. Cambridge: Cambridge University Press.

Whitfield, P. 2019. “Mapping the Silk Roads.” In S. Whitfield (2019), 20–39.

Whitfield, S. 2015. *Life along the Silk Road*. 2nd ed. Oakland, CA: University of California Press.

–. 2018. *Silks, slaves and stupas: Material culture and the Silk Road*. Oakland, CA: University of California Press.

–, ed. 2019. *Silk Roads: Peoples, cultures, landscapes*. London: Thames & Hudson.
Whittaker, C. R. 1994. *Frontiers of the Roman Empire: A social and economic study*. Baltimore, MD: Johns Hopkins University Press.
–. 2004. *Rome and its frontiers: The dynamics of empire.* London: Routledge.
Winter, T. 2022. *The Silk Road: Connecting histories and futures*. Oxford: Oxford University Press.
Zuchowska, M. 2016. "Palmyra and the Chinese silk trade." In J. C. Meyer, E. H. Seland, and N. Anfinset (eds.), *Palmyrena: City, hinterland and caravan trade between orient and occident*, 29–39. Oxford: Archaeopress.

Milinda Hoo

2 Global History and the Study of Frontier Zones in Ancient Afro-Eurasia: A Postcolonial Endeavor

I Introduction

Recent decades saw a decisive shift in spatial imaginations of classical antiquity. The ancient world is now increasingly considered a globalized world, its geography seen as polycentric, its dynamics as interconnected, and its history as world history.[1] Greece and Rome now share foundational place with other centers of connectivity in global configurations of the ancient Afro-Eurasian world, stretching far beyond the geographies of the Mediterranean basin.[2] Timely interests in such global configurations have incited immense fame and fascination for 'Silk Road history' to apprehend the rapid transformative interconnectedness of the Afro-Eurasian world from the third century BCE onward.[3] Often considered as the ultimate story of premodern globalization, a precursor to our modern globalized times, the Silk Road narrative presents the ancient world as a vibrant commercial 'commonwealth' where goods,

1 See, for instance, new narratives on the ancient world in Scott 2016; Burstein 2017; Seland 2022; as also, more specifically engaging with globalization theories to understand the ancient world and its connectivities, Pitts and Versluys 2015a; Hodos 2016; Boivin and Frachetti 2018; Hodos 2020; Autiero and Cobb 2021; Blömer et al. 2021; and Versluys forthcoming, amongst others; cf. Altaweel and Squitieri 2018 with an emphasis on universalism; and Malkin 2011; Collar 2013; Hall and Osborne 2022 with an emphasis on networks.

2 Afro-Eurasia as used in this handbook refers to the world region of North Africa, Europe, and Asia as a macro-unit of analysis, based on local, regional, and global transimperial connectivities across this space. It encompasses the Greek mainland, Egypt, the Red Sea, Western Asia, Central Asia, the Inner Asian steppes, the Indian subcontinent, and East Asia (von Reden, vol. 1, Introduction, 2). For the term Afro-Eurasia as a suitable arena for global history see Hodgson 1963; Frank and Gill 1993; Bentley 1998; Chase-Dunn and Hall (1997) 2018, 149–186; cf. the thoughtful discussion in Hann 2016 in relation to the term 'Eurasia.'

3 This moment of globality in the third century BCE has been connected to the oft-cited passage of Polybios who observed an increasing connectivity of the *oikoumene*: "ever since this date [ca. 220 BCE], history has been an organic whole: the affairs of Italy and Libya have been interlinked (συμπλέκεσθαί) with those of Greece and Asia, all leading up to one end" (Polyb. 1.1.3, transl. Paton 2010, instructive discussion in Inglis and Robertson 2005; Benjamin 2014). Common narratives, however, anchor the beginnings of the Silk Road in the second century BCE, often evoking the date of 138 BCE as the foundational moment of the 'opening' of the Silk Road, launched by the diplomatic mission of Zhang Qian (164–114 BCE), who was sent by the Han emperor Wudi (r. 141–187 BCE) to the 'Western regions' in Central Asia to seek support of the Dayuezhi against their common enemy: the Xiongnu (Sima Qian, *Shiji* 123). See Christian 2000 for reflection on the chronology of the Silk Roads; cf. Leese-Messing, ch. 3, II.1, this volume, for the origins of the idea of such an 'opening' of the Silk Road.

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religions, language, and ideas flowed freely across lands, continents, and seas, driven and facilitated by lucrative long-distance networks of exchange, communication, and cooperation between Han China and the Roman Mediterranean.[4] With a commitment to connectivity, this vision of history promises a novel narrative of rich intercultural contact and human collaborative achievement, shifting the focus from contained areas to connective histories. Yet, as critically outlined by Sitta von Reden (ch. 1), the harmonized success story of the Silk Road has not only served nationalist, colonial, and neo-imperial narratives and ambitions since Ferdinand von Richthofen's popularization of the term in the nineteenth century, but also profoundly obscured and overlooked various historical frictions, conflicts, and a diverse range of local and regional actors in the various spaces in between Rome and China whose voices became lost in the crossroads of civilization.[5] In the vagaries of Silk Road rhetorics, these in-between regions and their 'long-forgotten' kingdoms and polities have been positioned as marginal places, written into history as peripheral spaces between domains of perceived centralities in the West and the East but deprived of being recognized as historically meaningful in their own right. These in-between regions, here referred to as the frontier zones of imperial space, are the topic of this volume, pushed into the limelight of historical analyses.

In service of this handbook volume's objective to historicize economic processes of the Afro-Eurasian world region beyond the Silk Road narrative, this chapter is concerned with embedding the study of ancient frontier zones in the theoretical logics of globalization on the one hand, and with the intellectual agenda of postcolonial studies on the other. At first glance, the combination of frontier zones, globalization, and postcolonialism appears an impossible trinity of subject matter. After all, frontier zones are associated with zonal limits of space within an implied geography of distinct (political) entities, and thus hardly compatible with the borderless decentralized world of cultural ties and flows that globalization presumably represents. The conceptual origins of 'frontiers' further carry significant colonial baggage, much of it related to American expansionism, exploitation, and violent subjugation of indigenous peoples. These trappings might make the focus on frontier zones one that risks reproducing, rationalizing, and reifying landscapes according to colonialist geographies and thus one that might be considered counterintuitive in light of aspirations to redeem ancient Afro-Eurasian history from the essentialist rhetorics of the Silk Road – itself a term produced in imperial times.[6] Globalization, in turn, has not only been considered as a consequence of modernity and therefore conceptually unsuited for studies

4 See modern narratives in, amongst others, Liu 2010; Frankopan 2015; Benjamin 2018, 1–15; Whitfield 2019.

5 Von Reden, ch. 1, this volume, with thoughtful analysis and bibliography; see also Leese-Messing, ch. 3, I.1, this volume, and recent discussion in Winter 2022.

6 For the imperial context surrounding the emergence of the concept, see Osterhammel 1987; Rezakhani 2010; Chin 2013; see also Hopkirk 1980; Winter 2022, 23–91 particularly in relation to the adventurous travel spirit of the early 1900s.

of antiquity, but has also received harsh criticism by some postcolonial theorists who view it as a new form of imperialism that thrives on grand narratives of a borderless interconnected world at the expense of diverse local realities and deep economic inequalities.[7]

As it seems, the relationships between frontier zones, globalization, and postcolonialism are difficult, complex, and even perceptibly contradictory. Yet, it should not be overlooked that ancient economies did not amount to a single global capitalist market economy, and that imperialism and colonization in antiquity operated in vastly different ways than modern colonizations.[8] As I will argue, frontier zones, globalization, and postcolonialism can form a productive combination for investigating ancient economic processes on various scales if they are not objectified as predetermined phenomena – reified in time and space – but rather treated as part of a heuristic constellation that facilitates the endeavor of global history writing. Broadening rather than restricting the analytical terrain, they are able to direct unprecedented light, thought, and theorization on a diverse range of transscalar interactions on the edge of empires that fundamentally shaped and spurred broader transimperial connectivities, as the various chapters in this volume demonstrate. Complementing the chapters to come, it is thus my goal in the following sections to unravel the uncanny relationships between frontier zones, globalization, and postcolonialism and canvass their combined heuristic potential for writing global history of ancient Afro-Eurasian economies.

II Frontier Zones in a Globalizing World

The untangling of these relationships proceeds in a discussion of two main paradoxes and the interlinkage between them. The first paradox forms around the interest in frontier zones as peripheral territorial entities on the one hand, and conceptions of interconnectivity in globalization theory on the other. Phrased differently: how does this handbook, operating in the domain of global history with connectivities and interactions at its methodological core, integrate the notion of frontier zones as its object of study?[9] The second paradox proceeds from the first one and forms around the broad perspectives that globalization offers and the endeavor of postcolonialism to challenge grand narratives. In other words: how do globalization and postcolonial-

7 See Giddens 1990 for globalization as a consequence of modernity; Naerebout 2006 for specific criticism in relation to antiquity; and further discussion in Jennings 2011, 1–34; Versluys 2014; Pitts and Versluys 2015b; Hoo vol. 2, ch. 1; Hoo 2022, 229–243.

8 For Western historiographies on the ancient economy, see von Reden and Speidel, vol. 1, ch. 17; for thoughtful discussion on ancient and modern colonizations, see van Dommelen 1997; Dietler 1998; 2005; Hurst and Owen 2005, as also n. 50.

9 For global history as this handbook's domain of operation, see Hoo, vol. 2, ch. 1.

ism align with this handbook's endeavor of writing global history beyond the essentialist tenets of the Silk Road model?

II.1 Frontiers and Frontier Zones in History

To untangle the first paradox, we must first address terminology. What is a frontier zone? Intuitively and at its very simplest, a frontier refers to a type of boundary that establishes a real or constructed demarcation of an inner space in relation to an outer space, with the area around the frontier signified as a frontier zone. Frontiers and frontier zones are often used as synonyms for borders and borderlands, respectively, yet both sets of terms accompany different connotations that are worth clarifying. Pertaining to the particular quality of an in-between space, both borders and frontiers belong to what Bradley Parker described as a continuum of boundary dynamics or boundary situations.[10] In this continuum, borders represent crystallized boundaries that can be crossed or contested and therefore relate to more static or restrictive dividing lines between political units. Borders and borderlands, as also used in this handbook, thus appear in particular contexts of territorial state formation and edges of political authority, for instance in the highlands of Armenia or in the disputed area around the Euphrates as an imagined border between the Arsakid and Roman empires.[11]

Frontiers, at the other side of Parker's continuum, are more dynamic boundaries related to both the space as well as behaviors afforded by that space. They are considered to be more porous and fluid in character as they lean into the outwards.[12] This outward orientation of frontiers is also suggested by the etymology of the term: derived from the Latin word *frons* (pl. *frontes*; forehead or front), frontiers face that which is in front of them with the propensity to merge into it. Frontier *zones* are thus by definition fuzzy and spatially ambiguous: like the frontier itself, the zone around it is flexible and open rather than bounded and restricted. This particular openness and flexibility of the term is key for how frontier zones as dynamic networked spaces are analyzed in this handbook. Yet, it should also be made explicit that the term and its expansive connotations have a distinct history connected with the ideology and operation of imperial expansion. To explain how frontier zones then

10 Parker 2002, 374–375; 2006, 78–89; further discussion in Langer and Fernández-Götz 2020.

11 As in, e.g., Plutarch, *Pompey* 33. 6; Cassius Dio 40. 15. 5, 76. 2. For the highlands of Armenia, see Fabian, ch. 9, this volume; for the borderland around the Euphrates, see Gregoratti, ch. 10, this volume; cf. de Jong and Palermo 2018.

12 The distinction between borders and frontiers is also reflected in scholarship: where there is a primacy in Border Studies of research concerned with modern international state borders, especially the USA–Mexican border, Frontier Studies are more ambiguous about their subject of inquiry because of the more permeable nature of frontiers. See further discussion in Baud and van Schendel 1997; Rodseth and Parker 2005.

comes to align with the theoretical logics of globalization, I discuss here four historiographical highlights as important conceptual pathways that inform and transform the significance of frontier zones in the interest of global history.[13]

The notion of the frontier was first projected into scholarly discourse by Frederick Jackson Turner (1861–1932) whose Frontier Thesis infused the word with profound historical and historiographical meaning in reference to a distinct material reality.[14] A professor of history, Turner delivered his impactful lecture on *The Significance of the Frontier for American History* at the annual meeting of the newly founded American Historical Association in Chicago in 1893, three years after the U. S. Census Bureau formally declared the closure of the frontier after four centuries of West-European colonization of North America since its 'discovery' by Columbus.[15] He explained the colonial conquest of indigenous lands as a "great historic movement" of agrarian settlement that expanded the American frontier westwards across lands of wilderness.[16] The frontier came to represent the outer margins of civilization, a hostile line bravely defied and driven forward by West-European colonists featured as pioneering and voyaging farmers who spread and spatially progressed civilization into 'free land' – indigenous peoples remained fully marginal in the story. Importantly so, Turner's triumphal narrative not only described the frontier as a moving place but articulated its significance as a historical process of encounter. As a "meeting point between savagery and civilization," the frontier was marked by unique opportunity, adaptation, and transformation resulting from a "continuous touch with the simplicity of primitive society" beyond the frontier, an experience that would have shaped European colonists into new, uniquely democratic, and truly independent Americans.[17] With a far-reaching legacy of compelling ideas about American exceptionalism, national identity, and progressive individualism, the Turner Thesis thus established frontiers as a major area of historical inquiry.[18]

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13 The intimate relation between global history and globalization theory is discussed in Hoo, vol. 2, ch. 1.

14 Osterhammel 2009, 465–564 provides elaborate discussion on frontiers and their colonial contexts in the nineteenth century.

15 Turner 1894, 199. The westward frontier had already accumulated adventurous (and celebrated) images of cowboys and 'Indians' in the popular imagination. Significantly so, the 1893 congress in Chicago was organized in connection with the World Columbian Exposition which juxtaposed Turner's lecture with William F. Cody's ('Buffalo Bill') entertainment show on the 'Wild West' (White 1994); Turner's lecture mobilized such existing ideas into the field of historical inquiry.

16 Turner 1894, 199–200; note the word choice of peaceful "settlement" rather than violent conquest and ruthless exploitation which it entailed.

17 Turner 1894, 200, see also 226–227; (1920) 1962, 293. The westward advancement of the frontier was thus considered not only as a movement of civilization but also as a movement of increasing independence of America from Europe – an achievement attributed to the courageous and creative spirit that the frontier experience instilled on its Anglo-American inhabitants.

18 Yet, not without critique; see Waechter 1996; Klein 1997 for overviews of the debate.

Its impact was profound: the following decades, deep into the twentieth century, saw an immense surge of studies on the American frontier as well as on comparative frontiers across the world that had been settled by colonists founding new societies in Australasia, Africa, Canada, and Latin America.[19] Using Turner's nascent interpretation of the American frontier as point of departure, such inquiries not only broadened the scope of frontier studies but illuminated very different contexts and diverse consequences of colonial encounters, asserting differential roles of the frontier in various histories. Most influential among these were the writings of Owen Lattimore (1900–1989) on the diachronic relations of Imperial China with their nomadic pastoralist neighbors on the northern steppes. An American Sinologist and Mongolist, Lattimore had travelled extensively in northern China, Mongolia, and Xinjiang and experienced up-close the Japanese invasion of China and the imperial triangulations between China, Britain, and Russia in Central Asia.[20] His monumental work on *Inner Asian Frontiers of China* (1940, second post-war edition in 1951) as well as his subsequent writings were revolutionary in the way they approached frontiers, revising the notion with novel anthropological insights. As in Turner's conception, Lattimore's frontiers were pivotal for the development of human history, but his approach shifted the focus from geographical conditions of the frontier that shaped the colonist, to the social, economic, and ecological factors that shaped the frontier.[21] His deep diachronic analysis of China's frontier zones demonstrated that frontiers were "of social, not geographical origin," anchored in cyclical patterns of interactions and oscillating power relations between communities of expansionist powers (China) and the communities that bordered them (steppe pastoralists).[22] Rather than an essential line of civilization overcoming the wilderness, frontiers were reconsidered as shifting zones of interactions and exchange, shaped by negotiations of difference, mutual accommodation, joint collaboration, and potential community between border populations on both sides of the frontier, driven by shared economic interests different than those of central governments.[23] While providing due discussion of frontier frictions, violence,

19 The literature is immense, some examples will suffice: Bolton (1921) 1996 on Latin American frontiers; De Kievit 1938 on South African frontiers; Webb 1951 on global European frontiers; Careless 1954 on Canadian frontiers; McIntyre 1967 on West-African and Australasian frontiers; Hartz 1964 from a comparative perspective; Wieczynski 1976 on Russian frontiers. A Russian frontier thesis concerning Siberia had circulated in Russia decades before Turner gave his lecture, as discussed in Bassin 1993; 1999.

20 Lattimore 1962, 16–23. Through his scholarly output, Lattimore also exerted influence on public opinion and political affairs, even becoming an advisor to Chiang Kai-Shek upon request of Franklin Roosevelt; further discussion in Harvey 1983.

21 His framework is vividly outlined in Lattimore (1940) 1951, 21–25.

22 Lattimore 1962, 469–470 (citation on 471); also Lattimore (1940) 1951, 242–251, 468, 542–552 for main conclusions. His narrative builds on the analytical categories of agricultural 'communities of sown land' and pastoralist 'communities of steppe land' (of Manchuria, Mongolia, Tibet, and Xinjiang) whose socio-economic realms overlapped in the frontier zone.

23 Lattimore (1940) 1951, 244. Further discussion in von Reden, this volume, ch. 1.

and warfare between expanding Chinese settlement and margin populations, for Lattimore, the significance of the frontier lay in the ebb and flow of local interconnections rather than in the separate histories and destinies of colonizers and colonized – a dichotomy that did not suit at all the fluctuating Inner Asian power dynamics he analyzed.

Shifting the narrative from external imperial forces to internal frontier processes, Lattimore's writings on frontiers not only highlighted the socio-ecological creation of space but also drew attention to the role of marginalized peoples usually excluded from historical inquiry, analyzing them not as "inert pawns on the vast checkerboard of power politics" but as most "capable of political volition."[24] His intellectual engagement with general patterns of human history from the local perspective of the frontier zone anticipated later currents across studies of the past in relation to the rapidly changing present. Post-war scholarship, deeply affected by the sweeping socio-political impacts of World War II as well as the surge of colonial liberation movements of the 1950s, saw the rise of several new streams of thought with heightened awareness for the importance and agency of peripheries and its peoples. It is in this period that William McNeill (1917–2016) catapulted frontier zones to the center of world-historical change in his monumental work *The Rise of the West* (1963), prefiguring his many later contributions.[25] Although written from a distinct Eurocentric perspective, aimed to historically explain the hegemony of Europe and North America since 1500, McNeill's argument was formed around the idea that historical change and innovation were driven by societal confrontation and interaction with 'strangers' whose new skills and knowledge broadened the assortment and expression of civilization.[26] Time and again, it were those peripheral contacts with unfamiliar Others that provided the crucial traction and force needed for the motion of history. In this vein, the emergence of the great ancient civilizations of India, Greece, and China were explained as peripheral frontier processes themselves, their location "on the fringes of the [more] anciently civilized world" having been pivotal for prompting profound originality, drawing on diverse peoples, interactions, and lifestyles.[27] In spite of his preoccupation with how discrete civilizations rose and fell, McNeill's panoramic approach to the rhythms of history and his insistence on recurring cross-civilizational connections pioneered the articulation of peripheral zones as those interconnected spaces that drove 'ecumenical' processes of the world.[28]

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24 Lattimore 1950, 23.

25 Most relevant here are McNeill 1992; McNeill and McNeill 2003; McNeill 2008.

26 As clearly stated in McNeill (1963) 1991, xvi, see also 253 for the ancient world. His retrospective essay on the book after 25 years is remarkably reflective in admitting the flaws, Western bias, and Eurocentric naivety of his writing in the 1960s.

27 McNeill (1963) 1991, 167–170 (citation on 167).

28 Most explicitly: they "prepared the way for the spectacular unification of the globe": McNeill (1963) 1991, 253. The rhythms of history would have followed a scheme of Middle Eastern dominance – Eurasian balance – Western hegemony, with the period of 500 BCE until 1500 CE as a balance between

With McNeill, peripheral areas became a key concern for the endeavor of world history, setting the stage for current practices of global history.[29] Numerous scholars followed up on the task to consider peripheries and their interactive and interlinking dynamics as essential for the motor of history.[30] Ongoing post-independence decolonization processes in Africa, Asia, and the Pacific intensified in the 1970s and 1980s, resulting in shifting political, cultural, and societal structures through increasing long-distance mobility and migrations across the world. These decades saw further intellectual reflections on world-historical dynamics with the rise of world-system approaches, first developed by Immanuel Wallerstein (1930–2019) in his *Modern World-System* (1974; 1980; 1989).[31] Inspired by Fernand Braudel's watershed study *La Méditerranée et le monde méditerranéen à l'époque de Philippe II* (1949, English translation in 1972) which conceived the notion of the entire Mediterranean basin as an interconnected geohistorical unity, Wallerstein argued that the origins, development, and complex mechanisms of political-economic realities of the modern capitalist world could not be adequately understood by using the nation state as the unit of socio-historical analysis.[32] These complexities could only be grasped from a broader macroperspective, if assessed as part of an integrated world system, structured and driven by systemic interactions and interdependencies between core regions, semi-peripheral and peripheral regions.[33] Drawing these dependency networks to the center of analysis, Wallerstein's world-system theory recognized structural inequalities across the system with peripheral zones at the poorest end of history. Peripheral regions, according to Wallerstein, were functionally defined as economically underdeveloped countries (often former colonies in frontier zones) that produced raw materials for more developed core areas whose economic success, in turn, depended on their exploitation of peripheries and semi-peripheries.[34] The role of peripheries in the development and workings of the world system was therefore crucial, as their possession of desirable (material and human) resources influenced the economic incorporation of these zones into the system as well as further shaped structural distributions of power, wealth, and resources within it. Since Wallerstein's scope of analysis reached back to 1500 as

Eurasian civilizations. McNeill's approach aligned with the French Annales school of history, though Braudel is scarcely cited in his work.

29 Hoo, vol. 2, ch. 1 for the distinction between world history, globalization history, and global history.

30 For studies on frontier zones in ancient history and archaeology, see von Reden and Speidel, vol. 1, ch. 17; von Reden, ch. 1, this volume.

31 For his own reflections on how decolonization processes shaped his work, see Wallerstein 1974, 4–6. For world-systems theory and the question of power, see Hoo, vol. 2, ch. 1.

32 Wallerstein 2004, 18. Braudel's approach deeply impacted ancient studies as it confronted and challenged traditional modes of analysis previously focused on isolated regions of the Mediterranean.

33 Wallerstein 2004, x–xi. Wallerstein analyzed the origins of the modern world system, which initially spanned only part of the globe (Europe and North America) but later developed to span the entire globe.

34 Wallerstein 1974, 97–99, 349–350, 355.

the origins of the modern world system, his theory had limited immediate impact on studies of antiquity.[35] Yet his timely and compelling methodological appeal to adopt global units of analysis to understand peripheral areas as entangled in networked processes unfolding beyond the geographical stretch of distinct societies resonated deeply across the humanities.[36] It is from world-system approaches that globalization studies rose to the fore, gaining momentum in the 1990s. While (early formulations of) world systems theory attracted much criticism for deterministic and totalizing overtones with exclusive concern for economic macrostructures at the expense of local cultural dynamics and human agency, other strands in proliferating globalization research of the past decades provide conceptualizations of the myriad ways in which local, regional, and global processes were entangled.

II.2 The Significance of Frontier Zones for Global History Writing

It is against this background that we come to the significance of frontier zones in the interest of global history. The four historiographical highlights – connected with the writings of Turner, Lattimore, McNeill, and Wallerstein – illuminate how the conceptual itinerary of frontier zones shaped a repertoire of figurations that resonate in various scholarly explanations of frontiers zones. Frontier zones are considered as expanding (imperial) spaces, marked by (colonial) encounter, adaptation to physical and human geographies, and opportunities of transformation into something new. They are shaped by conflict and warfare but also by local social and ecological interaction, negotiation of differences, and with the potential of forging new communities. Phrased differently, they are places of change and innovation, where diverse people meet, exchange, and connect with unfamiliar 'strangers' with different sets of skills and knowledge. And finally, frontier zones possess economically exploitable resources and are interlinked with core areas as they likely operate as peripheral spaces in networks of dependency. All related to shifting social orders and variously conceptualized according to models of diffusionism, evolutionism, assimilation, interaction, and dependency networks of the world system: these figurations illustrate the formative and transformative significance of frontier zones across history.

The chapters in this volume engage with the existing thematic terrain but with particular interest in the significance of frontier zones for increasing and shifting transimperial connectivities across Afro-Eurasia in the period from 300 BCE to 300 CE.

35 See reflections in Kohl 1987; Hall and Chase-Dunn 1994; cf. Woolf 1990. For his own thoughts on antiquity, see Wallerstein 1974, 127–129.

36 Wallerstein's world-system theory (originally spelled with a hyphen, later meaningfully conceptualized as world-systems analysis – in the plural – or world system analysis, without hyphen) branched out in various directions since its inception; see Chase-Dunn and Hall 1993; Hall et al. 2011; Hall 2017; Chase-Dunn and Hall 2018; and recently Chase-Dunn and Khutkyy 2021.

Answering to the endeavor of global history writing, potent globalization concepts centered around connectivities between distant localities have helped to shift lenses of research from politico-economic and socio-cultural containers to broader units of analysis that accommodate transregional connectivities. Much of the diverse globalization research adopted by pioneering historians and archaeologists for studying the ancient world has been built on theorizations of the cultural dimension of globalization. Concepts and practices such as deterritorialization and decentering, respectively, have drawn attention away from unidirectional core-periphery relations, to the ways in which objects and ideas (such as silk and religion) can be 'lifted out' of their previous spatio-historical context, to be adopted and re-embedded in other, new, or old local settings in light of large-scale political-economic connectivities and integration.[37] Such considerations can provide valuable alternatives to top-down narratives in order to explain the decentralized emergence of shared material culture, similar consumption practices, and social transformations across large distances in the ancient world.[38]

Early globalization scholars framed such deterritorialization as the growing irrelevancy of borders, resulting in a borderless world marked by increasing integration, assimilation, and universalization of institutions, standards, and behaviors.[39] Such conceptions gave rise to the persistent idea that globalization would entail increasing transregional homogenization – processes which were understood to entail a new form of hegemony of the universal.[40] The narrative of globalization thus presented an imperialistically shaped world order as a harmonious and naturalized version of reality – similar to the Silk Road model. Critics within and beyond globalization debates raised their voices against 'globalcentrism' and the emphasis on universalization in light of ever-increasing movements, migrations, and connectivities at the expense of local realities of place. Arturo Escobar, amongst the critics, argued that "place continues to be important in the lives of many people, perhaps most, if we understand by place the experience of a particular location with some measure of groundedness (however, unstable), sense of boundaries (however, permeable), and connection to everyday life, even if identity is constructed, traversed by power, and never fixed."[41] In similar vein, Arjun Appadurai stressed that local culture and identity "are not

37 It should be noted that globalization research adopted much vocabulary from postcolonial studies (Krishnaswamy 2008, 1–3; cf. Acheraïou 2011, 171–178). For deterritorialization, see Appadurai 1986; 1990, 301–308; Giddens 1990, 21–29; Tomlinson 1999, 106–149; for decentering ('provincializing the centre') see Chakrabarty 2000, 3–18. For these terms used in (globalization) approaches to antiquity, see, e.g., Fitzpatrick 2011; Versluys 2014, 35; Nederveen Pieterse 2015; Hoo 2022, 243–270.

38 Within this volume, most explicitly, Brosseder and Miller, ch. 5.

39 E.g., Ohmae 1990; Ritzer 1993; Friedman 2005; further discussion in Nederveen Pieterse 2021, 159–176.

40 Most notably voiced by Hannerz 1997; Hardt and Negri 2001.

41 Escobar 2001, 141; see further discussion on globalization and the local in Hoo 2022, 237–240 with bibliography.

subordinate instances of the global, but in fact the main evidence of its reality."[42] Despite global connectivities and global flows, it is in the locality where globalization processes are felt and negotiated: the locus of global macrointeractions lies in local contexts. Caution is therefore necessary in order not to lose sight of the significance of local action and local dynamics mediating globalizing processes on the ground, despite the focus on increasing transregional connectivities.

These deliberations were certainly relevant for the adoption of globalization vocabulary in studies of ancient history which, impacted by the immediacy of globalization in modern times and the prevalent usage of its lexicon, sometimes uncritically replaced the rubrics of Romanization and Hellenization to articulate hegemonic acculturative processes and implied civilizational progress, with that of globalization.[43] Escobar's concerns over the loss of the local and the eradication of local agency in favor of global interconnections aligned with earlier postcolonial criticisms stressing neo-imperial consequences of globalization processes. Arif Dirlik, most vehemently, argued that globalization processes are neither neutral or natural but that its workings are rooted in asymmetrical colonial power dynamics that are perpetuated and reconfigured into transnational neocolonial ones.[44] For Dirlik and others, global structures developed as reconfigurations of past colonial power dynamics, echoing the world-systemic inequalities that Wallerstein had brought into focus. For such critics, the language of globalization is profoundly inadequate if not profoundly inappropriate for any intellectual endeavor claiming to be postcolonial.

III Globalization, the Local, and Postcolonialism

III.1 Postcolonialism and Discursive Knowledge

This brings us to the uneasy relationship between globalization and postcolonialism and its intellectual connection to the study of ancient frontier zones. Importantly so, the stirring socio-political context of the 1970s and 1980s not only shaped the climate in which Wallerstein developed his world systems theory to conceptualize structural global inequalities but also instigated, in parallel, the intellectual movement of postcolonialism. Spearheaded by scholars with personal histories of migration or displace-

42 Appadurai 2010, 12; cf. Latour 2005, 176: "Macro no longer describes a *wider* or *larger* site in which the micro would be embedded like some Russian Matryoshka doll, but another equally local, equally micro place, which is *connected* to many others through some medium transporting specific types of traces" (emphasis in original). On the production of locality, see Appadurai 1996, 178–199; Tomlinson (2000) 2003.

43 Critical discussion is offered in Versluys 2014 (on Romanization); Hoo 2020; 2022, 38–70 (on Hellenization).

44 Dirlik 1994; see similar critique in Mignolo 2000; Hardt and Negri 2001; Dirlik 2002.

ment from former European colonies, postcolonialism devoted itself to articulate and challenge the manifold operations of imperialism and the lasting cultural and societal effects of colonization.[45] Initially in the form of literary criticism, postcolonialism soon galvanized a much broader wave across academia that critically interrogated the hegemonic structures and consequences of European colonialism as well as colonial canons of knowledge and (mis)representations of colonized places and peoples.

This makes postcolonialism profoundly relevant for the study of ancient frontier zones, as indeed for broader historical studies. The subtle but crucial difference between 'post-colonialism' and 'postcolonialism' is worth articulating here.[46] The absent hyphen gives meaning to the term as an intellectual movement that directs attention as well as challenges ongoing complex colonial legacies in the present. It indicates a broader scope than 'the historical period after colonialism' which focuses on the conditions, experiences, and effects of colonialism on peoples and diasporas of the 'post-colony'. The two often overlap in thematic scopes of study but, importantly so, the foundational premise of postcolonialism (without hyphen) is that colonialism and imperialism have not come to an end but still impact the present in manifold ways, long after colonies achieved formal independence. As phrased by John McLeod, postcolonialism "does not refer to something which tangibly *is*, but rather denotes something which it *does*."[47] Postcolonialism, as such, embodies ways and methods of thinking and inquiry that demand critical awareness of asymmetrical power relations wrought by centuries of colonialism of large swathes of the world.

Most astute is the postcolonial observation of the deep and lasting legacy of colonialism on the production of knowledge – both popular and academic – of (once-) colonized places, and peoples. Aligned with other scholarly observations and inspired by Michel Foucault's understanding of a discourse, Edward Said's seminal work *Orientalism* (1978) radically brought to light the intricate ways in which Europeans (the British and the French) were historically able to describe, manage, and dominate their colonies, not only militarily but also ideologically, scientifically, and imaginatively.[48] He argued that centuries of colonialism had created a profound institutional and

45 A concise history of the broad field is provided in Young 2005, 151–712; 2009; for discussion on the postcolonial turn, see Bachmann-Medick 2016, 131–173. See also n. 48.

46 I follow McLeod 2010, 5–6; Appiah 1991, 348; but cf. broader terminological discussion in Ashcroft 1996; Ashcroft et al. (2000) 2007, 168–173.

47 McLeod 2010, 6 (emphasis in original).

48 Cf. Marchand 2009 for German Orientalism. While Said's work is often considered to have launched postcolonialism into a broader field, due should also be given to other pioneering postcolonial theorists. Most notably are Fanon 1952; 1963 on the psychological and cultural internalization of colonial structures of thought by colonial subjects; Spivak 1988; Hall 1990 on the fluid construction of cultural identity and the problem of fixed binaries; Spivak 1996a on unheard voices of subaltern groups (esp. women) and the problem of their (authoritative) representation by Western scholars; Bhabha (1994) 2004 on hybridity and the ambivalence of the interstitial Third Space where cultural difference and power (between colonizer and colonized) is negotiated. For an overview of critiques on Said, see Ashcroft and Ahluwalia 2009, 69–82.

systemic discourse of Orientalism – a "Western style for dominating, restructuring, and having authority over the Orient" – that culturally naturalized notions of Western superiority over the Orient, its peoples, and cultures.[49] This pervasive discourse of Orientalism not only referred to structures of thought but also to academic, seemingly objective practices of describing and researching (histories of) the Orient which produced knowledge that endorsed the legitimization and materialization of colonial projects in the process. Exposing the historical entanglements between imperial power and academia, Said compellingly argued that those who control cultural knowledge of geographical regions (the Orient), by investing in scholarship about it, are able to monopolize and shape authoritative 'truth' about these regions in the service of colonialism. Postcolonial criticisms reverberated across the humanities with particular relevance for ancient Near Eastern studies, a collective discipline borne from Napoleon's expedition to Egypt (1789), and classical studies, traditionally devoted to the history and archaeology of Greece and Rome as cradles of and models for modern Western civilization.[50] Mindful about hegemonic practices of knowledge production, new directions of research soon emerged that integrated broader arrays of source material (beyond Greek and Latin texts) while challenging colonial narratives of the ancient past.[51] Yet, despite the interdisciplinary transformations that postcolonialism instigated, postcolonial thought in studies of antiquity runs a current risk of being relegated to the background as a politicized academic trend of the recent past. Especially in debates on Hellenization and Romanization, several scholars voiced criticism of postcolonial perspectives that were taken up, arguing that these engendered anti-colonial methodologies that fostered nativist narratives of indigenous resistance and local continuity at the expense of historical change and complexity of imperial situations.[52]

III.2 Globalization and Postcolonialism: A Heuristic Constellation

We should indeed remain cautious not to fall in the trap of monocentristic essentialism: there is no fixed, authentic native past to retrieve from the ancient past. But

49 Said (1978) 2003, 3; see also 1994 elaborating on discursive (imperial) production of culture.

50 See thoughtful reflections on archaeology in Webster and Cooper 1996; van Dommelen 1997; Gosden 2001; Meskell 2002; González-Ruibal 2010; Porter 2010; Gorshenina et al. 2019; Garcia-Ventura and Verderame 2020. For critical reflections on ancient history, see Goff 2005; Vlassopoulos 2007, 13–67; Schein 2008; Bradley 2010; Vlassopoulos 2010; Vasunia 2013, 1–30.

51 For Greek and Hellenistic studies, see, e.g., Briant 1978; Preaux 1978; Kuhrt and Sherwin-White 1987; Sherwin-White and Kuhrt 1993; Malkin 2004; van Dommelen and López-Bertran 2013; Prag and Quinn 2013; Chrubasik and King 2017. For Roman studies, see, e.g., Millett 1990; van Dommelen and Terrenato 2007; Jiménez 2008; Mattingly 2014 for Roman studies.

52 This evokes what Spivak 1996b, 214 coined as 'strategic essentialism' against mainstream narratives. See criticism in, e.g., Woolf 1997; Strootman 2011, 28–30; Versluys 2014, 2–4, 7–10; but cf. Gardner 2013; Hingley 2015; van Oyen 2015; Hingley 2017.

nativist strands within the swathes of academia should not distract from the postcolonial critiques on hegemonic knowledge production which still carry significant weight for the study of ancient frontiers. Importantly so, the frontier zones discussed in this handbook all share modern histories as objects of colonial or imperial desire which deeply affected discursive knowledge productions about these regions. Cognizant of hegemonic structures of thought, the authors explicitly respond to dominant core-periphery models of civilization, high culture, and economic progress moving into these spaces by the agency of foreign empires. Enduring legacy of ancient historiographies also play a role. The edges of the Eastern Desert in Egypt, for instance, as well the coastal regions of Arabia and India, feature already in Graeco-Roman geographical writings as wondrous places on the edges of the inhabited world, abundant with natural raw resources, which attracted imperial desire.[53] Such ancient representations, in turn, left distinct imprints on the directions of modern research and historical narratives of frontier zones and their peripheral, accommodating role in (historical processes of) 'Silk Road trade.'[54]

Although the interest of this volume lies in the significance of frontier zones for increasing transimperial connectivities, it is not the intention to essentialize the nature of frontier zones through comparative analysis or to interpret them aprioristically as exploitable places in the service of empires. While labelling frontier zones as such might be considered a reaffirming act of scholarly (Orientalist/imperialist) reification, it is precisely their selection based on perceived peripherality that speaks to the intellectual agenda of postcolonialism. Fabian et al.'s approach to frontier zones as a heuristic in a related forthcoming volume is relevant here. They compellingly argue that the designation of frontier zones pushes these zones to the perspectival center of investigation which opens up avenues to ask questions about their very 'frontier-ness' in light of various "relationships across space and scale, dynamics of expansion and transformation, and meeting of difference and their subsequent negations."[55] Commencing the inquiry from within these 'peripheral' zones rather than from the perspective of imperial centers, the authors of this handbook thus actively (re)contextualize these spaces as dynamic interconnected centers in their own right, rather than mere transit zones for Silk Road trade in the interest of empires. Discussed with similar historical depth as traditional imperial centers, the chapters give voice to a diverse host of active interacting local, regional, and global actors such as merchants, financiers, steppe elites, monasteries, tax administrators, kings, and armies, as well as providing major consideration of constraining, demanding, and enabling affordances of the landscape that influenced the actions, interactions, and tools

53 Discussed by von Reden, ch. 8, III.5, this volume; cf. von Reden, vol. 2, ch. 10.B; Ruffing 2017.

54 But cf. the specialist historiography on Armenia, for which see Fabian, ch. 9, I.1, this volume.

55 Weaverdyck and Dwivedi forthcoming. Cf. Ludden 2011 Düring and Stek 2018; Stek and Düring 2018 for similar reflections on the potentials and challenges of centralizing (perspectives from) 'peripheries'.

that these actors used to achieve their goals. These agentic variables open up space for greater historical nuance of ancient economic processes. Rather than being passive recipients of physical or institutional infrastructures endowed upon them by empires, this volume demonstrates that local actors were actively and socially engaged participants in economic developments of frontier zones. For instance, in the Gulf of Khambhat, discussed by Mamta Dwivedi (ch. 7) in relation to 'Indian Ocean trade,' any ship wanting to moor at the low shores of Barygaza was dependent on the navigating service of local fisherman to lead the way.[56] Yet the various chapters in this handbook demonstrate that local demand, knowledge, and skill not only played a mediating role, but also significantly contributed to tie frontier-zone processes to broader connectivities across Afro-Eurasia between 300 BCE to 300 CE. Likewise, economic development did not immediately plummet when empires drew back from frontier zones, as Kathrin Leese-Messing (ch. 3) observes for the Hexi corridor, nor was it stagnant if it remained outside the administrative orbit of empires, as in the case of the coastal sites of India (Dwivedi, ch. 7).[57]

In addition, rather than resulting in the reproduction of grand narratives, globalization – when considered as part of the heuristic toolbox – can actually assist analytical navigation of the thematic terrain of frontier zones in a way that does not propel back to the colonial Silk Road model. The authors of this volume work in explicit recognition of the diversity of frontier zone contexts, situations, and processes that shape the local, regional, and transregional networks across and beyond them. As discussed elsewhere in this handbook, conceptualizations of space and scale in globalization research provide productive ways to take interpenetrative levels of human activity into account.[58] A central premise is formed around the notion that space – as a scale as well as a sphere of action – is not contained: local processes do not happen in isolation but are shaped by their relational entanglements in regional and global social, cultural, and economic dynamics. The interconnection of different imperial networks, in turn, significantly depended on local efforts, frequently in the form of interpersonal relationships and interactions. In Nabatean society, discussed by Eli Weaverdyck (ch. 12.A), evidence for banqueting practices in places across large distances indicates that social conviviality played a significant role in maintaining and negotiating various intra-Nabatean relationships.[59] During such banquets, a Nabatean merchant could advance his personal reputation as trustworthy potential trade partner, in competition with other traders. Historical actors, therefore, operated in social domains which, through networked ties, expanded across geographical scale. These transscalar entanglements are expressed in the notion of glocalization which draws

56 PME 43–44 provides a vivid impression; discussion with further evidence by Dwivedi, ch. 7, III.1.1, this volume.

57 Respectively, Leese-Messing, vol. 2, ch. 3; Dwivedi, ch. 7, this volume.

58 Hoo, vol. 2, ch. 1.

59 Weaverdyck, ch. 12.A, III.1, III.3.2, this volume.

analytical attention to the diverse ways in which local and broader translocal and global processes are entangled through the disjunctive flows (such as objects, produce, and knowledge) and ties (relationships and the tools that shaped them) between nodes (actors) that drive the connectivities between them. Rather than limiting the inquiry, globalization concepts can thus call to prioritize relational and transscalar perspectives in framing the central research questions.[60] Globalization thinking can extend the range and scope of frontier zones, while embracing localized interactions tapping into broader networks.

III.3 An Analytical Spectrum of Inbetweenness

This translates into the investigation of frontier zones on a transscalar spectrum of inbetweenness – not an objective quality but an analytical construct for inquiry – that ranges from particular places to abstract spaces of connectivities.[61] The frontier zones in this handbook are meaningfully considered as peripheral *places* in a physical locality within a larger spatial and social context. Thus, frontier zones are considered in relation to their setting along environmental gradients, referred to as ecotones: transitional or integrative ecological zones where disparate landscapes (and their affordances) meet.[62] The setting of frontier zones on such ecotones, combined with a marginal or in-between position in relation to ideological (imagined) imperial geographies, in fact did distinctly shape the tensions, interactions, and economic opportunities cultivated in and afforded to these spaces. For instance, ecotones (and attendant geoclimatic conditions) that afforded subsistence strategies combining sedentary agriculture with mobile pastoralism feature in several landscapes in this volume.[63] Although episodes of violent 'nomadic raids' of urban settlements by steppe pastoralists – a powerful image of the nomadic barbarian as typically featured in ancient literary sources – were part of the range of economic interactions, these were not the only types of relations that shaped economic connectivities in such frontier zones.[64] Ursula Brosseder and Bryan Miller (ch. 5) as well as Lauren Morris (chs. 4.A and 4.B) stress the economic importance of elite competition and consumption of prestige

60 Von Reden, Introduction, this volume, on this handbook's central research questions.

61 For inbetweenness as a construct, see Shields 1991, 3; Green 2005, 1–40; Giesen 2017; and related discussion Hoo 2022, 17–33 on cultural inbetweenness. For (in)betweenness in network terms, see Knappett 2011, 42 and application in Weaverdyck, ch. 12.B, II.9, this volume.

62 Von Reden, ch. 1, this volume; see also Weaverdyck et al., vol. 2, ch. 7 for human-environment interactions in this handbook; cf. Kempf 2020 for recent instructive discussion. Ingold 2018 provides a concise introduction to the theory of affordances.

63 See most notably Leese-Messing, ch. 3; Morris, ch. 4; Brosseder and Miller, ch. 5; also Fabian, ch. 9, this volume.

64 For literary imaginations of the nomadic barbarian, see Shaw 1983; Di Cosmo 2002, 93–126; 2010; Gerstacker et al. 2015.

goods in relation to those landscapes that afforded mobile (if seasonal) pastoralist practices and lifestyles across the Eurasian steppes.[65] Another example of place-based geophysical factors affecting economic configurations can be seen in coastal frontier zones. Maxim Korolkov (ch. 6), for instance, articulates the expansion of agricultural settlements and the intensification of transregional interactions along the South China Sea coast as significant economic developments that entangled with changes in the sea level which formed the fertile deltas of the Red and Pearl Rivers.[66]

In concert with their physical locality, frontier zones are also meaningfully considered as peripheral *spaces* in the geography of networks. As connectors of macroregions, frontier zones are analyzed with distinct eye for their transscalar relationality as spaces where various regional, imperial, and transimperial networks meet and, accordingly, where frictions between intersecting and overlapping value regimes and institutions occur.[67] In light of such network convergence, frontier zones are arguably spaces where peripheral connections ('weak ties,' i.e., social relationships that are distant or infrequently maintained) are common since network frictions or network distance make it more demanding to form strong social ties. On the one hand, such intensified tensions emerging from diverse encounters could be pivotal for instigating innovations – innovative solutions to negotiate frictions.[68] On the other hand, these weak ties also facilitated access to different networks beyond one's own, which could be capitalized upon as pathways to new knowledge, resources, and economic opportunities.[69] Although such weak ties, for instance between a merchant and a financier, might be peripheral within one's own network, they can be strong connectors (shortcuts) to other social networks and so provide access to larger and more distant circuits of regional, imperial, and transimperial exchange.[70] Leese-Messing (ch. 3) dis-

65 Morris, ch. 4.A, II.2, 4.B, I.1, this volume; Brosseder and Miller, ch. 5, this volume; also Miller and Brosseder 2016.

66 Korolkov, ch. 6, III.1, this volume.

67 Lightfoot and Martinez 1995 for similar considerations; Brughmans et al. 2016; Knappett 2016a provide concise discussions on network perspectives and methodologies for archaeology and history. Cf. Elton 1996, 5 who defines frontier zones as places where boundaries came together. See further recent discussion in Versluys 2021 on globalization as a theory of friction.

68 Versluys forthcoming; after Grewal 2008.

69 Granovetter 1973; see also Knappett 2011, 126–129; 2016, 31–32. That 'weak ties' are common in frontier zones does not mean that strong relationships were not forged in these spaces, nor that these spaces were not well-networked. On the contrary, it is through relationships of trust and reciprocity ('strong ties'), built through repeated interactions, that many economic transactions came about while, in Granovetters model, it is through peripheral connections ('weak ties') that goods and knowledge (for instance information about a trader's trustworthiness or how to navigate infrastructural obstacles) could reach more people and places. Cf. more nuance below.

70 Granovetter 1973, 1363–1369; he articulates this as "the strength of weak ties." Weak ties, according to Granovetter, thus form peripheral innovators whereas 'strong ties' (defined as frequent and more intimate relationships between peers), though contributing to internal social cohesion, are less likely to lead to the diffusion of innovation – compare McNeill's notion that contact and interaction with strangers drive ecumenical processes (see this ch. section II.1).

cusses a telling case of a Han officer stationed in Dunhuang, who writes his friend or colleague, stationed elsewhere, to buy him a specific pair of shoes as well some supplies for others from the regional market there – with the promise to pay him back in coin later.[71] The example illustrates how a spatially stretched social relationship could be capitalized upon by 'stayers' to connect, via 'movers,' to the circulation of supplies from a distant market and so trigger a chain of translocal exchange.[72]

The example also suggests that the strength of ties may vary depending on the situation and that weak ties could be exploited as strong ones to advance economic goals through social obligation. Mechanisms to bridge networks could widely diverge: not all bridging relations were 'weak' while investment in weak ties could transform them into strong ones (or vice versa) over time, blurring the distinction.[73] Additionally, the notion of glocalization makes aware that global (distant) macrointeractions and local microinteractions should neither be seen as static nor separate levels of processes of exchange. The request to buy shoes in the example invoked by Leese-Messing was predicated upon prior knowledge of distant circuits of exchange in the first place. Knowledge, too, reflects transscalar relationality. Knowledge of networked practices, such as the consumption of prestige goods, the use of universalized language, the format of contracts, or architectural decorations, could be capitalized upon with different economic aims, for instance to facilitate commensurability across institutional frameworks to gain network advantage (as the use of Greek language and legal forms at Dura, discussed by Jen Baird and Sitta von Reden, ch. 11) or to boost local social standing and prestige (as in Brosseder and Miller's case of regional elites engaging with a global visual language of prestige in localities across the Eurasian steppes, ch. 5).[74] Moreover, the same actors (or various members from the same network cluster) could traverse across networks scales themselves, operating within different localities in different sometimes distant places and investing in social relationships of various strengths. Leonardo Gregoratti (ch. 10), for instance, draws attention to the economic roles of a network of Jewish communities within and around the Roman-Arsakid frontier zone, while Weaverdyck (ch. 12.A), in a different context, also articulates the importance of Nabatean actors as a networked collective[75] Specific types of sociopolitical networks such as those formed by Armenian-Iranian interdynastic marriages in the Armenian frontier zone (discussed by Lara Fabian, ch. 9) could also forge strong relationships that provided socially regulated contexts for the movement of goods within distinct circles (royal courts) which, in turn, could influence broader local taste and consumption of elite culture, such as Greek literature and

71 Leese-Messing, ch. 3, III.2, this volume.

72 Thus, although not everyone is a 'mover', connectivities still reach into the lives of 'stayers' in the way they structure, coordinate, and internalize social relations; see Woolf 2016 and discussion in Hoo, vol. 2, ch. 1, IV.3.

73 Knappett 2016b, 31.

74 Baird and von Reden, ch. 11, IV.3, this volume; Brosseder and Miller, ch. 5, this volume.

75 Gregoratti, ch. 10, II; Weaverdyck, ch. 12.A, III, this volume.

art.[76] The social contours of transscalar relationality that shaped economic processes in frontier zones are thus highly contextual. Indeed, in the analytical consideration of frontier zones as physical places in their respective landscapes as well as particular spaces in the geography of networks, the chapters in this handbook evoke a diverse series of scenarios of economic frontier-zone processes that formed and transformed transimperial connectivities in profound and disparate ways.

IV Conclusion: A Postcolonial Endeavor

The contradictions of the paradoxical combinations reviewed here – between the interest in frontier zones and the "borderless world" of globalization, and between universalist conceptions of globalization and postcolonial critiques – eventually dissolve when brought into the fold of this volume's intellectual endeavor. Common to these paradoxes is the implied looming pitfall of reproducing a grand narrative, either that of colonialism or that of globalization, which obscures the role of local places and peoples in the service of top-down history, dominated by central (imperial) powers. Yet, research on frontier zones, globalization, and postcolonialism actually resonate and expound on common themes and concerns around connectivities and the local. In this handbook, globalizing processes are not considered to entail the erasure of local place in an increasingly borderless world. On the contrary, this volume insists that it is in localities that increasing connectivities are negotiated, articulated, and capitalized upon in diverse ways and for various economic goals. Secondly, postcolonial studies and globalization research are neither contradictory nor exclusively relevant to historical periods of modernity but provide critical complementary bodies of thought and reflection on the analytical terrain of historical inquiry. Their combination is here considered as a critical heuristic constellation that facilitates the thinking tools to globalize the study of antiquity – not merely in terms of geographical scale but more importantly in relation to the analytical scope of research on economic processes in the ancient Afro-Eurasian world.

The study of frontier zones in this handbook, written in the domain of global history, thus speaks as a postcolonial endeavor in various ways. Firstly, this handbook commences from a common critique of the Silk Road model as a master narrative of ancient world trade. Seeking to reorient that story and diversify the lines of Afro-Eurasian economic developments, it answers the demand of global history to expand the horizons of historical inquiry not only outwards but also inwards. Transscalar approaches to entangled local, regional, and global processes are taken up to explore

76 Fabian, ch. 9, IV.1, IV.2, this volume; see further Fabian 2021; cf. Strootman 2013 on Hellenism as court culture; Strootman and Versluys 2017 on Hellenism and Persianism as a cultural concept; Hoo 2022 on Hellenism as a paradoxical interpretive model.

diverse networked histories, relationships, institutions, and tools that cultivated innovations and economic opportunities to tap into transimperial connectivities. Secondly, this handbook is grounded in the awareness of previous privilege given to imperial centers and imperial actors and the modern geopolitical factors that shaped that privilege. The Afro-Eurasian world areas under review here all share a heritage of modern colonial or imperial histories which variously impacted research traditions in which studies of economic processes developed. Modern historiographies have extensively been discussed in volume 1 of this handbook, and are again touched upon in the chapters of this volume with particular reference to their respective frontier zones. Within their own fields of expertise, the authors not only expound awareness of that intellectual heritage but explicitly challenge traditional narratives anchored in imperial modes of inquiry and hierarchical knowledge production. Lastly, the focus on frontier zones in this handbook does not emanate from a commitment to reify these areas as territorial peripheral entities (or voids of wilderness). Rather, this handbook sheds central light on various frontier-zone situations whose role in shaping connectivities and networked interactions are analyzed from the inside of the frontier. It does so in ways that neither (exclusively) prioritize local agency, serving nativist narratives, nor privilege imperial agency in service of the Silk Road model. By balancing diverse bodies of knowledge and investigating frontier zones as local places and networked spaces of economic connectivities, the chapters in this handbook develop fresh understandings of various ancient frontier zones at the edge of empires. In the process, the emerging panorama effectively deconstructs the peripherality of these zones, as each chapter articulates diverse significance of frontier zones for the increasing transimperial connectivities across Afro-Eurasia from 300 BCE to 300 CE.

References

Acheraïou, A. 2011. *Questioning hybridity, postcolonialism and globalization*. Basingstoke: Palgrave Macmillan.

Altaweel, M. and A. Squitieri. 2018. *Revolutionizing a world: From small states to universalism in the pre-Islamic Near East*. London: UCL Press.

Appadurai, A. 1986. "Introduction: Commodities and the politics of value." In A. Appadurai (ed.), *The social life of things: Commodities in cultural perspective*, 3–63. Cambridge: Cambridge University Press.

–. 1990. "Disjuncture and difference in the global cultural economy." *Theory, Culture & Society* 7, 295–310.

–. 1996. *Modernity at large: Cultural dimensions of globalization*. Minneapolis, MN: University of Minnesota Press.

–. 2010. "How histories make geographies: Circulation and context in a global perspective." *Transcultural Studies* 1, 4–13.

Appiah, K. A. 1991. "Is the post- in postmodernism the post- in postcolonial?" *Critical Inquiry* 17.2, 336–357.

Ashcroft, B. 1996. "On the hyphen in post-colonial." *New Literatures Review* 32, 23–32.

Ashcroft, B. and D. P. S. Ahluwalia. (2000) 2009. *Edward Said*. 2nd ed. London: Routledge.

Ashcroft, B., G. Griffiths, and H. Tiffin. (2000) 2007. *Post-colonial studies: The key concepts*. 2nd ed. London: Routledge.

Autiero, S. and M. A. Cobb. 2021. *Globalization and transculturality from antiquity to the pre-modern world*. New York, NY: Routledge.

Bachmann-Medick, D. 2016. *Cultural turns: New orientations in the study of culture*. Berlin: De Gruyter.

Bassin, M. 1993. "Turner, Solov'ev, and the 'Frontier Hypothesis': The nationalist signification of open spaces." *The Journal of Modern History* 65.3, 473–511.

–. 1999. *Imperial visions: Nationalist imagination and geographical expansion in the Russian Far East, 1840–1865*. Cambridge: Cambridge University Press.

Baud, M. and W. van Schendel. 1997. "Toward a comparative history of borderlands." *Journal of World History* 8.2, 211–242.

Benjamin, C. 2014. "'But from this time forth history becomes a connected whole': State expansion and the origins of universal history." *Journal of Global History* 9.3, 357–378.

–. 2018. *Empires of ancient Eurasia: The first Silk Roads era, 100 BCE–250 CE*. Cambridge: Cambridge University Press.

Bentley, J. H. 1998. "Hemispheric integration, 500–1500 CE." *Journal of World History* 9.2, 237–254.

Bhabha, H. K. (1994) 2004. *The location of culture*. London: Routledge.

Blömer, M., S. Riedel, and M. J. Versluys, eds. 2021. *Common dwelling place of all the gods: Commagene in its local, regional, and global context*. Stuttgart: Franz Steiner.

Boivin, N. and M. D. Frachetti, eds. 2018. *Globalization in prehistory*. Cambridge: Cambridge University Press.

Bolton, H. E. (1921) 1996. *The Spanish borderlands: A chronicle of old Florida and the southwest*. Albuquerque, NM: University of New Mexico Press.

Bradley, M., ed. 2010. *Classics and imperialism in the British Empire*. Oxford: Oxford University Press.

Briant, P. 1978. "Colonisation hellénistique et populations indigènes: La phase d'installation." *Klio* 60, 57–92.

Brughmans, T., A. Collar, and F. Coward. 2016. "Network perspectives on the past: Tackling the challenges." In T. Brughmans, A. Collar, and F. Coward (eds.), *The connected past: Challenges to network studies in archaeology and history*, 3–19. Oxford: Oxford University Press.

Burstein, S. M. 2017. *The world from 1000 BCE to 300 CE*. Oxford: Oxford University Press.

Careless, J. M. S. 1954. "Frontierism, metropolitanism, and Canadian history." *Canadian Historical Review* 35.1, 1–21.

Chakrabarty, D. 2000. *Provincializing Europe: Postcolonial thought and historical difference*. Princeton, NJ: Princeton University Press.

Chase-Dunn, C. and T. D. Hall. 1993. "Comparing world-systems: Concepts and working hypotheses." *Social Forces* 71, 851–886.

–. (1997) 2018. *Rise and demise: Comparing world-systems*. 2nd ed. London: Routledge.

Chase-Dunn, C. and D. Khutkyy. 2021. "The evolution of geopolitics and imperialism in interpolity systems." In P. F. Bang, C. A. Bayly, and W. Scheidel (eds.), *The Oxford world history of empire.* Vol. 2, 111–154. Oxford: Oxford University Press.

Chin, T. 2013. "The invention of the Silk Road, 1877." *Critical Inquiry* 40.1, 194–219.

Christian, D. 2000. "Silk Roads or Steppe Roads? The Silk Roads in world history." *Journal of World History* 11.1, 1–26.

Chrubasik, B. and D. King, eds. 2017. *Hellenism and the local communities of the eastern Mediterranean*. Oxford: Oxford University Press.

Collar, A. 2013. *Religious networks in the Roman empire: The spread of new ideas*. Cambridge: Cambridge University Press.

De Jong, L. and R. Palermo. 2018. "Living on the edge: The Roman Empire in the north Mesopotamian steppe." In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*, 240–271. Cambridge: Cambridge University Press.

De Kievit, C. W. 1938. *The imperial factor in South Africa: A study in politics and economics*. Cambridge: Cambridge University Press.

Di Cosmo, N. 2010. "Ethnography of the nomads and 'barbarian' history in Han China." In L. Foxhall, H.-J. Gehrke, and N. Luraghi (eds.), *Intentional history: Spinning time in ancient Greece*, 299–325. Stuttgart: Franz Steiner.

Di Cosmo, N. 2002. *Ancient China and its enemies: The rise of nomadic power in East Asian history*. Cambridge: Cambridge University Press.

Dietler, M. 1998. "Consumption, agency, and cultural entanglement: Theoretical implications of a Mediterranean colonial encounter." In J. G. Cusick (ed.), *Studies in culture contact: Interaction, culture change, and archaeology*, 288–315. Carbondale, IL: Southern Illinois University Press.

–. 2005. "The archaeology of colonization and the colonization of archaeology: Theoretical challenges from an ancient Mediterranean colonial encounter." In G. Stein (ed.), *The archaeology of colonial encounters: Comparative perspectives*, 33–68. Santa Fe, NM: SAR Press.

Dirlik, A. 1994. "The postcolonial aura: Third world criticism in the age of global capitalism." *Critical Inquiry* 20.2, 328–356.

–. 2002. "Rethinking colonialism: Globalization, postcolonialism, and the nation." *Interventions* 4.3, 428–448.

Düring, B. S. and T. D. Stek 2018. "Ancient empires on the ground: Provincial and peripheral perspectives." In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*, 1–17. Cambridge: Cambridge University Press.

Elton, H. 1996. *Frontiers of the Roman Empire*. London: Routledge.

Escobar, A. 2001. "Culture sits in places: Reflections on globalism and subaltern strategies of localization." *Political Geography* 20, 139–174.

Fabian, L. 2021. "Beyond and yet in-between: The Caucasus and the Hellenistic *oikoumene*." In Blömer, Riedel, and Versluys (2021), 357–380.

Fanon, F. 1952. *Peau noire, masques blanc*. Paris: Éditions de Seuil.

–. 1963. *Les damnés de la terre*. Paris: F. Maspero.

Fitzpatrick, M. P. 2011. "Provincializing Rome: The Indian Ocean trade network and Roman imperialism." *Journal of World History* 22.1, 27–54.

Frank, A. G. and B. K. Gill, eds. 1993. *The world system: Five hundred years or five thousand?* London: Routledge.

Frankopan, P. 2015. *The Silk Roads: A new history of the world*. London: Bloomsbury.

Friedman, T. L. 2005. *The world is flat: The globalized world in the twenty-first century*. New York, NY: Farrar, Straus and Giroux.

Garcia-Ventura, A. and L. Verderame, eds. 2020. *Perspectives on the history of ancient Near Eastern Studies*. Philadelphia, PA: Eisenbrauns.

Gardner, A. 2013. "Thinking about Roman imperialism: Postcolonialism, globalisation and beyond?" *Britannia* 44, 1–25.

Gerstacker, A., A. Kuhnert, F. Oldemeier, and N. Quenouille, eds. 2015. *Skythen in der lateinischen Literatur.* Berlin: De Gruyter.

Giddens, A. 1990. *The consequences of modernity*. Stanford, CA: Stanford University Press.

Giesen, B. 2017. "Inbetweenness and ambivalence." In C. Alexander, R. N. Jacobs, and P. Smith (eds.), *The Oxford handbook of cultural sociology*, 1–19. Oxford: Oxford University Press.

Goff, B. 2005. *Classics and colonialism*. London: Duckworth.

González-Ruibal, A. 2010. "Colonialism and European archaeology." In J. Lydon and U. Z. Rizvi (eds.), *Handbook of postcolonial archaeology*, 39–50. Walnut Creek, CA: Left Coast Press.

Gorshenina, S., P. Bornet, M. E. Fuchs, and C. Rapin, eds. 2019. *"Masters" and "natives": Digging the Others' past*. Berlin: De Gruyter.

Gosden, C. 2001. "Postcolonial archaeology: Issues of culture, identity, and knowledge." In I. Hodder (ed.), *Archaeological theory today*, 241–261. Cambridge: Polity Press.

Granovetter, M. S. 1973. “The strength of weak ties.” *American Journal of Sociology* 78.6, 1360–1380.
Green, S. F. 2005. *Notes from the Balkans: Locating marginality and ambiguity on the Greek-Albanian border.* Princeton, NJ: Princeton University Press.
Grewal, D. S. 2008. *Network power: The social dynamics of globalization*. New Haven, CT: Yale University Press.
Hall, J. M. and J. F. Osborne, eds. 2022. *The connected Iron Age: Interregional networks in the eastern Mediterranean, 900–600 BCE*. Chicago, IL: University of Chicago Press.
Hall, S. 1990. “Cultural identity and diaspora.” *Framework* 36, 222–237.
Hall, T. D., ed. 2017. *Comparing globalizations: Historical and world-systems approaches*. Cham: Springer.
Hall, T. D. and C. Chase-Dunn. 1994. “Forward into the past: World-systems before 1500.” *Sociological Forum* 9.2, 295–306.
Hall, T. D., P. N. Kardulias, and C. Chase-Dunn. 2011. “World-systems analysis and archaeology: Continuing the dialogue.” *Journal of Archaeological Research* 19.3, 233–279.
Hann, C. 2016. “A concept of Eurasia.” *Current Anthropology* 57.1, 1–27.
Hannerz, U. 1997. “Scenarios for Peripheral Cultures.” In A. D. King (ed.), *Culture, globalization and the world-system: Contemporary conditions for the representation of identity*, 107–128. Minneapolis, MN: University of Minnesota Press.
Hardt, M. and A. Negri. 2001. *Empire*. Cambridge, MA: Harvard University Press.
Hartz, L., ed. 1964. *The founding of new societies: Studies in the history of the United States, Latin America, South Africa, Canada, and Australia*. New York, NY: Harcourt, Brace & World.
Harvey, D. 1983. “Owen Lattimore: A memoire.” *Antipode* 15.3, 3–11.
Hingley, R. 2015. “Post-colonial and global Rome: The genealogy of empire.” In Pitts and Versluys (2015a), 32–46.
–. 2017. “The Romans in Britain: Colonization on an imperial frontier.” In C. D. Beaule (ed.), *Frontiers of colonialism*, 89–109. Gainesville, FL: University Press of Florida.
Hodgson, M. G. S. 1963. “The interrelations of societies in history.” *Comparative Studies in Society and History* 5.2, 227–250.
Hodos, T., ed. 2016. *The Routledge handbook of archaeology and globalization*. London: Routledge.
–. 2020. *The archaeology of the Mediterranean Iron Age*. Cambridge: Cambridge University Press.
Hoo, M. 2020. “Globalization and interpreting visual culture.” In R. Mairs (ed.), *The Graeco-Bactrian and Indo-Greek worlds*, 553–569. London: Routledge.
–. 2022. *Eurasian localisms: Towards a translocal approach to Hellenism and inbetweenness in central Eurasia, third to first centuries BCE*. Stuttgart: Franz Steiner.
Hopkirk, P. 1980. *Foreign devils on the Silk Road*. Oxford: Oxford University Press.
Hurst, H. and S. Owen, eds. 2005. *Ancient colonizations: Analogy, similarity and difference*. London: Duckworth.
Inglis, D. and R. Robertson. 2005. “The ecumenical analytic: ‘Globalization’, reflexivity and the revolution in Greek historiography.” *European Journal of Social Theory* 8.2, 99–122.
Ingold, T. 2018. “Back to the future with the theory of affordances.” *Journal of Ethnographic Theory* 8.1–2, 39–44.
Jennings, J. 2011. *Globalizations and the ancient world*. Cambridge: Cambridge University Press.
Jiménez, A. 2008. “A critical approach to the concept of resistance: New ‘traditional’ rituals and objects in funerary contexts of Roman Baetica.” In C. Fenwick (ed.), *TRAC 2007: Proceedings of the seventeenth annual Theoretical Roman Archaeology Conference, which took place at University College, London and Birkbeck College, University of London, 29 March–1 April 2007*, 15–30. Oxford: Oxbow Books.
Kempf, M. 2020. “From landscape affordances to landscape connectivity: Contextualizing an archaeology of human ecology.” *Archaeological and Anthropological Sciences* 12, 1–12.
Klein, K. L. 1997. *Frontiers of historical imagination: Narrating the European conquest of native America, 1890–1990*. Berkeley, CA: University of California Press.

Knappett, C. 2011. *An archaeology of interaction: Network perspectives on material culture and society*. Oxford: Oxford University Press.
–. 2016a. "Networks in archaeology: Between scientific method and humanistic metaphor." In T. Brughmans, A. Collar, and F. Coward (eds.), *The connected past: Challenges to network studies in archaeology and history*, 22–33. Oxford: Oxford University Press.
–. 2016b. "Globalization, connectivities and networks: An archaeological perspective." In Hodos (2016), 29–41.
Kohl, P. L. 1987. "The use and abuse of world systems theory: The case of the pristine west Asian state." *Advances in Archaeological Method and Theory* 11, 1–35.
Krishnaswamy, R. 2008. "Postcolonial and globalization studies. Connections, conflicts, complicities." In R. Krishnaswamy and J. C. Hawley (eds.), *The Postcolonial and the global*, 2–21. Minneapolis, MN: University of Minnesota Press.
Kuhrt, A. and S. Sherwin-White, eds. 1987. *Hellenism in the East: The interaction of Greek and non-Greek civilizations from Syria to Central Asia after Alexander*. London: Duckworth.
Langer, C. and M. Fernández-Götz. 2020. "Boundaries, borders and frontiers: Contemporary and past perspectives." *E-Topoi. Journal for Ancient Studies* 7, 33–47.
Latour, B. 2005. *Reassembling the social: An introduction to Actor-Network Theory*. Oxford: Oxford University Press.
Lattimore, O. 1950. *Pivot of Asia: Sinkiang and the Inner Asian frontiers of China and Russia*. Boston, MA: Little, Brown and Company.
–. (1940) 1951. *Inner Asian frontiers of China*. 2nd ed. New York, NY: American Geographical Society.
–. 1962. *Studies in frontier history: Collected papers 1928–1948*. Paris: Mouton & Co.
Lightfoot, K. G. and A. Martinez. 1995. "Frontiers and boundaries in archaeological perspective." *Annual Review of Anthropology* 24, 471–492.
Liu, X. 2010. *The Silk Road in world history*. Oxford: Oxford University Press.
Ludden, D. 2011. "The process of empire: Frontiers and borderlands." In P. F. Bang and C. A. Bayly (eds.), *Tributary empires in global history*, 132–150. Basingstoke: Palgrave Macmillan.
Malkin, I. 2004. "Postcolonial concepts and ancient Greek colonization." *Modern Language Quarterly* 65.3, 341–364.
–. 2011. *A small Greek world: Networks in the ancient Mediterranean*. Oxford: Oxford University Press.
Marchand, S. L. 2009. *German Orientalism in the age of empire: Religion, race, and scholarship*. Washington D.C.: German Historical Institute; Cambridge: Cambridge University Press.
Mattingly, D. J. 2014. *Imperialism, power, and identity: Experiencing the Roman Empire*. Princeton, NJ: Princeton University Press.
McIntyre, D. 1967. *The imperial frontier in the tropics, 1865–75: A study of British colonial policy in West Africa, Malaya and the South Pacific in the age of Gladstone and Disraeli*. New York, NY: St. Martin's Press.
McLeod, J. 2010. *Beginning postcolonialism*. Manchester: Manchester University Press.
McNeill, J. R. and W. H. McNeill. 2003. *The human web: A bird's-eye view of world history*. New York, NY: Norton.
McNeill, W. H. (1963) 1991. *The rise of the West: A history of the human community*. Chicago: University of Chicago Press.
–. 1992. *The global condition: Conquerors, catastrophes, and community*. Princeton, NJ: Princeton University Press.
–. 2008. "Globalization: Long term process or new era in human affairs?" *New Global Studies* 2.1, 1–9.
Meskell, L. 2002. "The intersections of identity and politics in archaeology." *Annual Review of Anthropology* 31, 279–301.
Mignolo, W. 2000. *Local histories/global designs: Coloniality, subaltern knowledges, and border thinking*. Princeton, NJ: Princeton University Press.
Miller, B. K. and U. Brosseder. 2016. "Global dynamics in local processes of Iron Age Inner Asia." In Hodos (2016), 470–487.

Millett, M. 1990. *The Romanization of Britain: An essay in archaeological interpretation*. Cambridge: Cambridge University Press.
Naerebout, F.G. 2006. "Global Romans? Is globalisation a concept that is going to help us understand the Roman Empire?" *Talanta* 38–39, 149–169.
Nederveen Pieterse, J. 2015. "Ancient Rome and globalisation: Decentring Rome." In Pitts and Versluys (2015a), 225–239.
Nederveen Pieterse, J. 2021. *Connectivity and global studies*. London: Palgrave Macmillan.
Ohmae, K. 1990. *The borderless world: Power and strategy in the interlinked economy*. New York, NY: Harper Business.
Osterhammel, J. 1987. "Forschungsreise und Kolonialprogramm: Ferdinand von Richthofen und die Erschließung Chinas im 19. Jahrhundert." *Archiv für Kulturgeschichte* 69.1, 150–195.
–. 2009. *Die Verwandlung der Welt: Eine Geschichte des 19. Jahrhunderts*. Munich: Beck.
Parker, B. J. 2002. "At the edge of empire. Conceptualizing Assyria's Anatolian frontier ca. 700 B.C." *Journal of Anthropological Archaeology* 21.3, 371–395.
–. 2006. "Toward an understanding of borderland processes." *American Antiquity* 71.1, 77–100.
Pitts, M. and M. J. Versluys, eds. 2015a. *Globalisation and the Roman World: World history, connectivity and material culture.* Cambridge: Cambridge University Press.
–. 2015b. "Globalisation and the Roman world: Perspectives and opportunities." In Pitts and Versluys (2015a), 3–31.
Porter, B. 2010. "Near Eastern archaeology: Imperial pasts, postcolonial presents, and the possibilities of a decolonized future." In J. Lydon and U. Z. Rizvi (eds.), *Handbook of postcolonial archaeology*, 51–60. Walnut Creek, CA: Left Coast Press.
Prag, J. R. W. and J. C. Quinn, eds. 2013. *The Hellenistic West: Rethinking the ancient Mediterranean*. Cambridge: Cambridge University Press.
Preaux, C. 1978. *Le monde hellenistique. La Grèce et l'Orient de la mort d'Alexandre à la conquête romaine de la Grèce (323–146 av. J.-C.)*. Paris: Presses universitaires de France.
Rezakhani, K. 2010. "The road that never was: The Silk Road and trans-Eurasian exchange." *Comparative Studies of South Asia, Africa and the Middle East* 30.3, 420–433.
Ritzer, G. 1993. *The McDonaldization of society*. London: Sage.
Robertson, R. 1995. "Glocalization: Time–space and homogeneity–heterogeneity." In M. Featherstone, S. Lash and R. Robertson (eds.), *Global modernities*, 25–44. London: Sage.
Rodseth, L. and B. J. Parker. 2005. "Theoretical considerations in the study of frontiers." In B. J. Parker and L. Rodseth (eds.) *Untaming the frontier in anthropology, archaeology, and history*, 3–21. Tuscon, AZ: University of Arizona Press.
Ruffing, K. 2017. "Der *Periplus Maris Erythraei* und die Ethnographie der Erythra Thalassa." In R. Rollinger (ed.), *Die Sicht auf die Welt zwischen Ost und West (750 v. Chr.–550 n. Chr.)*, 185–195. Wiesbaden: Harrassowitz Verlag.
Said, E. W. 1994. *Culture and imperialism*. New York, NY: Vintage Books.
–. (1978) 2003. *Orientalism*. 5th ed. London: Penguin Books.
Schein, S. L. 2008. "'Our debt to Greece and Rome': Canons, class and ideology." In L. Hardwick and C. Stray (eds.), *A companion to classical receptions*, 75–85. Malden, MA: Blackwell.
Scott, M. 2016. *Ancient worlds: A global history of antiquity*. New York, NY: Perseus Books.
Seland, E. H. 2022. *A global history of the ancient world: Asia, Europe, and Africa before Islam*. London: Routledge.
Shaw, B. 1983. "'Eaters of flesh, drinkers of milk': The ancient Mediterranean ideology of the pastoral nomad." *Ancient Society* 13–14, 5–31.
Sherwin-White, S. and A. Kuhrt. 1993. *From Samarkhand to Sardis: A new approach to the Seleucid Empire*. Berkeley, CA: University of California Press.
Shields, R. 1991. *Places on the margin: Alternative geographies of modernity*. London: Routledge.
Spivak, G. C. 1988. "Can the subaltern speak?" In C. Nelson and L. Grossberg (eds.) *Marxism and the interpretation of culture*, 271–313. Urbana, IL: University of Illinois Press.

–. 1996a. “Subaltern talk: Interview with the editors.” In D. Landry and G. M. MacLean (eds.), *The Spivak reader: Selected works of Gayatri Chakravorty Spivak*, 287–308. New York, NY: Routledge.
–. 1996b. “Subaltern studies: Deconstructing historiography.” In D. Landry and G. M. MacLean (eds.), *The Spivak reader: Selected works of Gayatri Chakravorty Spivak*, 203–237. New York, NY: Routledge.
Stek, T. D. and Düring, B. S. 2018. “Towards a patchwork perspective on ancient empires.” In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the Ancient Near East and Mediterranean world*, 351–362. Cambridge: Cambridge University Press.
Strootman, R. 2011. “The Seleukid Empire between Orientalism and Hellenocentrism: Writing the history of Iran in the third and second centuries BCE.” *Nāme-Ye Irān-e Bāstān: The International Journal of Ancient Iranian Studies* 11.1–2, 17–35.
–. 2013. “Babylonian, Macedonian, King of the World: The Antiochos cylinder from Borsippa and Seleukid imperial integration.” In E. Stavrianopoulou (ed.), *Shifting social imaginaries in the Hellenistic period: Narrations, practices, and images*, 67–97. Leiden: Brill.
Strootman, R. and M. J. Versluys. 2017. “From culture to concept: The reception and appropriation of Persia in antiquity.” In R. Strootman and M. J. Versluys (eds.), *Persianism in Antiquity*, 9–32. Stuttgart: Franz Steiner.
Tomlinson, J. 1999. *Globalization and culture*. Cambridge: Polity Press.
–. (2000) 2003. “Globalization and cultural identity.” In D. Held and A. McGrew (eds.), *The Global transformations reader: An introduction to the globalization debate*, 269–277. 2nd ed. Malden, MA: Polity Press.
Turner, F. J. 1894. “The significance of the frontier in American history.” *Annual Report of the American Historical Association*, 197–227.
–. (1929) 1962. *The frontier in American history*. New York, NY: Holt, Rinehart and Winston.
Van Dommelen, P. 1997. “Colonial constructs: Colonialism and archaeology in the Mediterranean.” *World Archaeology* 28.3, 305–323.
Van Dommelen, P. and M. López-Bertran. 2013. “Hellenism as subaltern practice: Rural cults in the Punic World.” In J. R. W. Prag and J. C. Quinn (eds.), *The Hellenistic West: Rethinking the ancient Mediterranean*, 300–319. Cambridge: Cambridge University Press.
Van Dommelen, P. and N. Terrenato, eds. 2007. *Articulating local cultures: Power and identity under the expanding Roman Republic*. Portsmouth, RI: Journal of Roman Archaeology.
Van Oyen, A. 2015. “Deconstructing and reassembling the Romanization debate through the lens of postcolonial theory: From global to local and back?” *Terra Incognita* 5, 205–226.
Vasunia, P. 2013. *The classics and colonial India*. Oxford: Oxford University Press.
Versluys, M. J. 2014. “Understanding objects in motion: An archaeological dialogue on Romanization.” *Archaeological Dialogues* 21.1, 1–20.
–. 2021. “Romanisation as a theory of friction.” In O. Belvedere and J. Bergemann (eds.), *Imperium Romanum: Romanization between colonisation and globalization*, 33–48. Palermo: Palermo University Press.
–, ed. Forthcoming. *A global revolution? Objects and change in Afro-Eurasia in the final centuries BCE*. Cambridge: Cambridge University Press.
–. Forthcoming. “Network power. Intensification and innovation in western Afro-Eurasia during the Hellenistic-Roman era.” In L. Fabian, K. Leese-Messing, E. J. S. Weaverdyck, L. Morris, and M. Dwivedi (eds.), *Economies of the edge: Frontier-zone processes at regional, imperial, and global scales (300 BCE–300 CE)*. Heidelberg: HeiUP.
Vlassopoulos, K. 2007. *Unthinking the Greek polis: Ancient Greek history beyond Eurocentrism*. Cambridge: Cambridge University Press.
–. 2010. “Imperial encounters: Discourses on empire and the uses of ancient history during the eighteenth century.” In M. Bradley (ed.), *Classics and imperialism in the British Empire*, 29–53. Oxford: Oxford University Press.
Waechter, M. 1996. *Die Erfindung des amerikanischen Westens: Die Geschichte der Frontier-Debatte*. Freiburg im Breisgau: Rombach.

Wallerstein, I. 1974. *The Modern World-System.* Vol. 1. *Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. New York, NY: Academic Press.
–. 2004. *World-systems analysis: An introduction*. Durham, NC: Duke University Press.
Weaverdyck, E. J. S. and M. Dwivedi. Forthcoming. "Introduction." In L. Fabian, K. Leese-Messing, E. J. S. Weaverdyck, L. Morris, and M. Dwivedi (eds.), *Economies of the edge: Frontier-zone processes at regional, imperial, and global scales (300 BCE–300 CE)*. Heidelberg: HeiUP.
Webb, W. P. 1951. *The great frontier.* Austin, TX: University of Texas Press.
Webster, J. and N. J. Cooper, eds. 1996. *Roman imperialism: Post-colonial perspectives proceedings of a symposium held at Leicester University in November 1994*. Leicester: School of Archaeology and Ancient History, University of Leicester.
White, R. 1994. "Frederick Jackson Turner and Buffalo Bill." In J. R. Grossmann (ed.), *The frontier in American culture: An exhibition at the Newberry Library, August 26, 1994–January 7, 1995. Essays by Richard White and Patricia Nelson Limerick*, 7–65. Berkeley, CA: University of California Press.
Whitfield, S., ed. 2019. *Silk roads: Peoples, cultures, landscapes*. London: Thames & Hudson.
Wieczynski, J. L. 1976. *The Russian frontier: The impact of borderlands upon the course of early Russian history.* Charlottesville, VA: University Press of Virginia.
Winter, T. 2022. *The Silk Road: Connecting histories and futures*. New York, NY: Oxford University Press.
Woolf, G. 1990. "World-systems analysis and the Roman Empire." *Journal of Roman Archaeology* 3, 44–58.
–. 1997. "Beyond Romans and natives." *World Archaeology* 28.3, 339–350.
–. 2016. "Movers and stayers." In L. de Ligt and L. E. Tacoma (eds.), *Migration and mobility in the early Roman Empire*, 440–463. Leiden: Brill.
Young, R. J. C. 2005. *Colonial desire: Hybridity in theory, culture, and race*. London: Routledge.
–. 2009. "What is postcolonial?" *Ariel: A Review of International English Literature* 40.1, 13–25.

Part I: **Steppes and Oases**

Kathrin Leese-Messing

3 Beyond Transit and Trade: Embedded Commodity Movement in the Hexi Corridor during the Han Period

I Introduction

I.1 The Hexi Corridor and Silk Road Narratives

The so-called 'Hexi corridor' (*Hexi zoulang* 河西走廊, lit. 'corridor west of the [Yellow] River') is a long and narrow strip of land squeezed between the Qilian mountains to its south and the western Gobi Desert plateau to its north, running lengthwise between the Tarim Basin to its west and the upper course of the Yellow River to its (south)east. It broadly covers the narrow northern part of today's Gansu province, from Dunhuang 敦煌 down to Lanzhou 蘭州, and is therefore alternatively called the 'Gansu corridor.' Historical and archaeological studies alike typically refer to the region as a "passageway" or a "key section of the ancient Silk Road connecting China and Central Asia."[1] As I have mentioned in vol. 2 of this *Handbook*, the description of the region as a 'corridor' already implies a certain bias toward its interpretation as a transit zone between east and west, between the Tarim Basin and Central Asia on the one hand, and the centers of the ancient Qin and Han Empires in what is now central China on the other.[2] There certainly can be no doubt that during early imperial as well as later times, the 'corridor' was important as a transit zone for the long-distance movement of goods. Its reduction to this role, however, seems to be deeply intertwined with Silk Road narratives, and as such has certainly provoked one-sided, if not downright misleading, interpretations of the region's economic role in history.

In 1877, the man commonly known as the 'inventor' of the Silk Road paradigm, Ferdinand von Richthofen, used the designation 'Yü-mönn-Passage' (Yumen passageway or Jade Gate passageway) for this strip of land.[3] Just like 'corridor,' the term 'Passage' implies a primary function of lengthwise transit movement. Von Richthofen, who never visited this part of China himself and therefore had to rely on transmitted

1 E.g., Tse 2018, 28, and similarly, 12; Y. Yang et al. 2019, 958; Liu et al. 2019, 972.

2 Weaverdyck et al., vol. 2, ch. 7, 323.

3 He refers to the "Yü-mönn-Passage" as a strip entailing the "cities Liang-tshóu-fu [Wuwei], Kan-tshóu-fu [Zhangye] and Su-tshóu [Jiuquan] and its termination at the wall gate of Kia-yü-kuan [Jiayu Pass, which he elsewhere identifies as Yumen Pass]." Von Richthofen 1877a, 267; von Richthofen 1882, 699.

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ancient works[4] and other people's descriptions, stresses the importance of the 'Passage' as "the key to the control over Central Asia"[5] in the context of his vision of a transcontinental railway line connecting China to Europe.[6] It may be useful to keep this contemporary mental framework in mind when reading von Richthofen's depiction of the early imperial history of this space. Contemporary circumstances are reflected in his claim that during ancient times, "the possession of the Yü-mönn-Passage … was of highest importance for the roads of silk trade." In more concrete terms, he seems to have imagined the ancient 'passageway' primarily as a space housing cities that functioned as flourishing commercial hubs of long-distance market exchange. Most strikingly, he refers to Dunhuang (Scha-tschóu) as "the large marketplace … which the Chinese had established for the foreign countries." Depending on politicomilitary circumstances, either Dunhuang or Zhangye 張掖 (Kan-tschóu), one of the other 'passageway' cities, then served as the preferential place to which "traders from many countries came in order to receive the silk."[7]

Some succeeding authors cemented and strengthened this idea of the Hexi corridor as a central element of the ancient 'Silk Road.' For instance, Friedrich Hirth stated that Han encroachment toward Central Asia (via the Hexi corridor) was motivated neither by "political interest" nor "appetite for conquest," but by "the desire to get to know the best customers of their silk market."[8] The underlying idea of the "search of capitalism for new markets and new resources" being the "single structural principle driving expansion" or, in other words, the reduction of "imperialism to an economically driven mechanism,"[9] which clearly grew out of a 19th-century European colonial perspective, could hardly be any more obvious.

Criticism of the notion of the 'Silk Road(s)' is, of course, by no means new and has been expressed in manifold ways.[10] Nevertheless, the term is still omnipresent in both political and scholarly discourse, within which the Hexi corridor is typically credited with a prominent role. Under different auspices, related projections are now-

4 Especially Ptolemy's *Geography* and the dynastic histories of early imperial China.

5 Von Richthofen 1882, 699. See also von Richthofen 1877b, 106–107.

6 For the full description of this vision, see von Richthofen 1877b, 692–703. On von Richthofen's and his funders' interest in mapping potential Chinese and transcontinental railway routes, see also Chin 2013, 196, 210–214.

7 Both citations from von Richthofen 1877b, 122. Von Richthofen here (and elsewhere) identifies Ptolemy's Daxata with "Scha-tschóu" (Shazhou), as Dunhuang was called at certain times. This identification has since, however, been put into question. Dunhuang is nowadays quite consistently identified as Ptolemy's Throana, while Daxata has been associated with various other places within the 'corridor,' for instance, Jiuquan (Tupikova, Schemmel, and Geus 2014, 46). Note further the use of different place-name transcriptions in von Richthofen's 1877 article in comparison to his 1877 and 1882 books (e.g., Scha-tschóu vs. Sha-tshóu and Kan-tschóu vs. Kan-tshóu).

8 Hirth 1890, 1.

9 Perdue 2015, 35.

10 See von Reden, ch. 1, this volume, and further Selbitschka 2018; Bertrand 2021; Brosseder 2015, 199–200.

adays being promoted under the proclamation of the government of the People's Republic of China (PRC) of a "New Silk Road" in the context of its "Belt and Road Initiative" (BRI, *Yi dai yi lu* 一带一路), in which the Hexi corridor is counted as a vital part of the Silk Road Economic Belt (*Sichou zhi lu jingji dai* 丝绸之路经济带). Reminiscent of von Richthofen's almost 150-year-old vision, the famous Chongqing–Xinjiang–Europe Railway connection (the "New Eurasian Land Bridge" route of the the so-called "Iron Silk Road") is now running through the Hexi corridor. In recent years, the section through the Hexi corridor has been upgraded by the construction of the Lanzhou–Xinjiang high-speed railway, which is supposed to cut the travel time between Lanzhou and Ürümqi (in Xinjiang Uyghur Autonomous Region) from around 18–20 to 12 hours, with a line length of close to 1,800 km.[11] Not surprisingly, the interpretation of the Hexi corridor as a major element of the ancient Silk Road[12] and an emphasis on its historical role in east–west trading connections are again framing narratives for the region. Despite many differences in detail, these are ultimately cementing rather than replacing some of the basic assumptions of the old, colonial economic perspective on this space and its history.[13]

The realization that modern depictions (i.e., from the colonial period onward) of the space's ancient history are informed by modern geopolitical visions does not mean that their assumptions are altogether unfounded. That the region did play a role in the movement of goods, knowledge, and technology during both pre-imperial and imperial times from east to west and vice versa can hardly be doubted. Neither can it be denied that Han occupation of the region ushered in a new epoch with regard to such movement. The main problem with 'Silk Road' approaches to the region's early imperial history rather lies with the general impression they convey of it having been centrally characterized by large-scale and long-distance trade conducted by more or less free-roaming merchants or, at a pinch, by merchants 'cloaked' in pseudo-diplomacy but ultimately acting on the same basis of market principles. A critical attitude toward this approach is no mere nitpicking. First, the approach limits the consideration of variety and heterogeneity growing out of social, cultural, and ecological differences across the large Eurasian space. And second, it has a strong tendency to take the form of a macroeconomic success story, in which expanding empires and their markets acted as the central drivers of the course of a connected Eurasian economic and political history, resulting in largely win-win situations for all kinds of people, as they could jump on the bandwagon of miraculously prospering, globalizing trade.

11 Wikipedia contributors 2022b, "Lanzhou–Xinjiang high-speed railway"; Wikipedia contributors 2022a, "Lan Xin tielu di er shuang xian."

12 The relevance of the Hexi corridor for Chinese Silk Road narratives is, for instance, manifest in representations in museums of the region. See von Reden, ch. 1, sec. I, this volume.

13 On the BRI and its Silk Road iteration providing "China with a unique platform to exercise its geocultural advantage" both within and beyond the nation-state, see Winter 2020.

With regard to the region under consideration here, a more concrete aspect of such a simplistic 'capitalist' image is that it was the potential for these market-based transactions that made the region interesting in the first place, particularly for decision-makers of the political core of the Han Empire. In modern accounts of Han encroachment into the Hexi corridor and the Tarim Basin, an allegedly central interest in 'securing trade routes' to the west is omnipresent but rarely involves any further exemplification of what this abstract notion means in practical terms.[14] This easily creates the impression that the conquest of the Hexi corridor, the establishment of institutions such as relay stations, and the maintenance of relationships with polities further west were all for the sake of trade.[15] More generally, a simplistic 'Silk Road' perspective tends to stress the economic motives that allegedly were at play beyond either end of the 'transit zone' while underemphasizing the economic processes that were happening on the ground inside this very space, be they related to inter-imperial movement of goods or not. Furthermore, the 'trade route' perspective on the Hexi corridor, often related to the idea of it being the 'most natural' (i.e., shortest) route to Central Asia from the Han capitals of Chang'an or Luoyang, easily misleads one to neglect other routes that far-traveling goods may have taken and which did not rely on the Hexi corridor. Apart from far-southern connections that were beginning to take shape,[16] northern routes leading through the Xiongnu 匈奴 realm, where Chinese goods ended up in massive amounts largely through diplomatic channels and were probably also massively redistributed in western directions, are of central importance in this regard.[17] Furthermore, even less prominent potential routes and networks, such as via various groups of people living south of the corridor, sometimes referred to in the condensed term 'Qinghai Road,' also have to be taken into consideration.[18]

Certainly, all this is not to say that research on the Hexi 'corridor' finds itself at a century-long standstill. In fact, the region belongs to the areas of modern-day China that have been most blessed with spectacular archaeological discoveries throughout the last century, especially with regard to Han-era manuscript finds. These texts have brought considerable new insights about exactly what was happening on the ground in this space. Based on them, detailed and illuminating research on many different aspects of the space's early imperial history has been and continues to be published by scholars from China and across the globe. Nevertheless, it is my impression that certain internalized assumptions connected to the 'Silk Road' concept keep shaping our interpretation even of the most recent evidence.

14 On the problem of lacking definitions of what 'control over trade routes' actually means, see further Weaverdyck, ch. 13.A, III.4, this volume.

15 For examples of this view, see sec. II.1 below.

16 See Korolkov, ch. 6, this volume.

17 Brosseder 2015; Brosseder and Miller, ch. 5, this volume.

18 E.g., J. Li 2015.

This chapter is an attempt at qualifying some of these assumptions. Rather than wanting to establish an exhaustive new narrative of the space's role in economic history during the early imperial era, it is meant to provide some thought-provoking impulses that highlight the complexities involved in the processes that made goods move within and across this space. To this end, the following sections will highlight the ancient Hexi corridor and its role in the development of (partially border-crossing) economic networks during the Han period from different angles. The source examples used to create such a panorama are primarily textual, including both transmitted historical texts and excavated manuscripts from the region itself. In the second part of this introduction (I.1), I will introduce the region in its role as a frontier zone and explore how this role can be associated with questions of economic interconnectivity. Section II approaches the economic role of the region from an indirect perspective by reconsidering the question of what role economic incentives played in the border-crossing movement of goods in the context of diplomacy, for which the Hexi corridor served both as a transit zone and – less famously – as an end point. Section III will then turn to the conditions for the movement of goods on the ground by providing a panorama of local trading conditions, centrally based on two excavated documents from the region. Section IV will then consider the role of private long-distance trade in the Hexi corridor. While this kind of trade certainly existed, I will argue that evidence for it tends to be significantly inflated. Based on the foregoing considerations with regard to Han times, section V will put the role of the Hexi corridor as a place of economic border-crossing connectivity into a historical perspective that spans the post-Han era.

I.2 The Hexi Corridor as a Frontier Zone

During the late second and early first centuries BCE, the Hexi corridor was militarily occupied and colonized by the Former Han and became the region furthest northwest in which the Han government established those administrative units – commanderies (*jun*) and subordinated units – that also made up the more central parts of the empire. The newly established commanderies were Wuwei 武威, Zhangye, Jiuquan 酒泉, and Dunhuang (see map 1).

Their foundation marked a degree of territorial claim that the Han government never applied to regions further west.[19] Accordingly, the region was a place of massive fortification structures and is often referred to as the northwestern "borderland" (*bian* 邊) in ancient Chinese sources.

Most generally, and transcending different politico-historical constellations, the Hexi corridor can easily be grasped as an ecological frontier. It is a region in which

19 The Tarim Basin to its west was never integrated into this administrative system, and Han administrative control over it was much looser and much more intermittent.

Map 1: The Hexi corridor and its Western Han commanderies. © Peter Palm.

different landscapes and ecotones meet, with the mountainous areas of the Qinghai-Tibetan Plateau to its south, the desert plateau of the Gobi to its north, the depression of the Taklamakan Desert to its west, and the grasslands and partly arable lands of the Ordos to its east. Further to its southeast lies the Wei River valley with the Guanzhong Plain, a region of intensive agricultural use already during ancient times, which housed the Former Han capital Chang'an. The geoclimatic characteristics of the Hexi corridor itself have always set limits in economic and demographic regards. It differs markedly from the central and southern parts of China in its relative aridity and altitude, both of which have always limited its agricultural potential in particular, even though ancient conditions seem to have been slightly milder and moister.[20] To this day, the region is much less densely populated than more eastern and southern Chinese regions, and Gansu is ranked as one of the poorest provinces of the PRC.

Given its natural affordances as an ecological frontier, the Hexi corridor was also a place where people of different lifestyles and subsistence strategies were likely to meet and interact – both peacefully (including trade and political negotiations) and violently (raids and military conflicts). This was not only true for connections between east and west. In the time before Han encroachment into the region, for instance, Chinese sources depict it as a region that was important for interactions between the Xiongnu to its north and the Qiang 羌 to its south. In fact, it was exactly this north–

20 See Leese-Messing, vol. 2, ch. 7, 322.

south axis of interaction that the sources mention as a major target to be crushed by Han military encroachment into the region.[21]

When Han forces eventually arrived and stayed in the region, they built up fortifications and established settlements. Farmers from Guanzhong and other places in the empire were invited to the region as permanent settlers who were meant to cultivate produce locally. All of this brought new frictions into the region on a massive scale. Despite their various backgrounds, the lifestyles of earlier contestants of the region all had relatively strong pastoralist and mobile components. They had made use of the region and its rich grazing grounds seasonally and extensively rather than permanently and intensely. Han colonization, however, brought along a massive influx of people, the introduction of permanent settlements and partly urban structures, intensive agricultural use of land, and deforestation. That these massive changes had the potential for an increase in friction and outright violence is self-evident. It is manifest, among others, in the well-documented military fortification lines and frequent military confrontations between Han frontier guards and Xiongnu raiders. More generally, violent repercussions of Han expansionism can also be seen in the massive Qiang rebellions in the larger northwestern region during the Later Han period. The Han ultimately suppressed them by the means of extreme violence, including mass killings of Qiang people.[22] On top of the concrete conflicts between newcomers and locals on the ground, the potential for friction was further enhanced by a construction of a dichotomy by people at the Han center, many of whom felt the need to stress differences between civilized settled agriculturalists and uncivilized mobile pastoralists to legitimize their military encroachment and spending on the empire's new frontier.[23]

Han imperialism is thus first of all to be seen as a massive source of friction in the region of the Hexi corridor. The question of whether or in which ways the Han imperialist approach eventually also functioned as a successful negotiator and reducer of friction and as a facilitator of cross-imperial economic interaction is a different matter. It cannot be answered in an easy and generalizing manner. One thing that this chapter aims to show is that it is worth taking a step back from the generalizing idea of Han imperial expansion as a natural driver of economic interaction, even though it is partly true. Instead, it is useful to take a thorough look at individual actor groups, institutions, and structures to see where this negotiating and connectivity-enhancing function may or may not have played a role. Beyond that, examining the developments that accompanied the very decline of imperial power held over the region may further sharpen our view of the ways in which certain imperialist structures in frontier zones may even have impeded rather than enhanced potential for negotiating difference and increasing economic interaction across larger distances.

21 Leese-Messing, vol. 2, ch. 7, 323–324.

22 E.g., Tse 2018, ch. 4.

23 E.g., Di Cosmo 2002. See also von Reden, ch. 1, sec. VII.2, this volume.

II Re-thinking Economic Incentives in Diplomatic Undertakings: Some Qualifying Impulses from Transmitted and Excavated Texts

II.1 Trade, Diplomacy, and the Hexi Corridor's 'Opening Function'

Han occupation of the Hexi corridor region has long been associated with the alleged 'opening' of the Silk Road. Needless to say, this is a very China-centered perspective. Ancient Chinese historical accounts include phrasings that have been interpreted as expressions of this idea of 'opening' the Silk Road, particularly the use of the word *tong* 通 ('to penetrate,' 'to get through,' 'to establish contact'). For instance, the Han historians Sima Qian and Ban Gu both state that the Han "first established Jiuquan commandery (in the Hexi corridor) and thereby penetrated to the states of the northwest" 初置酒泉郡以通西北國.[24] If accompanied by a notion of a 'Silk Road,' such statements on the Hexi corridor easily evoke the idea of 'trade.' Accordingly, the encroachment of the Han and their successors toward this northwestern region has often been explicitly associated with the notion of 'trade.' In a rather pointed assessment, for instance, Boltz once argued that Emperor Wu's interest in the Hexi corridor was the "loss of the smooth-running trade routes that had been under friendly Yuezhi control through Gansu (i.e., the Hexi corridor)." As these trade routes had "fallen into hostile Xiongnu hands," it was the emperor's desire to "restore" them.[25] As for a less pointed and more recent example, Yap associates the Han government's establishment of northwestern relay stations with "the need to provide safe passage for its traders to trade with the west."[26] In a similar vein, de Crespigny, in his 1984 account on the *Northern frontier*, writes that "by 222 ... the government of the Wei state [one of the Han's successors] controlled the commanderies of the Gansu corridor, and the trade with Central Asia was officially reestablished." In a footnote, he further explains that "an imperial decree announced the revival and opening of the trade route."[27] The concrete text passages he refers to, however, simply record individual kingdoms sending envoys with gifts, plus the noted imperial decree, which states that "contacts to the Western Regions were thereupon [again] established, and the Wu and Ji colonelcy was again installed" 是後西域遂通, 置戊己校尉.[28] The sources thus indicate nothing but the reestablishment of contacts (*tong*), a term that doubtlessly refers to diplomatic contacts here, and the installation of Han administrative-military posts. Denoting this as an official reestablishment of "trade" and the announcement of a revival of the "trade route," has the poten-

24 *Shiji* 123.3170; *Hanshu* 61.2694.
25 Boltz 1981, 400.
26 Yap 2019, 658.
27 De Crespigny 1984, 166, with n. 65 on 500.
28 *Hou Hanshu* 9.382; *Sanguo zhi* 2.79.

tial to be thoroughly misleading, especially for readers unfamiliar with the source material.

To overcome such misunderstandings in the consideration of transfers of goods across this space, two basic points are important. First, whenever possible, we need to identify the concrete actors, actor groups, and networks of actors between which the goods were moving. It makes a big difference if transfers of goods, including trade, happened between two private merchants or between two ruling houses. After all, each scenario was different from the other with regard to the institutions that facilitated such transactions and with regard to broader socioeconomic implications. Second, we need to identify the incentives that made the actors engage in the transaction in question: Were these incentives largely economic? Or was economic gain (e.g., from a gift received) secondary to other, e.g., political, incentives? An unmindful use of the word 'trade' easily blurs both distinctions. If used without further explanation, it easily provokes the idea of traders as the central participating actors and/or the idea of economic gain being the primary incentive for whichever actors where involved.

Generally speaking, initial Han encroachment in the northwest and the resulting occupation of the Hexi corridor was primarily politically motivated. Above all, it was aimed at disrupting Xiongnu alliances and securing allies against them. This, however, sometimes came to be intermingled with certain economic interests of particular actor groups. One example is the desire to access special breeds of Central Asian horses, which were considered militarily important and furthermore subject to the personal fancies of particular emperors.[29] In any case, this westward "penetration" (*tong*) to regions that had previously been more or less unknown to the imperial center fundamentally meant a communicative penetration: an establishment of diplomatic contacts with the power centers of the resident polities of the Tarim Basin and beyond. It is therefore suitable to look at these developments from a network perspective. And yet, one must be cautious not to misinterpret these networks as general facilitators of trade that involved broader parts of society. Whereas talk of an 'opening' of routes easily leaves the impression of an opening for trade connections based on market transactions and of an "almost miraculous flow of goods"[30] between east and west, the evidence we have from transmitted texts rather speaks in favor of interpreting these developments as the creation of new links among highly restricted circles. Han actors (or nodes) were largely limited to those with close ties to the imperial center: the emperor and his court, envoys, and other high statesmen using state infrastructure. The transfers of good that occurred in this context thus occurred in highly restricted channels of movement.

Whether these socially restricted transfers deserve to be called 'trade' is yet a different question. I propose that a relatively narrow definition of 'trade' is useful for our purpose. It enables us to differentiate more neatly between different ways in

29 Leese-Messing, vol. 1, ch. 12.A, 509.

30 Brown 2014, 17, criticizing this imaginary perspective.

which goods were moving and in which (social, institutional, political, etc.) circumstances they were doing so.[31] It is useful to limit its meaning to transactions that principally follow market principles: Both parties engage in the transaction according to their situation of supply and demand and are thus driven by economic motives, i.e., because of the direct economic gain they are getting (or expecting) from it. As long as they get what they want from each other, their social relationship is irrelevant, and the transaction ends without leaving any social, political, or economic obligations on either side. Market-based trade in its purest form, therefore, is the only form of economic transaction that works impersonally. Physical marketplaces are, of course, neither necessary nor sufficient conditions for transactions primarily based on economic motives. Such transactions can also occur in somebody's home, somewhere on the road, or inside a certain state agency. Therefore, they are likewise applicable to transfers of goods between different ruling houses that are given the label of diplomacy. One of the main arguments I will bring forward throughout this section, however, is that such associations are still being made too readily and simplistically.

Certainly, actual transfers of goods are hardly ever purely based on economic incentives. Rather, they are to be placed on a broad spectrum on which purely economically driven transactions are but one extreme end. But to see the different entanglements of such transactions on this spectrum, it is nevertheless important to keep these theoretical distinctions, especially when we talk about issues such as diplomatic relationships. Defining 'trade' narrowly in the above sense and identifying the individual incentives that played a role in particular transfers may help us describe the role of economic motives behind diplomatic and other exchange processes more clearly, while also acknowledging the complexities involved in them.[32] It foregrounds the existence of different background structures than those involved in market trade, including different kinds of institutions and social relationships – relationships of symmetry or asymmetry, leading to different kinds of social obligations after the transaction. Ultimately, the narrow definition also allows us to more clearly recognize in which circumstances (between which kinds of actors, with the help of which institutions, in relation to which goods, etc.) forces of supply and demand did indeed play a role.

So what role did economic motives play in the establishment and maintenance of diplomatic ties between the Han court and the many polities of the 'Western Regions'? First of all, the relationship to these newly acquainted lands depended a lot on momentary power constellations in the larger region, i.e., between Han, Xiongnu, the mostly sedentary Tarim Basin city-states and their partly pastoralist neighboring

31 See Selbitschka 2018 for a proposal to make the concept of movement of goods (and ideas, etc.) the primary heuristic tool for analyzing cross-cultural interactions.

32 For an inspiring example of deconstructing complex transfer processes by identifying the particular sets of incentives involved, see Weaverdyck, vol. 2, ch. 12.C, sec. III (with regard to the coordination of grain transports in the Roman Empire).

polities on and beyond the Basin's edges.[33] During certain phases, the Han were able to exert some political power over the Tarim Basin states by stationing troops there, placed under the command of a protector-general of the Western Regions (*Xiyu duhu* 西域都護) and provisioned by newly built-up agricultural garrisons. Their primary aim, at least from the perspective of the central government, was to secure these polities' loyalty to the Han vis-à-vis the Xiongnu, with whom the states had been allied before. And during certain phases, the states themselves reportedly regarded Han presence in the Tarim Basin as an asset for their own security, which even led them to urge the Han to reestablish their protectorate. During times of Han supremacy over the Xiongnu, therefore, the states had good (political) reasons to demonstrate their willingness to cooperate with them, and they did so by using the full package of ancient diplomatic practice – such as sending hostage sons to the Han court, undertaking marriage alliances, and sending gifts as 'tribute' (*gong*).[34] But as power constellations in the larger region were subject to constant change, so were diplomatic relationships. Whether or not goods were transferred depended on these fragile ties rather than just on forces of supply and demand.

Without any doubt, the Hexi corridor played an important role for enabling such diplomatic ties in the first place. Diplomatic missions were moving through the Hexi corridor, relying on its state-built infrastructural institutions, including relay stations. The Han documents from the Xuanquan 懸泉 station near ancient Dunhuang have provided local evidence for these diplomatic missions. Xuanquan examples include missions from Tarim Basin polities such as Yutian (Khotan, modern Hotan), Jingjue (Caḍota, modern Niya/Minfeng), and Shanshan (former Loulan, Kroraina), as well as from more distant polities such as Kangju 康居 (see map 2). Some of the delegations are explicitly mentioned as using Hexi corridor relay stations from or to the Han court.[35]

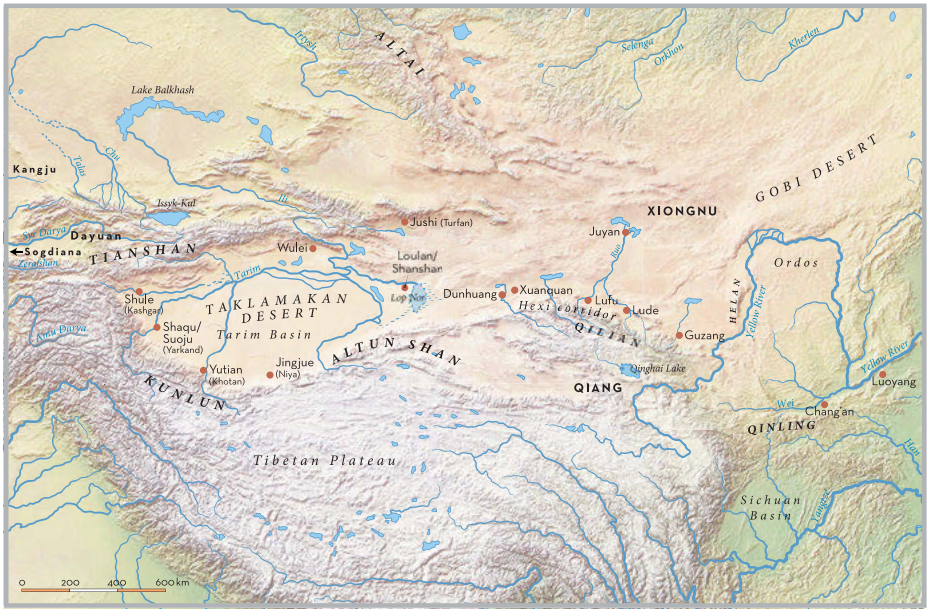
They also show that Han legal institutions were at times used to overcome situations of friction that occurred in such contexts. Even envoys from distant polities appear to have readily resorted to Han judicial procedures when feeling wronged.[36] Although the movement of goods (in the form of gifts) did play a role in these undertakings, they were only one part of the whole diplomatic game. Also, these movements cannot always be termed 'exchange' in the sense of two-directional transfers. In the case of Tarim Basin city-states, transmitted Chinese sources suggest that the movement of goods took place primarily in the direction from the Tarim Basin city-states toward the Han center, i.e., as tributary gifts in an asymmetric power relationship. Gifts by the Han to these states are mentioned only rarely and typically in the context

33 For the Tarim Basin oasis states and their neighbors during Han times and after, see, e.g., Di Cosmo 2000; Høisæter 2013; Selbitschka 2010; Høisæter 2020a; Høisæter 2020b.

34 See, e.g., Selbitschka 2015.

35 For an example, see J. Yang 2015, 427–428.

36 See the example below, sec. II.2.



Map 2: The Hexi corridor in its larger regional context: From Sogdiana to the Han capitals. © Peter Palm.

of special occasions such as inaugurations or marriages rather than as direct reciprocations for gifts received.[37]

Yet Chinese luxury products such as lacquer items and elaborate *jin* silks, with the technological quality of the latter indicating production in imperial workshops, have indeed been found in Tarim Basin tombs. They can usually be dated only very imprecisely, but some of them may date to Later Han times.[38] Even with these finds, however, the seemingly self-evident assumption that they must have reached the Tarim Basin from the central regions of the Han Empire (or one of its successors) via the most direct route through the Hexi corridor may be misleading. On the contrary, there are some indications that these commodities may rather have reached there by a detour via the Xiongnu.[39] The latter evidently received such gifts from the Chinese court in huge amounts and most likely passed some of these on to members of the ruling elites in neighboring polities, including Tarim Basin city-states, many of whom

37 Selbitschka 2015, 102–104; 2010, 29–30.

38 Selbitschka 2010, esp. p. 167.

39 Selbitschka 2010, 169. Selbitschka further explains that this does not rule out the possibility that once these – probably state-produced – luxury products of Chinese origin had left the Han Empire via diplomatic channels, they may eventually have changed hands further via private trading transactions, e.g., within the Tarim Basin region itself.

they were sporadically controlling or allied to.[40] This plausible scenario reminds us that network connections – in this case, connections between ruling houses – and power constellations between them may often have been more crucial to the eventual movement of such goods across space than factors that one would instinctively think of as facilitating trade, such as short and protected transport routes – which in this case would have been provided by the Hexi corridor. To summarize, not only do finds of products of Chinese origin in the Tarim Basin not necessarily indicate market-driven trade (by either private or state actors), they do not even necessarily indicate that these goods had moved through the Hexi corridor. While both scenarios certainly were also happening, they were not the only paths for Chinese goods to end up in the Tarim Basin and beyond.

Much of these Tarim Basin polities' interest in diplomatic contacts can basically be understood in the context of the direct military and political effects of their proximity to the Han and Xiongnu. Things are less straightforward when it comes to more distant polities such as Kangju. Their geographic distance to the Han, from which it was months of travel apart, made them less exposed to direct Han political or military outreach. It is their diplomatic relationship with the Han in particular, therefore, that has often been associated with purely economic motives. Based on a close reading of both excavated and transmitted text material, I will argue that even with regard to these more distant polities, this interpretation is rash and over-simplifying.

II.2 The Pitfalls of Camel Gifting: Reexamining a Legal Case from Xuanquan

Kangju missions to Han territory have long been known from transmitted texts that record instances of them sending hostages and delivering 'tribute' gifts to the Han court.[41] Kangju delegations do, however, also show up in the excavated Xuanquan material. They play a particularly central role in the following document, which serves as an illustrative example for how certain internalized assumptions on Silk Road trade and the role of (purely) economic incentives keep shaping the interpretation even of new evidence. It involves a delegation of Kangju and Suxie envoys delivering camels to local Han administrative authorities at Jiuquan (see fig. 1). The second part of the document, which is largely a protocol of transmission, dates the incident to the year 39 BCE. The following is a translation of the first part of the document:[42]

40 For the importance of the Xiongnu elite in the wider distribution of such goods, see Brosseder 2015; Barfield 2001; Brosseder and Miller, ch. 5, this volume.

41 See, e.g., the passage in *Hanshu* 96A.3892–3893, which will be discussed in sec. II.3 below.

42 This translation is largely a result of the joint translation efforts and group discussions in the context of a reading group in 2021 in which I was lucky to participate, organized by Enno Giele (University of Heidelberg) and with Chun Fung Tong and Wang Banban also taking part, all of whom contributed to the transcription, translation, and annotation in a way that I could not have achieved

> The parties of Envoy Yaobodao[43] and Vice [Envoy] Biantian, sent by the king of Kangju, and Envoy Gumo, Vice [Envoy] Shaqunji,[44] and Nobleman Weini, sent by the king of Suxie,[45] all kowtow and state personally: "Several times in the past, on behalf of [our] kings, we have contributed camels [to the Han]. [Each time after] entering[46] [Han territory] at Dunhuang Checkpoint, [we had passed] through one county after another and obtained food [for the camels] continuously [in order to maintain their weight], all the way to the Kunti[47] office of Jiuquan [Prefecture]. The governor [of Jiuquan] and Yaobodao along with the rest of us gathered to fairly evaluate the constitution [of the camels]. This time, [we,] Yaobodao and company, once again entered the [Han] border to contribute camels on behalf of [our] kings. We traveled along the road and … food.[48] After we arrived at Jiuquan [and gave the camels to the authorities, however], the governor of Jiuquan, together only with a junior clerk,[49] evaluated the livestock, [while we,] Yaobodao and company, were not allowed to see the contributed camels [anymore]. The one male and two female camels contributed by Gumo on behalf of [his] king were all white. [But the governor] claimed that they were yellow. The camels contributed by Yaobodao[50] and company were all fat. [But the governor] claimed that they were thin. [This] does not accord with the facts. [We were] treated unjustly."

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on my own. Transcriptions of the document (II90DXT0216:877–883, here: to 880), have been published in Hu and Zhang 2001, 118–19; Hao and Zhang 2009, 217. For earlier English translations of the first half of the document (each with deviations from the above), see J. Yang 2015, 429–430 and Hansen 2017, 31–32.

43 Previous transcriptions have largely identified the first character of this name as *yang* 楊, making the name Yangbodao 楊佰刀, as is also reflected in J. Yang 2015, 429–430. Discussions in our reading group resulted in the agreement that it actually looks more like【扌月言】, which could be read as *yao* 搖 (see Kangxi Zidian for the variant 𢯱) or as *you* 猶, as in early bronze inscriptions.

44 Hu and Zhang (2001, 119, n. 3), Zhang (2004, 142), and J. Yang (2015, 429) all regard the name of the person as Shaqun 沙困, leaving the following *ji* 即 unaccounted for. Here, the latter is therefore tentatively interpreted as a part of the name.

45 Suxie likely referred to Samarkand as Sogdiana's traditional center. See Morris, ch. 4.A, sec. I, this volume, referencing Bi 2019, 53. See Huber 2020, 92–93, for an overview of earlier debates regarding the identification of Suxie.

46 The character is not clearly legible but might be *ru* 入 ("enter").

47 Previous transcriptions suggested *hun*/*kun gui* 昆歸. But based on *Hanshu* 19A.729 (including the commentaries under no. 6), and as already proposed by, e.g., Feng (2021, 7), it should be transcribed as Kunti 昆蹏 (with *ti* 蹏 being the old form of *ti* 蹄, "hoof"), obviously the designation of an office concerned with pastures or stables, under the supervision of the *taipu* 太僕.

48 Two characters are difficult to identify here. Neither the identification as *yi ci* 以次 ("in proper order," see Hu and Zhang 2001, 118) nor as *bu de* 不得 ("not be able/allowed to," see D. Zhang 2004) is quite persuasive. Unfortunately, the different interpretations are crucial to understand the envoys' line of argument, as the two versions would result in opposite meanings: Either the traveling party was or was not able to obtain a proper amount of food (for themselves and/or their camels) along the route to Jiuquan. Considering that the envoys claim later that the camels were indeed fat (i.e., well fed), however, it would seem unlikely to suppose that at this point they were claiming not to have obtained food for their camels along the way. On the other hand, the latter part of the document indicates that the question whether the camels had been properly fed along the way may yet have been an issue. J. Yang 2015 accepts *yi ci* 一次 and translates "fed the animals at each stop" (429–430).

49 Or plural: with junior clerks.

50 The characters of the name are not clearly visible but obviously make sense here.

Fig. 1: Legal document concerning a complaint lodged by Kangju and Suxie envoys with Han authorities. Written on wood, found at the site of Xuanquan station, Dunhuang. Sohu.com.

> 康居王使者【扌月言】佰刀、副扁闐，蘇鋈王使者姑墨、副沙困即、貴人為匿等皆叩頭自言：「前數為王奉獻橐佗。□敦煌（877）關，縣次贖（續）食，至酒泉昆蹏官。大守與【扌月言】佰刀等集平直（值）肥瘦。今【扌月言】佰刀□□為王奉獻橐佗入關。行道□□（878）食。至酒泉太守獨與小吏直（值）畜。【扌月言】佰刀等不得見所獻橐佗。姑墨為王獻白牡橐佗一匹、牝二匹，以為黃。及□□□（879）等獻橐佗皆肥，以為瘦。不如實，寃（冤）。」（880）[51]

Yang Jidong interprets this text as an example of "Xuanquan manuscripts [that] have provided indisputable evidence that many of the 'envoys' [from Central Asian polities] were actually merchants" who used the transfer of diplomatic gifts as a "cloak for trade."[52] By the latter metaphor, he is referring to a long-held view according to which certain diplomatic transactions, even though disguised as tributary gift transfers, were in fact little more than trade deals.[53] As for the case at hand, Yang argues that the "contribution" (*xian* 獻, a word indicating a gift to a superior) of camels by the so-called envoys was actually a sale, in which the "the Han government clearly paid for the camels." He accordingly refers to the evolving legal case as an example of "disputes that erupted between the seller and the buyer."[54] In a similar vein and even more explicitly, Valerie Hansen interprets the envoys' complaint as a petition "to protest to the low prices they had received for camels." Their claim that the Chinese officials had falsely "paid them the rate for thin yellow camels," she argues, discloses the envoys' "clear sense of market values."[55] On a more general level, such an interpretation involves the assumption that economic incentives and market forces were the main or even sole drivers of the transaction that took place: The Han demanded camels, which the Kangju could provide, and the Kangju wanted to get paid with something that does not get mentioned in the text but was something that the Han could provide. If both parties delivered what they promised, the deal would be done.

All of this may have been the case, but likewise it may not have been. For all that we know about diplomatic gift-giving both in ancient China and elsewhere, it would be ignorant to simply disregard the possibility of political (rather than purely economic, market-driven) motives being at play. After all, one must acknowledge that the document itself does not provide any clear evidence for the assumption that the envoys were paid in either money or kind. And in fact, certain indications may rather point toward politico-diplomatic instead of purely economic motives. Besides lacking reference to a payment, the Han officials' complaint about the camels' color being yellow instead of white may be of relevance. Yang assumes that the color (next to the weight) was a crucial factor "in the assessment of the market value of camels," with

51 See n. 42 above.

52 J. Yang 2015, 429.

53 For the notion of diplomatic or tribute relationships as a "cloak for trade," see Fairbank 1942, 138–139; Yü 1967, 59. For an extensive critical treatment, see Selbitschka 2015.

54 J. Yang 2015, 429.

55 Hansen 2017, 17.

light-colored ones being "more expensive" than dark-colored ones.[56] But was it really a common market value that was being assessed here? It may have been. White camels may generally have been viewed as more valuable than yellow ones because of their rarity. Their fur may have been more expensive, and on a living animal may have lent prestige to its owner, whereas they would hardly have been more valuable with regard to their practical use as pack animals.

However, examples from transmitted texts indicate that the color white, rather than simply being considered 'beautiful' or 'special' and therefore enhancing the price of certain goods, may have had a specific meaning in diplomatic contexts during Han times.[57] Several Han texts mention a "contribution of white pheasants" (*xian bai ji* 獻白雉) by the southern Yuechang 越裳 people to the ancient Duke of Zhou (11th century BCE).[58] Even more telling is that the Han scholar Wang Chong, who also refers to this incident, mocks the very belief that obtaining white pheasants as tribute gifts was something particularly desirable. He argues that "as for white pheasants, they just have a white color during a short period after their birth. It is not because there is a [special] breed of white pheasants" 白雉, 生短而白色耳, 非有白雉之種也.[59] He further feels the need to clarify that "eating white pheasants ... does not help to cast out evil" 食白雉 [...] 不能除凶.[60] There are numerous further instances in the *Hanshu* and *Hou Hanshu* as well as in other transmitted Han texts that mention the sending of white animals in the context of foreign peoples' submission.[61] While individual cases also refer to animals of other colors, white animals seem to have played a predominant role in this context. This indicates that white animals may have borne some special meaning to the Han, possibly as a symbol of political submission in particular. But even if no such symbolism was involved, the Jiuquan actors' insistence on color issues does make at least as much sense in a diplomatic gift-giving context – in which accurate obedience to the formal rules, including the spot-on choice of proper gifts, is central to the acknowledgment of the sincerity of each party – as it would in a purely economically driven trade context.

Even more importantly, what speaks in favor of acute political incentives is the information we get from transmitted historical records about the Han–Kangju relationship around the time of the date of the document. Most generally, these records suggest that Han influence on and military presence in the Tarim Basin had increased noticeably during the two decades before 39 BCE. In 59 BCE, they had basically re-

56 J. Yang 2015, 430, n. 56.

57 Concerning this matter, I am indebted to Chun Fung who brought this possibility to my attention.

58 E.g., *Hanshi waizhuan* 5.180; *Lunheng jiaoshi*, vol. 2, 375 (ch. *Ru zeng* 儒增).

59 *Lunheng jiaoshi,* vol. 3, 731 (ch. *Jiang rui* 講瑞). A commentator to the passage suggested that instead of *sheng duan* 生短 (rendered above as "during a short period after their birth"), the text should read *zhi sheng* 雉生 ("when the pheasants are born"), which is possible but does not alter the overall meaning.

60 *Lunheng jiaoshi*, vol. 2, 375 (ch. *Ru zeng* 儒增).

61 E.g., *Hanshu* 6.176; *Hou Hanshu* 1B.62.

placed the Xiongnu in their previous dominance over many of the polities with their establishment of the protector-general of the Western Regions at Wulei, which was located on the northern route through the Tarim Basin. From there, the protector-general reportedly also "watched over the activities over the Wusun, Kangju, and other states outside [the protectorate region]" 督察烏孫、康居諸外國動靜.[62]

With regard to the specific years around the time of the camel case (39 BCE), a biographical chapter of the *Hanshu* provides us with fairly concrete information on the Kangju's involvement in the power struggles over the Tarim Basin. In 45 BCE, the Northern Xiongnu's *chanyu* Zhizhi had fled to the Kangju after killing a Han envoy accompanying Zhizhi's son, who had previously served as a hostage in Chang'an, back home. In the following, Zhizhi and the king of Kangju gave each other their daughters in marriage and jointly attacked the Wusun, who were allied to the Han. After a while, however, *Chanyu* Zhizhi antagonized his host, the king of Kangju, by killing the latter's daughter, some Kangju nobles, and hundreds of others. Obviously, this happened in an attempt at establishing a solid regional power base emanating from Kangju territory under his own leadership. Among other things, Zhizhi also had Kangju people build a fort for him on Kangju territory. Unsurprisingly, when Han forces eventually arrived in 36 BCE to battle against Zhizhi and the many Kangju fighters under his command, Zhizhi reportedly was worried that the king of Kangju might turn against him and secretly plot with the Han out of his personal embitterment. Zhizhi was eventually killed in his palace by Han attackers after Kangju troops had retreated from there and had basically left him without defense.[63]

The whole story unequivocally demonstrates that the Kangju were quite centrally involved in complex Han–Xiongnu power struggles during the time when the camel case occurred at Jiuquan. Assuming that either side may have had certain political rather than purely economic interests in participating in diplomatic relations with each other by no means seems far-fetched. The Kangju's delivery of camels should, therefore, also be considered in this light, and not be ticked off all too readily as purely market-driven commodity trade.

These observations have considerable consequences for the interpretation of the passage from the economic perspective adopted here. They would support the idea that the transaction, and possibly many others of this kind, may in fact not have been a form of trade at all – unless one extends the notion of trade to one that includes non-material goods such as assurances of political security as trading commodities. Apart from this non-material good, the envoys may not have taken back (and expect-

62 *Hanshu* 96A.3874; Hulsewé 1979b, 79, with a slightly different translation.

63 These events are only mentioned in passing in *Hanshu* 96 on the Western Regions but are recorded in some detail in the biographies of Chen Tang 陳湯 and Gan Yanshou 甘延壽 in *Hanshu* 70.3007–3029, trans. Yap 2019, 234–265. A few years later, in 33 BCE, the Kangju got involved again, this time in power struggles among the Wusun. The Han actively took part in these struggles, in the course of which one self-installed Wusun ruler fled to the Kangju. *Hanshu* 96B.3908, trans. Hulsewé 1979b, 159.

ed) any material compensation from the Han authorities in return for their camels in this particular case – neither money nor commodities. In such a scenario of momentarily strong Han dominance, the camels may have been delivered in a one-directional, tributary transfer based on an asymmetrical relationship that assured the Han of the Kangju's cooperation with the Han vis-à-vis the Xiongnu. The primary incentive of the Kangju in having the camels delivered to the Han would not then have been economic. Furthermore, the choice of far-traveling goods (in this case, more-or-less white camels) may have rested less upon pure market principles than in the case of actual trade.

For the basic assumption that noneconomic motives were also at play, however, we do not even have to assume that the Kangju did not take back anything in return. It is, of course, also well possible that some form of reciprocal gift-giving was involved. Indeed, some remarks in historical records suggest that in cases of distant polities such as Kangju, the Han were – at least occasionally – reacting to the reception of gifts by sending counter-gifts.[64] But to what extent such reciprocal behavior was economically motivated is again a different question. Certainly, depending on how useful and valuable both parties would have found the gifts they ended up receiving, they may also have been interested in keeping up the relationship for economic incentives. But even in this case, economic incentives were likely working next to the basic political incentive of keeping up friendly relations with a distant polity with which one may yet have occasional direct or indirect contact. The case involving *Chanyu* Zhizhi has provided an illustrative example of such a situation of contact between Kangju and Han. Furthermore, depending on acute power constellations, the motivational background may also have varied over time, from largely political to increasingly economic or vice versa. But even in a potential scenario of a (partly) economically driven relationship of reciprocal gift-giving, it makes sense not to confuse this with a market situation. Supply and demand certainly played a role in the exchange of gifts, as will be further discussed below (II.4). But in any likely scenario, they were not the only factors by far.

To summarize the above considerations in more abstract terms, different interpretations of the text and its underlying scenarios have consequences for our understanding of whether and which goods moved in which direction. They also affect our understanding of which incentives drove the movement, and on the basis of which larger structures they were moved. From an economic perspective, these differences are no mere negligible subtleties.

The above considerations alone show how certain underlying assumptions rooted in the Silk Road paradigm, including a simplistic picture of market forces alone steer-

64 Ban Gu writes that nearer states of the Tarim Basin at certain times were offered and accepted Han titles and insignia. He adds that more distant polities such as Kangju, Great Yuezhi, Anxi, Jibin, and Wuyi were treated differently: "When [these distant states] sent tributes or gifts, [Han] reciprocated, but [Han] did not exercise supervision or control" 其來貢獻則相與報, 不督錄總領也. *Hanshu* 96B.3928, trans. Hulsewé 1979b, 197; Selbitschka 2015, 101.

ing the movement of goods, still guides our interpretation of even the newest pieces of evidence in a certain direction. Rather than ticking off diplomatic transactions as trade too readily, acknowledging the various kinds of incentives that may have been involved in each case helps us acknowledge a more complex ancient reality of long-distance transfers inside this space. Such reconsiderations are not only worthwhile with regard to newly excavated documents. As the following examples attempt to demonstrate, a fresh look at some well-known transmitted records with regard to what they tell us about the incentives of long-distance transactions can also bring forth an adjustment of perspectives on this matter.

II.3 A Reexamination of Transmitted Text Passages

II.3.1 Contextualizing Depictions of the Kangju's Love for Trade

Different attempts have been made to explain the motivational background of diplomatic undertakings between Han actors and distant foreign polities such as Kangju and Jibin 罽賓. They can largely be summed up in two major approaches. In the following, I will briefly summarize these approaches with regard to the example of Kangju and offer a third option.

The first approach involves the assumption, also held by Yang Jidong and Valerie Hansen with regard to the camel story introduced above, that the Kangju had direct economic interest in delivering gifts to the Han. In this view, they delivered gifts simply in the expectation of getting direct economic compensation in return that corresponded to the value of the (pseudo-)gifts that they had delivered themselves.

The second approach is likewise based on the assumption of economic motives on the Kangju side, albeit in a more indirect way. As suggested most recently by Armin Selbitschka, the primary aim for the Kangju's delivery of 'tribute' was not to trigger countergifts. Even though they did receive such countergifts occasionally, these were at most part of the deal. Their primary incentive of delivering gifts was their hope that the Han would, in Selbitschka's words, "open new markets for regular commerce" in return. Rather than expecting profits in the form of valuable countergifts, he argues, "actual business was scheduled for private Chinese markets."[65] One may want to add that this interpretation seems to go well with one of the central insights provided by the so-called Sogdian *Ancient Letters* from the fourth century CE: These sources indeed attest to the presence and private mercantile activities of Sogdians – who are often regarded as the successors of the Kangju, even though their relation is much more complicated – in territory under direct Chinese administrative command in places ranging from frontier cities such as Dunhuang down to Luoyang.[66]

65 Selbitschka 2015, 104, 114.

66 The Sogdian *Ancient Letters* from the early fourth century CE (found near Dunhuang), discovered by Aurel Stein in 1907, in fact attest to Sogdian people living in Luoyang, Chang'an, and Lanzhou, as

Leaving this much later evidence aside for now, this assumption of the Kangju being interested in Chinese markets during Han times does not come out of thin air. It is based on a statement by Guo Shun 郭舜, protector-general of the Western Regions during the time of Emperor Cheng 成 (r. 33–7 BCE), i.e., more than 300 years prior to the Sogdian *Ancient Letters*. The Song historian Sima Guang 司馬光 (1019–1086) dates it to 11 BCE.[67] It was recorded in the following passage of Ban Gu's *Hanshu*, which deserves to be quoted in full:

> At the time of emperor Cheng, the Kangju sent a son to attend the Han court and made tribute offerings.[68] But the Kangju regarded themselves as cut off and distant [from the Han realm]. Behaving arrogantly in their [sensed position of] independence, they were not willing to place themselves on the same level with the other states [of the Western Regions]. Guo Shun, protector-general [of the Western Regions], submitted several petitions, saying: "Initially, when the Xiongnu prospered, this was not because they had annexed the Wusun and Kangju. And when it came to the point that [the Xiongnu] called themselves [our] servants and maids, this was not because they had lost control over these two states.[69] Even though the Han have received hostage sons from them all, amongst themselves the three states keep sending goods to each other and maintain mutual contacts just as before. Likewise, they keep a watch on each other and attack each other when they see fit. When united, they are unable to be close to and trusting each other; when split apart, they are unable to be subjects of one another. In terms of the present [situation], the conclusion of a matrimonial relationship with the Wusun has never brought any advantage but has, on the contrary, involved trouble for the central states [i.e., the Han]. Nevertheless, since the Wusun have been so related previously, and now together with the Xiongnu declare their allegiance [to the Han], it would not be right to refuse [their] request. However, Kangju is behaving arrogantly and cunningly and is still unwilling to bow before [Han] envoys. When officials of the Protectorate General (i.e., my officials) reach their state, the [Kangju hosts] seat them below the envoys of the Wusun and other [states]. The king and noblemen are served

well as in some Hexi corridor towns during that time period. But one must be careful not to project such a scenario to Han (and particularly Former Han) times all too readily. On these matters, see below, sec. V.1.

67 See Hulsewé 1979b, 126–127, n. 307 and 308.

68 *Hanshu* 70.3030, in the biography of Duan Huizong 段會宗, mentions that "the Kangju crown prince Baosuni, leading more than ten thousand men, wanted to surrender [to the Han]" 康居太子保蘇匿率衆萬餘人欲降. In the following, however, the imperially sanctioned reception of the Kangju by the Han military dispatched for that purpose failed, as the Kangju felt humiliated by the latter's behavior and eventually fled. The text does not provide a date for this event, but given the chronology of Duan Huizong's biography, it must have occurred during the latter's second term as protector-general of the Western Regions, as which he was reinstalled at some point during the Yangshuo period (24–21 BCE). How far this event relates to the above record of a Kangju son being sent to court is not clear.

69 Psarras (2004, 43) translates: "In the beginning, when the Xiongnu were powerful, we had no contact with the Wusun or with Kangju (Sogdiana?); but after their surrender, the Xiongnu did not lose (control over) these two countries." I would reject this translation for two main reasons: First, the Chinese text does not indicate any change of subject between what Psarras renders as "In the beginning, when the Xiongnu were powerful" and "we had no contact…" Second, the translation does not reflect the parallel construction that has 非以 […] 也 (rendered in my translation as "this was not because…").

with drinks and food first, and only when they have finished are the officials of the Protectorate General served with drinks and food. Hence, the Kangju are acting as if there is nobody to whom they need pay attention, so as to show off in front of their neighboring states. In view of these considerations, how can it be explained that they are sending a son to attend [court]?" "[The explanation] is that their wish to trade and their engagement in flowery words are a deceit." The Xiongnu are the largest state of the Man [peoples]. At present they serve Han scrupulously. If they are informed that the Kangju are paying proper deference to [our envoys], it would make the *chanyu* suspect that he is being humiliated. [Hence] it is appropriate to send the [Kangju's] attending son back, to sever relations, and to discontinue sending any further envoys. Thereby we would make clear that the house of the Han does not foster connections to states that lack proper demeanor. The small [Hexi] commanderies of Dunhuang and Jiuquan as well as the eight states of the southern route [through the Tarim Basin] have been supplying envoys in their coming and going with men, horses, asses, camels, and food, and have all suffered thereby. The places en route have been emptied and their resources spent, in providing an escort or welcome for [envoys of] an arrogant and cunning state that lies cut off and distant [from the Han]. This is no wise policy." [Yet,] since the Han had only recently established contact [with the Kangju] and attached importance to bringing people from remote places [to court], they maintained their ties and for the time being did not sever relations.

至成帝時，康居遣子侍漢，貢獻，然自以絕遠，獨驕嫚，不肯與諸國相望。都護郭舜數上言：「本匈奴盛時，非以兼有烏孫、康居故也；及其稱臣妾，非以失二國也。漢雖皆受其質子，然三國內相輸遺，交通如故，亦相候司，見便則發；合不能相親信，離不能相臣役。以今言之，結配烏孫竟未有益，反為中國生事。然烏孫既結在前，今與匈奴俱稱臣，義不可距。而康居驕黠，訖不肯拜使者。都護吏至其國，坐之烏孫諸使下，王及貴人先飲食已，乃飲啗都護吏，故為無所省以夸旁國。以此度之，何故遣子入侍？其欲賈市為好辭之詐也。[70] 匈奴百蠻大國，今事漢甚備，聞康居不拜，且使單于有自下之意，宜歸其侍子，絕勿復使，以章漢家不通無禮之國。敦煌、酒泉小郡及南道八國，給使者往來人馬驢橐駝食，皆苦之。空罷耗所過，送迎驕黠絕遠之國。非至計也。」漢為其新通，重致遠人，終羈縻而未絕。[71]

The assumption, also proposed earlier by Hulsewé, that the Kangju's motive in maintaining peaceful diplomatic contacts with the Han court was their interest in Chinese markets, basically hinges upon the interpretation of one single, highly problematic sentence. It is the sentence rendered in my translation above as "[The explanation] is that their wish to trade and their engagement in flowery words are a deceit" 其欲賈市為好辭之詐也. This tentative rendering would suggest that the Kangju's "wish to trade" (whatever that means concretely) is something they are just pretending. By contrast, Hulsewé's commonly used translation – "desiring to trade, they use a pretence couched in fine verbiage"[72] rather suggests that the Kangju's wish to trade was

70 I modified the punctuation suggested in the Zhonghua shuju edition by deleting the comma between *hao* and *ci* here. On this point, see n. 75 below.

71 *Hanshu* 96A.3892–3893. Cf. the partly deviating translations in Hulsewé 1979b, 126–128; Selbitschka 2015, 100.

72 Hulsewé 1979b, 128. Selbitschka's translation ("Their desire and love for trade in the markets is [shrouded] in cunning words!") is close in content to this translation of Hulsewé's (Selbitschka 2015, 100), while being a little less close to the original text.

something that they wanted to hide. This interpretation is certainly not implausible. But a look at Hulsewés footnotes discloses that he, too, found this translation problematic: He points out that the sentence could also be rendered quite differently, namely as "Their desire for trade and friendship is a deceitful use of words."[73] This would again come close in content to my above suggestion, even though hinging upon yet a different interpretation of the syntactical structure. De la Vaissière, while taking over the translation from Hulsewé's main text and accepting it as evidence for the idea of Kangju delegations being "fake embassies," also acknowledges the fact that the "the passage is ambiguous and the translation could be made differently."[74] The sentence is, in fact, problematic in so many ways that it is hard to come to a conclusive interpretation of it.[75] But as Hulsewé already pointed out in his footnote, by making a choice of translation in this case, "a matter of considerable importance is at stake," because only one of them "implies a willingness of distant Sogdiana [or, rather, Kangju] to engage in trade with China."[76] Such an interpretation, therefore, hangs by a thread that is much thinner than commonly acknowledged.

73 Hulsewé 1979b, 128, n. 312.

74 De la Vaissière 2005, 37–38.

75 Pointing to at least a few of the philological issues involved is useful for illustrating the depth of difficulty. It starts with issues of punctuation: As already pointed out by Hulsewé, the punctuation in the standard edition of the *Hanshu* does not seem right (Hulsewé 1979b, 128, n. 312). I agree with Hulsewé's argument that *hao* and *ci* probably belong together in the sense of "flowery words," "fine verbiage," or similar, since *hao ci* is well documented in this sense in very similar contexts. I therefore also agree that the punctuation in the Zhonghua shuju edition (which puts a comma between *hao* and *ci*) is probably wrong. But even with the modified punctuation, different options for interpreting the sentence in its syntax and overall meaning remain, one of which is the option I chose in my translation above. The problems that scholars have long had with punctuating the sentence is part of the problem of how to understand its overall syntax, related in part to the functions of *wei* 為 and the *zhi* 之. Three close-to-the-original translations that I would deem legitimate, each interpreting certain syntactical elements differently, would be the following (with no claim of completeness): (1) "[The explanation] is that their wish to trade and their engagement (*wei*) in flowery words are a deceit" (as suggested above). (2) "[The explanation] is that their desire to trade is (*wei*) just a deceit in flowery words." (3) "[The explanation] is that they wish to trade and fabricate (*wei*) a deceit made up of flowery words." One may want to add that on top of this, the contextual meaning of *gushi* 賈市 (and, to a lesser extent, of further expressions) is not quite clear. *Gu* typically means "to trade" (or "trader" as a noun), and *shi* usually means "marketplace" as a noun and "to exchange" as a verb. The two are most likely to be interpreted as a compound of two verbs with the meaning of "to trade" or "exchange" here. One has to acknowledge that the semantic range is pretty broad even for *shi*, the usage of which is certainly not limited to the kind of trade that one would expect to happen in marketplaces but also applies to "exchanges" more generally (see, e.g., the entries and examples the *Hanyu Da Cidian* gives for *shi*). In short, it is unclear if the Kangju's "trading" (*gu shi*) refers to private market transactions or diplomatic gift exchange, while additionally, the sentence structure leaves room for interpreting their "desire to trade" (whatever that means concretely) either as something that they are trying to hide, or quite the contrary, something that they are just pretending.

76 Hulsewé 1979b, 128, n. 312.

Given all these uncertainties, the point that I would like to make is yet another: Even if we assume that, from the perspective of the protector-general, the Kangju were trying to hide their desire to engage in exchange transactions in the context of private markets (and maybe even in actual marketplaces), do we really have to assume that the protector-general imagined these 'markets' to be 'Chinese markets'? I am inclined to say that the whole passage rather suggests otherwise. Apart from the problematic central sentence, what is the realm of interest that the passage depicts with regard to the Kangju? Looking through the whole passage again, one finds that the protector-general actually depicts the Kangju's sphere of activity exclusively with regard to their Tarim Basin and other neighbors, such as the Xiongnu and Wusun. In fact, this is still pretty much the same network of polities that historical records had suggested for the primary Kangju interaction radius in the 30s BCE, as discussed above with regard to the camel case from Xuanquan. It is with these neighbors that they "keep sending goods to each other and maintain mutual contacts" and "keep a watch on each other and attack each other when they see fit," and it is in front of them that they want to "show off." To put it shorty, what the Kangju rulers are interested in according to the protector-general's description is to stand their ground among the neighboring polities that they are in regular contact with: They want to assert their position within the political, military, and economic network they are maintaining with their own neighbors.

In this context, it is also important to remember that this geographic realm of Kangju activity is also what the protector-general, as a regional actor and observer, must have had on his mind when he was thinking about the Kangju. What he knew of the Kangju was his (and his subordinate's) acquaintance with them on visits to Kangju territory and especially within the Tarim Basin where he was stationed. What Kangju people might have been doing far away to the east in some alleged marketplace in Chang'an or the Hexi corridor likely did not fall into the protector-general's field of expertise or even central interest.

Considering the position of the protector-general and the larger context of the whole passage, would it not be much more natural to assume that even in that problematic sentence, the protector-general would have had the Kangju's activities with their direct neighbors (including those in the Tarim Basin) on his mind? If he was indeed talking of the Kangju's "desire to trade in the markets," would these markets not have been Tarim Basin markets rather than Chinese markets? It is worth considering that one or even the most important incentive for the Kangju to maintain diplomatic relationships with the Han may simply have been their desire to be left unhindered by the Han in whatever dealings they had with their neighbors, many of whom were currently under Han – and more particularly, the protector-general's – control to a certain extent. While it would be bold to claim that the matter is crystal clear, I would argue that a close reexamination of the well-known passage, as undertaken above, does provide solid arguments in favor of this scenario.

II.3.2 Jibin Merchants and Rhetorical Strategies

Finally, there is one more layer of criticism that we need to impose on all that has just been said. We have to allow for the possibility that in the case of the allegation of the Kangju's obsession with trade (in one way or the other), we may be dealing with little more than a well-established rhetorical trope. With constantly shifting alliances and fragile relations of loyalty with and between its northern and western neighbors, the central Han government systematically found itself in fear of diplomatic insincerity. One of the most self-evident ways to express and bundle such fears was the idea that actors on either side could be using diplomatic undertakings for their immediate personal profit rather than submitting to the greater good (of stabilizing alliances, etc.) – in other words, that they were acting like merchants. The earliest known example of such an accusation was aimed not at any foreign party, but at the Han envoys sent out by Emperor Wu from Chang'an to Central Asia. Sima Qian accused them of embezzling diplomatic gifts in their custody and selling them on their trips to distant lands. He explains this by pointing out that the people sent out on these missions were of low socioeconomic status.[77] In other words, they had little to lose and much to gain from such behavior. Such an explanation certainly stands to reason. It is plausible that such embezzlements were indeed happening, especially during the early phase of large-scale diplomatic outreach by the Han. Nevertheless, it is also not a coincidence that we first get to hear this accusation from this very historian, who was a notorious critic of northwestern expansion and seems to not have missed any opportunity to ridicule the central government's attempts at gaining power over distant lands.[78] Even if the accusations were true in this case, one has to also see them as part of a rhetorical strategy.

In any case, once such a concern about merchant-envoys had entered the discourse, it likely proved even more compelling with reference to diplomatic actors from distant lands. Their true intentions would have seemed much more difficult to decode, and their actions were even less controllable from a Han perspective. As well as the passage on the Kangju above, the same chapter of the *Hanshu* records a similar accusation with regard to diplomatic delegations from Jibin.[79] The passage follows a narrative about early Han–Jibin contacts beginning from Emperor Wu's time, when Han delegations were first sent out to Central Asia. Reminiscent of the Kangju case, Ban Gu writes that the Jibin "regarded themselves as cut off and distant, with Han troops being unable to reach them" 自以絕遠, 漢兵不能至, and that their king menaced and even killed Han envoys several times. At one point, when a Han official sent to escort a Jibin delegation back home again felt menaced by the Jibin king, he plotted

77 *Shiji* 123.3171; Leese-Messing, vol. 1, ch. 12.A, 509–510.

78 Van Ess 2014 provides ample evidence for this.

79 During Han times, 'Jibin' likely referred to the region of Kapisa and Gandhāra. Morris, vol. 1, ch. 9, 392.

with a rival of the latter. Their plot resulted in the killing of the former king and his replacement by the rival, who was then provided with Han ruling insignia. After a later Han envoy "fell out with" (*xiang shi* 相失) the new Jibin king, however, the latter killed 70 members of the Han delegation. He wrote an explanation and apology to the Han court, but relations were severed. At this point, no adequate means were found on either side to overcome such friction. We do not know anything about the concrete backgrounds of all these conflicts, but mutual misunderstandings likely played a central role. In any case, the Han felt humiliated by the Jibin's behavior, and possibly, the reverse was just as true.

During Emperor Cheng's reign in the late first century BCE, Jibin again sent an envoy, along with gifts and another apology. There seems to have been some insecurity among members of the high court as to how respond to this gesture, and particularly as to whether a Han envoy should be sent back to escort the Jibin delegation. The *Hanshu* then quotes the words of the counsellor Du Qin 杜欽 in an attempt at persuading Supreme General Wang Feng 王鳳 (d. 22 BCE), Emperor Cheng's uncle and one of the most powerful men at court, that the Jibin should not be rendered such a service. According to Ban Gu's quotation, Du Qin first reminded Wang Feng of Jibin's former misdemeanor and of the Han's policy of entering into generous relations only with polities that are close enough to potentially bring direct trouble to the Han. Du Qin argues that, should the Jibin show respect toward the Han, it would not be of much use because the impression that this would make on the other countries of the Western Regions would be negligible. Nor would the Jibin, should they decide not to adhere to the Han, be able to pose a real threat to the Tarim Basin city-states, which the Han wanted to secure as allies against the Xiongnu. In short, the Jibin are neither potentially useful nor potentially dangerous, so investing in a serious diplomatic relationship with them would be a complete waste. Du Qin, however, feels compelled to add yet another level to his argumentative strategy by making the following accusation:

> Now [the Jibin] regret their mistakes and have come [to us], but [among those that have come] there are neither members of the royal family nor people of high status. Those who make the offerings (*xian*) are all itinerant merchants and people of low status who wish to circulate goods and engage in trade and seek reputation by making offerings.
>
> 今悔過來，而無親屬貴人，奉獻者皆行賈賤人，欲通貨市買，以獻為名，故煩使者送至縣度，恐失實見欺。[80]

Ban Gu confirms Du Qin's allegation at the end of his section on Jibin, adding that Jibin envoys from then on "arrived once every several years" 數年而壹至.[81] The similarity of Du Qin's accusation in content and even wording to the earlier accusation against the indigent, profit-seeking Han envoys first uttered by Sima Qian as well as

80 *Hanshu* 96A, p. 3886; my translation. Cf. Hulsewé 1979b, 109.
81 *Hanshu* 96A.3887.

to the allegations against the Kangju discussed above is obvious. There are, of course, two basic possibilities for evaluating such a similarity. On the one hand, one could argue that the accumulation of such accusations against envoys is simply an indication of their accuracy. In a broader sense, such reasoning seems plausible. After all, fears of this happening were well founded in the systematic risks of principal–agent relationships, especially in those that lacked a stable establishment and routine. The interests that drove client (ruler/government) and agent (envoys) were not identical and even partly at odds with one another, and embezzlement and other forms of personal profit-seeking on the side of envoys and clients are all but certain to have happened. And indeed, for rulers (on any side) it would always have been an available option to include people in their delegations who were familiar with traveling and trading, simply because of their resulting expertise. On the other hand, even if merchants were integrated into delegations by their rulers, this does not mean that the whole undertaking was just about "circulating goods and engaging in trade." The perceived plausibility of such a generalizing accusation, however, increased its suitability as an effective, catch-all trope; as a lethal argument for everyone trying to convince somebody of the uselessness of a certain diplomatic undertaking or policy. Mixed with a pinch of xenophobia, its plausibility likely increased even further when applied to foreign delegations.

It is worth adding that Du Qin, who uttered the accusation against the Jibin envoys, is known for his broader criticism of excessive state expenditure, especially with regard to the central government's foreign policy in the north.[82] Furthermore, the available records suggest that Du Qin himself had never been to the northwestern frontier region, even though his warnings about the practical risks of traveling to Jibin shortly after the above passage suggest he had access to detailed information of local conditions. Unlike in the abovementioned case of Guo Shun, who as protector-general was personally in contact with Tarim Basin locals and their neighbors, Du Qin could not claim such firsthand experience. How exactly he would have gained sufficient knowledge about Jibin people in order to make such bold claims about their status and intentions remains questionable. What is clear, however, is that an allegation of them being merchants was a safe means for a critic of current foreign policies to roil decision-makers at court, whatever personal reason the critic had for doing so. Ultimately, therefore, the assumption of a trope with questionable validity being involved is not unjustified even with regard to comparatively distant polities.

All this is not to say that I do not believe that diplomatic missions – including Han and other envoys moving goods to, from, or through the Hexi corridor – did at times or in part serve as a 'cloak for trade,' nor that diplomatic exchange of goods was totally independent from particular economic demands. I will come back to this point shortly. Furthermore, it seems plausible that, in general, the likelihood of economic motives being involved increased with the geographic distance between the

82 Loewe 2000, 98.

ruling houses. Nevertheless, based on the above reconsideration of central text passages and their contexts, I would argue that taking a step back from some internalized assumptions about market-driven exchange processes does seem worthwhile if we want to see a fuller picture of the multifaceted nature and embedding of economic transactions in this space.

II.4 The Hexi Corridor as Transit Zone and Terminus in Diplomatic Exchange Processes

With regard to the question of what role economic incentives played in Han occupation of the Hexi corridor and in the establishment and maintenance of diplomatic contacts between the Han and distant polities, my previous arguments have been largely negative ones. Certainly, some of the suggestions I have made are tentative. But I think they can serve as a counterbalance to scenarios that oversimplify complex political realities by seeing them through a capitalism-inspired market lens. So far, they have also largely focused on the motivational background at each end of the transactions that took place between the Han court and the power centers of distant polities. The following two subsections aim to put both of these approaches into perspective by adding some thoughts about the ways in which economic incentives or market forces indeed played a role in these diplomatic undertakings, and by bringing the Hexi corridor itself back into the discussion.

II.4.1 The Role of Demand at the Power Centers

First of all, my previous argument in favor of primarily politically driven diplomatic exchange processes does not mean that economic considerations did not play any role in them at all. Asserting a clear-cut dichotomy between the two would certainly be misguided. As I have already pointed out in vol. 1, diplomatic gifts that reached the Han court were sometimes also discussed with regard to their value beyond diplomatic symbolism. In fact, some discussants also debated whether or not incoming gifts were balancing the costs of gifts that were sent away.[83] Their arguments were, however, rather generalizing deliberations that made up only one tiny part of lengthy debates on imperial expenditure between hostile factions at court. Maybe not too surprisingly, the discussants came to different conclusions as to whether diplomatic gift exchange was worthwhile from an economic standpoint. Among others, the incoming gifts from afar mentioned in these debates included exquisite furs, jades, and beautifully colored and decorated carpets. Many of these likely reached the Han court

83 Leese-Messing, vol. 1, ch. 12.A, 516–517.

via the Hexi corridor from the Tarim Basin and beyond. They were luxury goods that "filled up the imperial treasury" 充於內府.[84] They were certainly not meant to be sold on the market. But with their exquisiteness and their obviously foreign origin, they did have considerable significance for both public display at court and for redistribution among the highest echelons of the imperial elite. For instance, as I mentioned in vol. 2, foreign luxury products have so far been found mainly in the tombs of kings, i.e., members of the imperial family.[85] Therefore, there was a certain demand for these kinds of luxury gifts from afar, particularly because of their potential to be turned into political capital among high elite circles. And it is obvious that envoys were, among other things, also acting as a source of knowledge about supply and demand in faraway places.[86] With varying characteristics, these general aspects were probably as relevant at the Han court as they were in the power centers of their diplomatic partners, be they rulers of the Xiongnu, the Tarim Basin oases, or the Kangju and Jibin. Therefore, the perceived value of diplomatic gifts, largely based on their locally conditioned potential as political capital among the elites, certainly steered the movements of goods in each direction at least to a certain extent, especially with regard to their particular choice. But one should not confuse this economic aspect of gift-giving with its overall nature. It was one aspect out of many in a process that was, after all, in most cases primarily politically driven and furthermore happening in highly restrictive channels.

II.4.2 The Role of Local Demand and of the Hexi Corridor as Terminus

The historical records in Chinese dynastic histories of the Han period make us think of diplomatic gift exchange as something that was happening between one power center and the other: Gifts chosen at the Han court were sent off to rulers of neighboring or even more distant polities and vice versa. Some of the manuscripts found at Xuanquan have provided further proof of such undertakings, mentioning foreign delegations that were in fact using the Hexi corridor as a transit zone on their journey to the Han capital.[87] Examples such as the Kangju camel case from Xuanquan discussed above, however, indicate that the center-focused historical records on this matter may not tell the whole story. While I have argued that we should be careful not to impose a misleading idea of market trade lying at the heart of the whole transaction, the choice of the gift – camels – offers clues as to how local demands could play a role in diplomatic gift-exchange. As I have briefly mentioned above, scholars have expressed different views regarding the final destination of these cam-

84 *Yantie lun jiaozhu* 1.28.
85 Leese-Messing, vol. 2, ch. 6, 254–256.
86 Leese-Messing, vol. 2, ch. 6, 292.
87 See section II.1 above.

els. For instance, probably inspired by the transmitted idea of diplomatic exchange as a court-to-court affair, Hao and Zhang suggest that the camels were to be delivered onward to Chang'an, either by being passed on by the local authorities or by being brought there by the foreign envoys themselves.[88] By contrast, both Yang and Feng assume that the camels were meant to stay with the local authorities in the Hexi corridor, where local conditions (cold, drought, adjacent deserts) suited their use.[89]

So where were the camels bound for? As discussed above, the emperor and other court actors could doubtlessly make use of far-traveling luxury gifts being delivered to the capital. But it is questionable to what extent they would have been interested in having camels brought all the way down to Chang'an. Displaying a couple of wide-traveled, relatively unfamiliar, and maybe even specially colored camels in a park next to other foreign flora and fauna may certainly have made some sense for an emperor eager to show off the wide reach of his imperial power. And indeed, Sima Xiangru's 司馬相如 (ca. 189–117 BCE) *Shanglin fu* 上林賦 mentions camels among the animals that were kept in Emperor Wu's Shanglin Park.[90] So if this individual case was all we had, Hao and Zhang's assumption would have some plausibility. But in fact, both transmitted texts and the northwestern manuscripts from Xuanquan provide numerous references to camel deliveries as diplomatic gifts from polities of and around the Tarim Basin, including, for instance, Shule, Shache (Yarkant), Wusun, and Dayuan. Camels seem to have been brought to the Hexi corridor via these channels quite frequently, and in rather substantial numbers.[91]

At the same time, camels seem to have remained a rare sight in central regions of the empire throughout Han times.[92] Han sources almost exclusively associate camels with usage in the northwest, and particularly with movement between the Hexi corridor and the Tarim Basin. For instance, they refer to the massive use of camels – one report speaks of "hinnies and camels in the tens of thousands" – as pack animals that were sent out from the Hexi corridor to Han military forces within the Tarim Basin.[93] This stresses the importance of the Hexi corridor itself as a region of camel

88 Hao and Zhang 2009, 217–218.

89 J. Yang 2015, 430, with n. 57; Feng 2021, esp. 7.

90 Fei and Hu 1993, 64.

91 See the collection of text passages in Shi 2017, 46–48. For more information on manuscript evidence on camels in the northwest, see Q. Zhang 2020.

92 Shi 2017, 45.

93 *Shiji* 123.3176, trans. Nienhauser 2019, 89. This took place in the context of a Han military expedition against Dayuan in 102 BCE, in which reportedly more than 60,000 men (plus porters and attendants) set out with accompanying animals, which further included cattle and horses. See also *Hanshu* 96B.3913, trans. Hulsewé 1979b, 169, which quotes an edict by Emperor Wu referring to camels being sent out from Jiuquan commandery. See further Shi 2017. Camels also seem to have played an important role with regard to military contexts and alliance building among other polities of the larger region. For instance, *Hanshu* 94B.3802 mentions the Kangju's sending of "several thousands of camels, donkeys, and horses" to the Xiongnu *chanyu* Zhizhi so as to welcome him and his followers to Kangju territory.

usage and provisioning, particularly in support of westbound mobility and connectivity, and centrally including military contexts. From transmitted texts, we know that there were official posts in the administrative hierarchy whose tasks included the managing of animals, including horses and camels, on the northern and western frontiers.[94] And a local document from Xuanquan mentions an imperial order demanding the holder of such a local frontier post to move camels (and donkeys) from one place to another.[95] After all, the Hexi region has been renowned for its formidable grazing grounds since antiquity. As an illustrative piece of much later anecdotal evidence for this local affordance, it may be added that as late as 1929, the British Protestant missionary Mildred Cable described the town of Jiuquan (Suchow), i.e., the place to which the Kangju envoys had brought the camels, as a "halting place for caravans," where "all arrangements are made by caravans for the desert journeys."[96]

Bringing such large quantities of camels to the capital region seems to have been a downright unreasonable endeavor. After all, this would deprive the local frontier authorities under central command of one of their most precious means of transport that perfectly suited local conditions. I therefore assume that the majority of camels that came to the Hexi corridor via the diplomatic channel indeed stayed there. They did so in the interest of the central government, since they were regarded as important for the functioning and defensibility of the empire's frontier zone. But beyond that, it is worth considering the long-term effects of turning the Hexi corridor into a place that built up a huge reserve of desert-suited pack animals and the appropriate institutions to manage them. It does not take much imagination to assume that in the long run, this may have enhanced the region's potential for westward mobility beyond the motives of the central government. These new potentials could be made use of for the sake of local interests, especially when imperial power over the region waned (on which see further sec. V). We should therefore take the Hexi corridor into consideration not only as a transit zone for the movement of luxury gifts from ruling house to ruling house, but – as an important side effect of such court-to-court diplomatic practice – also as a terminus for certain goods that enhanced local capital accumulation. The accumulation of capital in the form of camels and in the form of related institutions and knowledge for keeping and managing them is only one example. It is a particularly interesting one, however, as it affected the region's role in connectivity across political and ecological boundaries in such a direct way.

94 *Hanshu* 19A.729, including commentary no. 5.

95 Hu and Zhang 2001, 60 (IV0317③:68). For a find of camel bones at the site of the Xuanquan relay station, see Gansu sheng wenwu kaogu yanjiusuo 2000, 16.

96 Cable 1929, 57–58.

II.5 Conclusions: Diplomatic Gift-Exchange and Its Complex Relationship with Trade and Markets

While the accumulation of evidence for camel deliveries and the obvious role of concrete demand may again leave the impression of diplomacy as a purely economically driven mechanism, another Xuanquan document reminds us that this is not the whole story. Rather than speaking of camels or other material goods being delivered, it mentions a "hostage son of the king of Kangju" being accompanied through the Hexi corridor in 21 BCE.[97] This is a further, telling indication of the camel deliveries being part of a larger bundle of diplomatic practices, which are mentioned in the dynastic histories, involved the Han court, and went far beyond the exchange of goods. Even though local demand for camels within the Hexi corridor did play a significant role in them, the camel deliveries were embedded in structures that were far more complex than simple market principles based on supply and demand of particular commodities.

After all, diplomacy cannot be equated with trade. Economic incentives did play varying roles in its context, but they were mostly subordinated to and always heavily contingent on noneconomic factors. Diplomatic gift exchange was heavily dependent on distant court-to-court contacts, acute power constellations, and political negotiations. Political breaks with and shifting alliances among foreign polities were highly common throughout the Han period. Equally common were internal conflicts and power struggles on all sides. As for conflicts at the Han court, different factions often were informed by regional interests within the empire. Accordingly, their opinions about the importance of military and economic investments in certain frontier regions and of diplomatic undertakings varied widely. Inner political shifts therefore typically went along with shifts in foreign policy.[98] Both outer and inner shifts could happen quite suddenly and could lead to an interruption of diplomatic contacts (including gift deliveries) despite ongoing Han elite interest in occidental luxuries. Such shifts were, therefore, an ever-present, incalculable, and significant risk for long-distance economic transactions from court to court, which often took months of travel. If one were to see diplomatic institutions as trade institutions in disguise, therefore, one would at least have to acknowledge their extreme fragility and riskiness. Furthermore, the *Hanshu* text passage on the Kangju text has demonstrated that diplomatic relationships were never a matter of political or economic negotiations between just two parties. Either side needed to consider the effects of every little step toward even a distant polity with care so as to avoid misunderstandings and inadvertent

97 Hao and Zhang 2009, 199 (II90DXT0215:17).

98 For the different fault lines with regard to court factions and foreign policy during the expansionist phase under Emperor Wu, as mirrored by Sima Qian in his *Shiji*, for instance, see van Ess 2014. For the role of factions in northwestern policy-making during the Later Han period, see Tse 2018.

humiliations of third parties that could provoke a collapse in the complex and fragile fabric of diplomatic channels across the larger region.

From the perspective of the Han central government, the maintenance of diplomatic relationships was also a matter of costs, depending not only on fragile political relationships but also on the expensive maintenance of vulnerable state-run institutions. Relay stations such as the one at Xuanquan needed to be provided with food, service personnel, etc., in order to provision both Han envoys and huge Central Asian delegations. To a certain extent, and provided that local resources were sufficient to satisfy this extra demand, this may have invigorated the local frontier economy, including actual trade with private actors. Xuanquan documents demonstrate that the relay stations' staff – next to having access to redistributed commodities – were buying some of the food for the traveling parties locally, expenditures for which they neatly entered into their accounting documents.[99] For the Han central government, this meant one of the various cost factors of infrastructural institutions that were tied to the practical functioning of diplomatic exchange and that could not be ignored.[100] And in fact, transmitted texts indicate that resource spending on delegations was indeed seen as a problem, both with regard to state expenditure and to the overexploitation of local resources on the frontier. The case of Kangju delegations from the *Hanshu* quoted above, for instance, referred to the "small [Hexi] commanderies of Dunhuang and Jiuquan," which included Xuanquan, as suffering from the duties of provisioning diplomatic delegations.[101] On top of this, time and labor resources needed to be spent on dealing with frictions and outright conflicts that occurred in the diplomatic context. The case of the Kangju's delivery of camels, which entailed investigation and extensive communication between different state agencies, provides an example of this. With all these risks and costs involved, one may wonder if economic demand for certain far-traveled goods could ever have been sufficient to make diplomatic gift exchange a reasonable undertaking.

As one factor within a more complex setting, however, the role of demand in diplomatic undertakings does merit serious consideration. This aspect is particularly interesting beyond the direct demand of the imperial centers themselves. The example of camels being brought to the Hexi corridor as diplomatic gifts has shown that the Hexi corridor deserves to be acknowledged beyond its transit function in the sense that it became itself a terminus of diplomatic goods. Entangled in court-to-court affairs, their reception likely increased the region's own political and economic capital in the long run. Becoming a frequent recipient of imported (and highly practical)

99 J. Yang 2015, 428–429; Lee Kim 2016.

100 Many other aspects of these institutions and their maintenance were also associated with regular costs, e.g., the supply of staff to the relay stations themselves, the maintenance of legal institutions that were, as we have seen, resorted to in the case of disputes, not to mention all the capacities tied up in maintaining correspondence between the frontier institutions and the central government.

101 See p. 94 above.

goods itself, and building up institutional structures for receiving and maintaining these foreign goods, meant considerable potential for a gradual political upgrading of the region and its powerholders in particular. Opportunities for network-building also played a role in this, as foreign envoys were personally interacting with local Hexi corridor authorities rather than (only) with members of the Han court. All these evolving local potentialities likely became particularly important when Han central power over the region waned and political actors in the region were increasingly forced and enabled to act on their own (rather than the imperial center's) behalf. This local economic effect of diplomacy in the Hexi corridor itself, therefore, has to be acknowledged as a factor for its further historical development, particularly with regard to its role as a frontier region (on which see further sec. V).

On a more general level, we should be careful not to confuse diplomatic networks with those of private trade. Both were entangled with each other at certain points – e.g., when envoys used diplomatic missions for private trade on the side, or when local markets were tapped for the provisioning of delegations. Another point that could be added here is that some diplomatic goods delivered to Han territory have had their own history of acquisition. For instance, it is possible that camels delivered by Kangju envoys were acquired by the envoys in the Tarim Basin, where they were likely much more abundant, rather than in Kangju territory itself. Through what means they may have acquired them there is a different question, but trade would be an option. All these (potential) entanglements are highly important. But on the whole, and particularly in order to identify such entanglements more clearly in the complex framework of incentives, it is useful to keep them apart conceptually. As several examples above have shown, in scholarship on respective issues, this distinction is sometimes blurred to an extent that creates thorough misunderstanding. A careless and overgeneralizing use of the word 'trade' should therefore be avoided.

In a different and yet related way, one should also be aware of the misleading potential in the use of network vocabulary. It sometimes creates an impression of a miraculously open spread of connectivity, while neglecting the fact that socioeconomic networks also had a thoroughly restrictive function. Rather than thinking of networks and their associated institutions as general facilitators of economic interaction, or even as generally resulting in 'flourishing trade,' they might be better understood in what could be termed a 'channeling function.' The goods that were moving across spaces, too, can be imagined to have been moving through certain channels of movement, with the number of in- and outflowing 'subchannels' being more or less restricted with regard to the institutions that underlay them.

Diplomatic gift transfer provides a nearby example of this, as its restrictive character is easily discernible. The actors involved in diplomatic exchange processes were usually limited to very particular groups. Depending on how the diplomatic institutions were functioning, these undertakings excluded other actors, and moreover, they did so systematically and purposefully. Restriction was also built into the imperial institutions in frontier regions. The relay stations set up by the Han in the northwest

were meant to accommodate and feed officials and diplomatic delegations on their trips – and only them. They were also part of a larger system of checkpoints with security and monitoring tasks, whose staff was responsible for controlling and restricting travel, e.g., by checking travel passports.[102] Diplomatic networks and the various imperial institutions connected to them, therefore, also had the potential to keep other actors (including private merchants) from moving, and thus prevent other networks from taking shape or getting more powerful. They were, after all, not established to facilitate private border-crossing trade, and could, in certain ways, even impede it. Charles Holcombe, in a study on a slightly later period, has even suggested that "the frequency of tribute embassies mentioned in the historical record may have, under some circumstances, been inversely related to the actual stability and regularity of commercial relations."[103] While the concrete validity of this proposition may be hard to prove, it can serve as yet another invitation to think of diplomatic networks as restrictive channels of interaction.

III Local Private Trade and Its Social and Institutional Embedding

III.1 Evidence for Local Private Trade in the Hexi Corridor

Next to individual references in transmitted texts, it is excavated texts found in various sites in the Hexi corridor itself that provide glimpses into the world of local private trade, characterized by very different sets of actors relying on different kinds of institutions and networks than that of diplomatic exchange.

Apart from occasional references to marketplaces and market officials, the excavated documents record many transactions in which various actors buy or sell goods. The sources are certainly biased, because they are largely connected to state institutions in one way or the other: Excavated texts were found in sites that used to be state agencies, such as beacon towers or relay stations – i.e., they usually concern people who are in some way associated with these institutions. Some documents thus indicate the concrete intersections between local state agencies and local private trade by recording local purchases of food, glue, etc.[104] Some of the manuscripts further provide evidence for economic transactions that people associated with certain state

102 For the system of state control over geographical mobility in preimperial and early imperial China, see Sou 2018.

103 Holcombe 2019, 297–298.

104 As in the case of the relay stations mentioned above. For items such as glue, grease, and cloth purchased by other agencies, see the examples in Loewe 1967, 94–99.

agencies were undertaking in a private capacity. Other documents concern people who may not have been directly associated with any state institution, but whose undertakings for some reason were subject to legal regulations (e.g., documentation required for certain sales or the granting of travel permissions) or jurisdiction (in the case of conflicts), and were thus recorded by the according state agencies.

More often than not, the transactions are documented in a terse way, such as in the form of short entries in administrative records, without much context being given. Yet they provide evidence for the involvement of various transactions, actors, and goods. They range from numerous records of soldiers selling individual garments on credit[105] to individual records of high-value transfers, such as a purchase of land for 2 million cash (*qian*).[106] Travel registration records sometimes mention people traveling through checkpoints for the purpose of "private trading for the family" (*wei jia si shi* 为家私市), occasionally referring to particular Hexi corridor towns such as Juyan, Zhangye, and Jiuquan.[107]

Occasionally, however, excavated records of legal cases or private letters also provide more context for private trading activities. In what follows, this section will focus on two particular examples of such excavated texts from the Hexi corridor. They illustrate the complex embedding of casual private trading activities in local conditions that were shaped by certain institutions and social networks. They demonstrate how private trade, too, was often tied to certain institutions that channeled movement and sometimes restricted interconnectivity among certain actor groups.

III.2 Shoe-Shopping in Dunhuang

As mentioned above, von Richthofen had imagined early imperial Dunhuang as "the large marketplace" to which "traders from many countries came" in order to stock up on Chinese luxury goods.[108] With this imaginary picture in mind, one may be struck by the clarity with which the following source document demonstrates the deficient supply situation in the very region of Dunhuang when it comes to items of everyday use. The letter manuscript, written on silk, was found at Xuanquan station. The well-preserved piece was undated but can quite confidently be dated to Han times on the basis of its find context and a typical Han script style (see fig. 2). The sender is a certain Yuan, probably an official or military officer, who in the letter discloses that he is about to be stationed at Dunhuang. The addressee is a certain

105 H. Wang 2004, 53–54.
106 Gansu sheng wenwu kaogu yanjiusuo et al. 1990, 154 (EPT50:33A).
107 See the examples in Wang and Li 2007, 30.
108 See sec. I.1 above.

Fig. 2: Letter from Yuan to Zifang. Written on silk, found at the site of Xuanquan station, Dunhuang. Nishibayashi 2009, 19.

Zifang, probably also an official or officer, staying in a different unknown place and possibly about to travel to yet another place even further away, presumably a town within or even outside the Hexi corridor.[109]

109 Another alternative would be to assume that Yuan was stationed somewhere in the Dunhuang region, while Zifang was himself stationed at Xuanquan station, where the document was found. But since Yuan refers to both Zifang's home and asks him to pass by another person's place, it seems more likely to me that Yuan wants to make use of Zifang's being in (or traveling to) a town where he has access to the items he needs. Giele, whose translation I will reproduce below, mentions both

Yuan conveys his best regards.

Dear Zifang! How are you? An arduous road you are embarking upon. That I cannot be there to see you off or accompany you on your way is unforgivable.[110] How are your parents, wife, and children? I hope that your parents and wife do not cause you any worries. I will not imprudently neglect [my] duties [of] taking care of the warehouse, [for which] I am eagerly awaiting your instructions. During this hot season I dearly hope that you can dress comfortably, be blessed with good wine and successfully attend to your business! Take care on the road!

It happens that now that I am about to be stationed at Dunhuang, I am lacking shoes. You know that. If you allow me to be direct, I would like to ask that you please be so kind as to buy a pair of shoes for me, made of thin but strong silk and soft leather, a foot and two inches long (27.7 cm), also five brushes, fine ones. I would be very happy! As for the money, I request to pay it at your home when next convenient. I do not want to owe you. Could you please pay attention to the shoes? I want to get thick ones, which are good for traveling on foot. You know that I have had trouble several times because it is so hard to procure shoes, so I would really appreciate it!

As to Ciru, to whom to forward a note and to whom to deliver [it] I am relying on you, could you, when you set out, pass by his place and ask for a reply? If Ciru isn't there, go and see Ciru's wife, Rongjun, and ask for the reply. That would be great! Best regards my dear Zifang! Those shoes you will kindly buy for [me], could you please ask the next officer who comes here to take care of them [and deliver them], so that they arrive [in time] to be used. That would be great! I send my best regards!

Lü Zidu wants to have a seal carved but he does not dare to approach [you in writing?]. He is unaware that I am incompetent [myself], so he is making me ask you, hoping that you could have a prosecutor's seal of 0.7 inches carved for him, with a turtle knob, and an inscription that reads: "Seal of Lü An." Hopefully you will pay attention. This matter has to work out with you, [I] don't want to ask anybody else to take care of this. As for the purchase of a whip for two hundred cash that camp sergeant Guo entrusted us with, please get a fine clacking whip,[111] please pay attention!

Self-written: With the purchases that I am asking you, please pay attention! Don't be careless! Be different from the others!"

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possibilities. I am not entirely convinced by Giele's assumption that, as well as certain towns, "a place [like Xuanquan station] must have had the means to procure what Yuan demanded" also (Giele 2015, 430). On the whole, however, Giele himself also regards it as most likely that "this letter, found in Dunhuang, had been originally sent from there to the recipient in some far away city, probably a friend, colleague or close superior of the sender on home leave, and traveled back with him to Dunhuang" (432, n. 41).

110 There have been different understandings of this sentence. See, for instance, Sanft (2013, 9; 2019, 144, with n. 14), who interprets *ku dao* 苦道 (lit. "bitter/arduous road") as a place name (Kudao) and translates "When you left Kudao, I missed the time and did not attend your departure." This would imply that Zifang is not about to set out on a journey at this point. I am following the reading of Giele here, who also discusses this point in his annotations (2015, 432–433). See also my previous footnote.

111 Based on two different understandings of the character *ji* 寄, the sentence at hand is rendered in different ways in Giele's and Sanft's translations. Giele understands *ji* to mean "to entrust" and therefore translates as above. Sanft (2013; 2019), by contrast understands *ji* as "to send" and translates: "The 200 cash that camp commander Guo sends is to buy a whip. He would like one that cracks well." The latter alternative would probably imply that the cash for Guo's whip was sent alongside Yuan's letter. The question would then be why Yuan did not send the money for his own shoes along, with

元伏地再拜請
子方足下：善毋恙。苦道子方發，元失候不侍駕，有死罪。丈人、家室、兒子毋恙，元伏地願子方毋憂丈人、家室。元不敢忽驕，知事在庫，元謹奉教。暑時元伏地願子方適衣、幸酒食、察事幸甚！謹道！會元當從屯敦煌，乏沓（鞜），子方所知也。元不自外，願子方幸爲元買沓（鞜）一兩，絹韋，長尺二寸；筆五枚，善者，元幸甚！錢請以便屬舍，不敢負。願子方幸留意，子方知元數煩擾，難爲沓（鞜）幸=甚=（幸甚，幸甚）！所因子方進記差次孺者，願子方發過次孺舍，求報。次孺不在，見次孺夫人容君求報，幸甚！伏地再拜子方足下。所幸爲買沓（鞜）者，願以屬先來吏，使得及事，幸甚！元伏地再=拜=（再拜，再拜）！

呂子都願刻印，不敢報。不知元不肖，使元請子方，願子方幸爲刻御史七分印一，龜上，印曰：「呂安之印」。唯子方留意，得以子方成事，不敢復屬它人。郭營尉所寄錢二百買鞭者，願得其善鳴者，願留意。

自書：所願以市事幸留=意=（留意，留意），毋忽，異於它人。[112]

Assuming that Yuan eventually got his desired shoes and the items he requested on behalf of other people, or at least that his confidence in getting them was not unfounded, how can we describe the chain of economic transactions that are taking place? One has to start with the important fact that Yuan obviously could not just go to a store, marketplace, or shoemaker in a nearby place (i.e., in or around Dunhuang) in order to buy the shoes that he needed. This, of course, does not rule out the possibility of the region providing a marketplace (or similar) at all. But if it existed, it obviously did not offer the items that Yuan demanded – items that may have been somewhat above the most basic level but would hardly have counted as overly luxurious. There neither seems to have been an option in his situation to get in touch with someone like a private itinerant merchant and place an order. Instead, Yuan being able to acquire what he demands depended on certain preconditions.

First of all, Yuan had access to knowledge about the regional supply situation with regard to shoes (and further items for two other people). He seems to have known that – unlike in or around Dunhuang – it would be easy to acquire the required commodities in the place where Zifang was staying or about to travel. This knowledge may not have been independent from his social status as an official. As such, he may either have traveled to said place himself or have acquired this knowledge through his personal network, which may well have been, above all, a bureaucratic network consisting of frequently traveling officials. Had Yuan been an ordinary soldier, presumably lacking town-traveling experiences and an according network, his knowledge might have been more limited.

Second, Yuan made use of scribal services, which he may have had access to simply in his capacity as a state official. The letter was likely written by a professional

potential explanations being that he was momentarily short of cash, or that the amount of cash for the shoes seemed inadequately high for an impersonal delivery.

112 Both translation and transcription of the manuscript are taken over from Giele 2015, 432–435. See further Hu and Zhang 2001, 187–191 (II0114③:611). For another translation into English, see Sanft 2013; 2019, 144–146.

scribe, with presumably only the last column written by Yuan himself. The latter demonstrates that Yuan could also write himself, even though he did so – for whatever reason – in "a decidedly less careful" hand.[113] Access to a scribe may thus not have been a necessary precondition for Yuan to articulate his needs, but it was probably a facilitating factor in the transaction.

Third, Yuan had access to the state infrastructure with its postal relay system. Yuan depended on this in order to articulate his demand in the first place, as the system provided him with the option to have letters sent out and delivered. He further seems to take for granted that eventually the demanded commodities would be delivered by "the next officer who comes here," i.e., by a person who would presumably again be using the official state infrastructure with its postal relay stations.

Fourth, Yuan relied on his social network and, more concretely, his friendship and trust relationship with Zifang. Friendship often entails various forms of reciprocity in services (besides material gifts). In this case, these 'friendly turns' included logistical and financial services, i.e., taking up the burden to run an errand by proxy and privately advancing (i.e., lending) a manageable amount of cash without taking interest. Zifang, besides trusting Yuan and his credit worthiness because of their preexisting trust relationship, could also see in his provision of these services a further investment in this relationship, which he might eventually profit from himself in one way or another. It is this independence from direct compensation between the two parties and the according absence of a set price that makes this part of the whole transaction typical of one that was socially embedded in a system of reciprocity. It is also useful to recall the basic institutions that facilitated this reciprocal system. We do not know how Yuan and Zifang knew each other, but since both seem to be officials or officers, they likely developed their friendship as colleagues in the civil or military administration. Alternatively, they may have known each other because of a shared geographical heritage. But even in the latter case, the system of state service had brought both of them into this frontier region, which bore additional incentives for maintaining and possibly intensifying their friendship.

Fifth, Yuan obviously believed that there were functioning market structures at Zifang's location. Yuan seems to be confident that Zifang will have a chance to privately buy a pair of shoes (plus other things) on his behalf in the town that he is at or is traveling to, possibly from a private shoemaker or shoe-dealer. This would, in any case, be best termed a private market transaction. Also, none of the people placing orders is expecting Zifang to give them the requested items 'for free.' The friendly turns that Yuan expected from Zifang included the abovementioned services, but not the goods themselves. The recipients would compensate the purchasing price – obviously not in kind, but in money, which leads us to the last point.

Sixth, Yuan also relies on an economy that is at least partly monetized, in which both he and Zifang have regular access to coins: Yuan expects Zifang to use "cash"

113 Giele 2015, 432.

(*qian*) in the shoe purchase, and Yuan wants to pay him this money back at the next opportunity. As for the other, indirect inquirers, Yuan explicitly names the envisioned price of 200 cash for the whip he is asking Zifang to buy on behalf of a certain Camp Sergeant Guo.[114] One likely source of cash would have been their salaries, i.e., money that they were receiving via a state-administered redistributive process and which had been mainly allocated through tax collection.

In fact, points five and six are related to market transactions, one fundamental component of which is their impersonal nature. Market exchange, therefore, did play a crucial role in the whole transaction. But the letter shows equally clearly that in certain places and regions of the Hexi corridor, including ones in or around Dunhuang, access to goods even for daily use was strongly socially embedded. Getting the goods one desired hinged much upon one's social status, which was related to but not limited by far to financial solvency. In Yuan's case, it was his social status as an official that provided him with money, market information, a friendship network, and access to physical state infrastructure and its personnel, and only the combination of these, in addition to existing market options, allowed for the transaction to come about in the first place. The region was far from providing open access to markets (and marketplaces) in all its subregions, to all kinds of people, and for all kinds of goods.

The historical interpretation of this piece of evidence is, of course, considerably impeded by its unclear dating. For if we assume that it dates back to the early period of Han occupation of the Dunhuang region, for instance, this would leave open the possibility that a couple of decades later or sometime during the first century CE, the whole economic situation at and around Dunhuang – including settlement density, supply situation, access to markets and physical marketplaces, etc. – may have been quite different from the situation that Yuan was confronted with. What the document does remind us of quite clearly, however, is that we need to regard the region as a frontier space characterized by ongoing change, in which none of the economic institutions and structures that had been well established in central parts of the Han Empire, for example, can be taken for granted. They were, at best and if at all, only established over time and under particular sociodemographic and ecological conditions. The region was not a ready-to-use trade corridor to the West that could simply be activated by being 'opened' – neither by an emperor nor a far-traveling envoy, nor by straightforward military and administrative occupation.

114 On different interpretations of this sentence, see my footnote to the translation.

III.3 Trade, Principal–Agent Relationships, and Monetization in the Hexi Corridor: Some Clues from the Kou En Case

III.3.1 Introduction to the Case

The above case has been an example of private trade in the Hexi corridor with a high degree of embedding in state institutions. There are also cases that show a lesser, yet still-existing degree of such embedding, of which the following may be an illuminating example. While it also shows a connection between private trade and state-imposed structures, it further provides some interesting glimpses into the existence and limits of other economic 'tools' that affected private trade in the region, including issues of law and monetization.

The Juyan documents contain a well-preserved manuscript recording a judicial file on a lawsuit dated to the 12th month of the 3rd year of the Jianwu period, i.e., January to February of the year 28 CE,[115] found at the site of the Jiaqu 甲渠 company headquarters in the Juyan area. The suit evolved from a dispute between the Commander (*houguan*) Su 粟[116] of Jiaqu company and a man called Kou En 寇恩. In the previous year, the latter had undertaken to sell 5,000 fish on behalf of commander Su in Lude, a county town near the modern city of Zhangye that was about 300 km south of the Jiaqu headquarters. The return trip likely took at least six weeks.[117] How and where exactly Kou En was supposed to sell the fish at Lude is not specified, but since there is no mention of any envisaged recipient, a marketplace would be a reasonable assumption. At Lude, Kou En had been unable to sell the fish at the previously agreed price of 400,000 cash, and Su eventually lodged a complaint with the local judicial authorities stating that Kou En was still in his debt.[118]

The file mainly consists of the records of two hearings of virtually the same content and in almost identical wording. In these, Kou En was given the opportunity to present his version of the story. He recounts that in order to deal with the predicament, he first of all sold the ox that in his rendering had been part of his wage. He then gave 320,000 (instead of 400,000) cash to Su's wife Ye, with whom he was traveling back to Juyan. Whether and to what extent the price that Kou had obtained for the ox was also part of the 320,000 cash that he gave to Su's wife is, in my understand-

115 The dates of the three testimonies are given as January 30, February 15, and February 24, respectively.

116 The character of the surname has by some scholars been suggested to be a mistake for the similar character *li* 栗, a common surname. E.g., Hulsewé 1979a, 31, n. 7.

117 Kou En states in his testimony that the way back from Lude took him more than 20 days.

118 For photocopies with a transcription of the document, see D. Zhang 2016, 213–219 (EPF22: 1–36). See also Gansu sheng wenwu kaogu yanjiusuo 1990, 475–478. The document was first published in Gansu Juyan kaogu dui 1978, 20–23 (photocopies) and Gansu Juyan kaogu dui jiance zhengli xiaozu 1978, 30–31 (transcription). An English translation of the document is provided by Hulsewé 1979a, 26–30. For a more recent study of the document, see further Z. Zhang 2013.

ing, not quite clear.[119] Kou then goes on with a meticulous list of transactions that, to his mind at least, made up for the 80,000 cash still missing, always mentioning corresponding values in cash: In addition to the monetary value of a couple of items that he had ceded to Su, he further lists the value of meat and barley that he had spent to provide food for Su's wife on their trip and the value of an outstanding wage payment in grain. According to Kou En, Su still owed the latter because Kou En's son had not yet been paid his wage for an earlier engagement. In Kou En's calculation, all these things added up to the value of 80,000 coins, on the basis of which he claimed to have completely cleared his obligation toward Su.

The document further includes a short, written testimony by Commander Su, who argues that Kou En had only borrowed the ox he had taken to and then sold at Lude, whereas he had gotten yet another ox as a part of his hire, which Kou En was now unwilling to use as compensation for the (allegedly borrowed) ox that he had sold without authority. Furthermore, Su states that the various things that Kou En listed as a compensation for the 80,000 cash that he was short from the fish sale did not cover this amount.

Since the long document gets increasingly illegible toward its end, the outcome of the suit is not perfectly clear. But it seems as though Kou En was not found liable for any further payments to Su. On the contrary, the authorities even seem to have turned against Su himself, even though the concrete charge against him remains unclear. In addition to these obscurities at the end, the contents of the extraordinarily well-preserved parts of the document do also contain quite a number of difficulties.[120]

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119 It has been argued that *bing* 並 in the sequence 恩到艓得賣魚盡，錢少，因賣黑牛，並以錢卅二萬付粟君妻業，少八歲〈萬〉 (EPF22:10–11) "must refer to the two sums, obtained respectively by selling the fish and selling the ox." That would mean that the 320,000 coins that Kou En gave to Su's wife Ye included both the money he got for the fish and the money he got for the ox (Hulsewé 1979a, 33, see also his translation as "combined" on p. 26). This interpretation does cause problems, however. Given that Kou En specifies the value of the ox to have been 60 *shi* of grain, and the current monetary value of one *shi* of grain is specified later in the document as 4,000 cash, the ox would have been worth 240,000 cash. If this corresponded to the price he was actually paid for the ox, this would have meant that Kou En only got 80,000 cash for the fish (240,000 + 80,000 = 320,000, leaving a difference of 80,000 to 400,000), instead of the envisaged 400,000. While this cannot be ruled out, it nevertheless seems baffling, also with regard to the extreme risks the job must then have borne for the agent, i.e., Kou En. I would argue that *bing* does not have to refer to the combined sum. It could, for instance, also just mean "at the same time"/ "furthermore" here, which is also a well-attested meaning of the word, leading to the following translation: "Having arrived at Lude and having completely sold the fish, the money [I had obtained] was less [than the envisaged 400,000]. I thereupon sold the ox, and furthermore gave the 320,000 cash [that I obtained by the fish sale] to his honor Su's wife Ye." This interpretation would, in fact, also fit Commander Su's testimony much better, which rather suggests that Kou En had already obtained 320,000 cash for the fish before selling the ox.

120 Apart from the question as to how exactly the 320,000 cash that Kou En gave to Su's wife came about (see n. 119 above), another open question is why the two men who had initially been asked to undertake the job felt obliged each to give an ox plus 55 *shi* of grain in total to Commander Su upon their refusal. Kou En states that they had given all of this to Su "to represent the value of hire for

III.3.2 A Private Trading Operation and Its Actors

Despite its difficulties, the case offers a couple of clues with regard to the local conditions for trading activities within the Hexi corridor during the early Later Han period. Most generally, it provides a clear example of a private trading operation in the region. There is no indication whatsoever that Commander Su was selling the fish on official duty. Instead, the fish sale seems to have been a private business. In fact, Kou En states later in his testimony that his son had caught fish for Commander Su earlier. It is to be assumed that the fish had been caught in some body of water in the Juyan area, which seems to have been less arid in Han times than nowadays and featured not only the Ruo 弱 River (also known as Etsin Gol/ Ejin/ Hei River) but also its terminals in the form of lakes, including the Juyan Lake (*Juyan ze* 居延澤, later called *Juyan hai* 海), which desiccated and disappeared during later periods.[121] Which rights Su possessed over the according fishing grounds is unknown.

In any case, Su's official position obviously did not prevent him from engaging in private business. That he took official legal action against Kou En in fact suggests that he did not expect anybody to find fault in this kind of behavior. On the contrary, one may assume that an official position like his rather facilitated such engagement. This is, among other things, indicated by the fact that Su had initially asked two subordinates (identified as chief clerk Hua Shang and police clerk Zhou Yu of Jiaqu) to undertake the transport and sale of his fish. All three of them would thus have engaged in private business alongside their official jobs. Apart from that, it is furthermore telling that Su's first choice in engaging agents for his trading activity had been to make use of the personal network (and power relationships, even though the two men in all likelihood had been meant to be paid as well) that came along with his official position. This suggests that relationships in official hierarchies could easily

transporting the fish" 以當載魚就（僦）直 (EPF22:6). Hulsewé (1979a, 26) translates "[my] hire," i.e., suggests a reference to Kou En's hire. But since Kou En's hire was – according to both Kou En himself and Commander Su – just one ox and 27 *shi*, i.e., almost exactly half of it, this does not quite seem to fit. And, as Hulsewé writes himself, the considerable payment "can hardly be considered as a kind of fine" for not being able to go (Hulsewé 1979a, 29). So maybe the two men had obtained the two oxen and the 55 *shi* (or something else corresponding in value) as their wages in advance and were now paying them back because they could not fulfill the corresponding task? If this was the case, then Hulsewé's second question in this part of the story, i.e., why the total value of the two men's grain and oxen corresponded to almost exactly half of what was agreed to be Kou En's wage, might also be easier to explain. One potential explanation I could think of would be that Su's wife Ye was traveling with Kou En both ways (i.e., from Juyan to Lude and back) and thus counted as the replacement for the second of the two people who had originally been supposed to go. In this scenario, it would make proper sense for Kou En to receive half of what had been planned to be the two men's combined wage. But given said uncertainties, this must remain speculation.

121 Mischke et al. 2019 suggest that water withdrawal for irrigation farming in the region during Han times may actually have led to this desiccation, since change to a drier climate cannot be observed in the available data on the larger region during the period of desiccation.

serve as a blueprint for principal–agent relationships in private business undertakings. Yet again, therefore, private trade and military-bureaucratic structures seem to have formed a natural symbiosis.

For some unknown reason, however, the two subordinates had been "unable to go," whereupon the task was transferred to Kou En. Apart from the principal–agent connection between Kou En and Su in this very case, only a couple of snatches about the nature of their relationship and of Kou En's professional and socioeconomic background can be deduced from the document. Unlike Su and his aforementioned subordinates, Kou En does not seem to have held any official position or title. In his testimony, he claims to be 66 years old and identifies himself as a man from Kunyang in Yingchuan commandery (in present-day Henan Province, central-eastern PRC). Commander Su refers to him as a "nonlocal" (*keren* 客人) in his testimony. For what reason Kou En had moved to the northwestern frontier and for how long he had been there is unknown. As already mentioned, we further learn that Kou's son had also worked for Su in the past, catching fish for a promised wage paid in grain. Kou En probably was not particularly wealthy, but neither does he seem to have been quite without means. We get to know that he owned a couple of items worth 15,600 cash (which he eventually ceded to Su) and further had the means to advance payment for Su's wife's food. The payment for his job was also quite substantial. The cart that he used for the fish transport may also have been his own, even though this is not clear from the text. His calculations and references to standard prices of certain goods further gives the impression of a certain familiarity with issues of local trade within the region. It seems likely that Kou En and his son were making their living – at least partially – as day laborers undertaking various kinds of nonspecialized jobs in and around the Juyan area, including trading activities, with Su being one of their clients.

III.3.3 Dealing with Principal–Agent Problems

Whether a written contract was used for the deal between Su and Kou is not quite clear, but it seems rather unlikely given that there is no mention of such in the document. Generally, the whole case rather gives the impression of a casual agreement that came along with a correspondingly ad hoc way of handling difficulties on Kou En's part. Not much of an *ex ante* legal or other safeguarding is noticeable on either side for unexpected outcomes. The way that the transaction was handled by the parties in the first place, in any case, does not speak in favor of well-established legal or other provisions that regulated liabilities in private principal–agent relationships and mitigated the risks involved in such transactions in a precautionary way.[122] Nevertheless, when difficulties arose, Commander Su eventually did take recourse to

122 For the apparent lack of regulations concerning principal–agent relationships as suggested by previous finds of legal texts, see also Leese-Messing, vol. 2, ch. 11, 563.

legal action. That the local judiciary accepted the case and initiated investigations suggests that handling such disputes fell under the regular tasks of the local legal institutions.

III.3.4 Monetary Issues

The economic and monetary situation in 27–28 CE as reflected in the document must be viewed against the background of the particular political situation at the time. During this beginning phase of the Later Han period, the Hexi corridor commanderies were under the control of Dou Rong 竇融 (15 BCE–62 CE), a warlord who had risen to hegemonic power in the Hexi corridor during the tumultuous years of political transition at the Han court after Wang Mang's death in 23 CE. Dou Rong had been officially supporting in sequence various contenders for imperial power. The year noted in the document (third year of Jianwu) is, in fact, the first year from which documents from the Juyan area (which stood under Dou's control) are dated based on the reign period of the Later Han founder Liu Xiu 劉秀, i.e., Emperor Guangwu (r. 25–57 CE). The year thus marks Dou Rong's shift toward acknowledging the new emperor's consolidating power.[123] But even afterward, Dou Rong retained considerable independence in his northwestern powerbase and remained in a position of strength with regard to the imperial center.[124]

Political disruptions at the imperial power center had perceptible repercussions on the use of money in both the central regions of the empire and the Hexi frontier region. In the document, the prices expressed in coins are strikingly high. Furthermore, the overall picture that the case conveys is one of a monetary clutter including manifold forms of money (in both coin and kind) in various functions. This is a considerable contrast to documents from the region that are dated to other decades, which suggest coins to have been the uncontested major form of money in the Juyan region, just as they were in most other parts of the Han Empire.[125] On closer inspection, however, this apparent clutter of money forms discloses some patterns.

One case in point is private-sector wage payments. Two wage payments are mentioned explicitly in the document: The first is Kou En's wage for taking over the job of transporting and selling the fish, set at one ox (reportedly worth 60 *shi*) and 27 *shi* of grain. The second is the wage payment that Commander Su allegedly still owed for the job of catching fish that Kou En's son had undertaken for him one year earlier. According to Kou En, this open payment amounted to 20 *shi*. From this, it seems that

123 This was only the first step in his acknowledging the newly established Han imperial power center, more formal steps of which he undertook only a couple of years later.

124 Dou Rong's biography is in *Hou Hanshu* 23.795–809. For a biographical overview, see De Crespigny 2007, 166–169.

125 H. Wang 2004, 48.

in the case of private wage payments, the standard unit of account – in the Juyan and Lude regions during this particular period – was grain counted in *shi* 石 ("bushels") and its fractions (*dou* 斗, *sheng* 升). It was probably also a typical, albeit not the only, means of payment in wages, as can be seen in the mixed form of payment of Kou En's wage (ox and grain). As for his son's job, Kou En calculates the outstanding wage payment as following:

> Furthermore, [my, Kou] En's son Qin had been catching fish for His Honour Su, starting on the 20th day of the 12th month of last year (16 January, 27 CE), for the whole of this year's 1st month, the intercalary month, and the 2nd month. Altogether he was working for three months and ten days (i.e., 100 days in total). He has not received the [according] wage. At the time the average price of hired labor for an adult man being 2 *dou* [of grain] per day, this (i.e., 100 times 2 *dou*) amounted to 20 *shi* of grain. At the time when [I, Kou] En, was at Lude and handed over the money to [Su's wife] Ye, the market grain [price] was set at 4,000 cash per *shi*.[126]
>
> 又恩子男欽以去年十二月廿日為粟君捕魚，盡今〖年〗正月、閏月、二月，積作三月十日，不得賈直。時，市庸平賈大男日二斗，為穀廿石。恩居觻得付業錢時，市穀決石四千。[127]

Kou En's explanations suggest that there were established ways of calculating wages for day laborers on the basis of "fair-market prices for hired labor" (*shi gu ping jia* 市庸平賈), counted per working day, and further distinguished by age and gender (in this case, specified to an adult male). The specific term used points to the 'fair-market prices' (*ping jia*) that are known to have been fixed temporarily by local government agencies. These were made especially for the agencies' own official buying and selling of goods, and Han imperial laws prescribed them to be based on average current market prices.[128] They commonly consisted of translations from or to cash, whereas in this case, the translation is from working days into grain. In any case, Kou En may have been using such an officially sanctioned local market price for the calculation of his son's wage. The same may have been true for his reference to a "set" or "fixed" (*jue* 決) "market grain [price]" (*shi gu* 市谷) in his grain-to-cash translation, even though in this case, he did not use the specific term *ping jia*. It may be added that this translation of the wage's value from grain into cash was only necessary for Kou

126 According to this calculation, the outstanding wage payment for his son alone would have sufficed to balance what Kou had owed Su from the fish sale. In the first version of his testimony, he makes a complicated calculation including a certain portion of his son's wage payment (namely 13 *shi*, 8 *dou*, and 5 *sheng*) and adding this to the value of a couple of other things that Su owed to him, which in total amounted to the 80,000 cash. He accordingly claims that it was, in fact, himself who was still "entitled to six *shi*, one *dou*, and five *sheng* of Qin's wages." In the second version of his testimony, he abstains from these complicated calculations and instead just points out that his son's wage alone balanced the 80,000 cash that he had been short.

127 D. Zhang 2016, 214 –215 (EPF22:14 –16), trans. Hulsewé 1979a, 27 (with modifications).

128 On the issue of 'fair-market prices,' see Leese-Messing, vol. 2, ch. 15, 804–806, with further references.

En in order to demonstrate that his son's outstanding wage made up for the 80,000 cash he owed Su.[129]

The form of wage payment must again be seen against the background of the concrete political situation. During Former Han times and the earlier years of Wang Mang's Xin dynasty (9–23 CE), both transmitted and locally excavated documents suggest that state salaries had primarily been paid in coin throughout the empire, including the Hexi corridor. Historical records mention an official switch to grain payment in official salaries under Wang Mang in 16 CE, which is also reflected in excavated Hexi corridor documents from this period. Even 30 years later, in the forties CE, official salaries in the Hexi corridor still seem to have been paid in grain.[130] The example of Kou En's case may therefore reflect this time-specific switch to grain payments with regard to wages in the private sector.

Another case in point is intraregional monetization patterns. Despite the evidence for both official and private wage payments to have been paid in grain, the document nevertheless clearly suggests that coins did not disappear from the scene in the Hexi corridor during this period. And on a closer look, the document suggests some interesting intraregional disparities when it comes to references to certain kinds of money. With regard to all transactions that are described to have taken place in the Juyan region, values (for the oxen, for Kou's son's wage) are given in *shi* of grain. But in the context of transactions taking place further south, i.e, at Lude, references to coins play a prominent role, both as a unit of account (translations into cash: value of ceded items, grain) and as a means of payment (in the fish sale and possibly the ox sale).

There are certainly different possibilities for explaining this. Since the transactions mentioned with regard to Juyan on the one hand (especially wage payments) and Lude on the other (especially the selling of goods) are very different, they are hard to compare. But taken together with some other pieces of evidence, the discrepancy may yet be an indication of intraregional differences: For instance, it might indicate that coin use was in fact more common in Lude during this time. The town of Lude was more directly connected to places both east and west along the corridor, whereas the Juyan frontier area was situated further afield to the north. After all, Su chose to have his fish transported to Lude, which speaks of a promising outlet market there, at least when it comes to fish.[131] That Lude may not only have been special in its function as an outlet market, but also more particularly with regard to monetization issues is indicated by the fact that Hexi documents from this very transitional period sometimes indicate a differentiation between 'Lude coins' (*Lude qian* 觻得錢) and 'circulating coins' (*xing qian* 行錢). What qualities distinguished the two, and whether Lude coins were particularly valuable, is however unclear.[132] And in fact,

129 See n. 126 above for details.

130 Yuan 2018, esp. 110–113.

131 But of course, we cannot rule out the possibility that he also sold fish within the Juyan area.

132 H. Wang 2004, 48.

the document of the Kou En case does refer to 'circulating coins' (not 'Lude coins') with regard to the agreed price of the fish to be sold at Lude. In any case, this shows us again that within the Hexi corridor region itself, there could be substantial differences from place to place with regard to the accessibility of economic institutions, including things as central as money and marketplaces.

III.4 Conclusions: Aspects of the Embedding of Private Trade and Frontier Particularities

These two examples have illustrated the complex embedding of different kinds of local private trading activities in the Hexi corridor. Both examples illustrate how the system of state institutions, including its physical and logistical infrastructure, created networks that provided opportunities for trading to its members. This was especially true in the first case, but, somewhat indirectly, also in the second, in the commander's initial plan to commission two of his official subordinates to undertake his trading venture.

In both cases, other economic tools that were connected to imperial state institutions, such as monetization, 'fair-market prices,' and the judicial system shaped the functioning of private transactions. They likely had the effect of reducing transaction costs in private trading transactions. The second example in particular, however, also brought some of the limits of these tools to the foreground. The regional differences with regard to currency use and the somewhat confusing mix of currencies in particular – grain and coins, with the latter furthermore being distinguished according to their place of origin or usage – may, in fact, point to certain conditions that characterized the Hexi region in its role as a frontier zone. The overall evidence for currency use in the Hexi corridor suggests a relatively frequent switch to payments in commodities such as grain and silk. It has been argued that the explanation for this could be that whenever crises occurred at the imperial center, which housed the legal imperial minting workshops, frontier regions such as the Hexi corridor would have been the regions most directly affected by disruptions in imperial coin production and transfers.[133] This may certainly have had at least short-term negative effects with regard to transaction costs in various economic activities, including private trade. But over time, these recurring experiences may have brought along a growing flexibility among actors and institutions in the Hexi corridor with regard to currency use. In the long run, such learned flexibility may even have had a facilitating effect on regional economic stability and on trading activities in the region. This may have been of particular relevance during times when changing political circumstances asked for a reorientation of networks away from the Han center and toward the west, a point I shall come back to below (sec. V).

133 Z. Wang 2015, 36.

IV Private Border-Crossing Trade and Foreign Merchants

The previous section has given some concrete illustrations of how local private trading activities within the Hexi corridor were embedded in certain social, political, and economic institutions. This section will turn the spotlight on the role of the Hexi corridor as a frontier region and its conditions for private trade between groups of people of different cultural and political backgrounds. While cross-cultural encounters, including trading activities – in both east–west and north–south directions – certainly also occurred in the Hexi corridor before Han conquest, it is hard to deny that such encounters must have gone through an immense change in both qualitative and quantitative terms when the Han conquered and colonized the region with hundreds of thousands of soldiers and settlers.[134] The sheer density of people and the accompanying rise in local consumption alone multiplied potential for contact in both violent and peaceful forms, including trading opportunities between the new settlers and (often highly mobile) locals from the Hexi corridor and its surrounding regions.

Yet some earlier channels of interaction, for instance between Xiongnu to the north and Qiang to the south of the corridor, were likely hampered rather than facilitated by Han presence in the region. After all, the latter came along with the establishment of fortification lines running through large parts of the corridor with the potential of keeping both southern and northern intruders at bay, and furthermore apart from each other. As has been mentioned above, military fortifications and infrastructural state institutions such as relay stations and checkpoints could also have restricting and channeling effects in the east–west direction (sec. II.5). With the potential to keep other actors (including private merchants) from moving, they could keep other networks from taking shape or getting more powerful. In a certain way, they could, therefore, also impede private trade.

We do hear of other state-initiated infrastructural institutions, however, that were indeed meant to serve as a tool for border-crossing trade. Transmitted texts occasionally speak of "border markets" (*guan shi* 關市) or "Hu markets" (*Hu shi* 胡市) being organized in various frontier regions for the sake of supervised cross-border trade. These trade fairs typically are presented as concessions made to the Xiongnu. Little is known, however, about their concrete locations, functioning, and regularity. What role they played in the Hexi corridor is also unclear.[135] What is clearer is that in 'border markets' and other forms of sanctioned trading events across political bound-

134 The transmitted census of 2 CE suggests a registered population of approximately 280,000 people. See *Hanshu* 28B.1611–1614; Tse 2018, 40.

135 Wang and Li (2007, 30–31) mention references in excavated texts from the Hexi corridor to non-Chinese people (without mentioned merchant background) and to people traveling within the region for the sake of conducting private trade, suggesting that all of these "may have something to do with border markets." This, however, is mere speculation.

aries, the function of controlling and prohibiting trade – in the case of weapon exports, for instance – likely was at least as important as the function of facilitating trade when it came to the state's (and especially the central government's) perspective.[136] Furthermore, permitting opportunities for border-crossing trade, whether explicitly termed 'border markets' or not, was also a potentially explosive diplomatic issue. An example from the Later Han period may serve as an illustration of this. In 84 BCE, the court approved the governor of Wuwei's[137] suggestion to organize a fair with people of the Northern Xiongnu, whose *chanyu* had asked for such a trading opportunity. The text passage mentions both Han officials and merchants as well as Xiongnu leaders with their subordinates, bringing tens of thousands of horses and cattle, as envisaged actors in this semiprivate but officially sanctioned undertaking. The Southern Xiongnu, however, who were at that time allied with the Han in opposition to the Northern Xiongnu, felt betrayed and infuriated by this cooperative move. They thus intercepted and plundered the Northern Xiongnu's large trading party and foiled the whole endeavor.[138] This example is a vivid illustration of how border-crossing trade conducted by partially private actors was entangled in political decision-making and acute regional power constellations.

Transactions in the Hexi corridor between Han and non-Han people that operated on a smaller scale may, however, have worked quite smoothly and in a rather regular fashion. A passage in the *Hou Hanshu* stating that during Later Han times, Guzang[139] came to be called a "wealthy town" 姑臧稱為富邑 in which people could get rich easily and "markets opened four times a day," associates this economic prosperity with the "exchange of goods with the Qiang and Hu [i.e., the Xiongnu]" 通貨羌胡, 市日四合.[140] A Xuanquan document further mentions the purchase of a piece of silk by a "Hu chief" (*Hu zhang*) from a soldier for 360 cash,[141] and a similar document found near Dunhuang mentions a man's selling of a cloth robe to a non-Chinese head of troops for 1,300 cash.[142] Rather than large-scale and long-distance westward trading connections to the Tarim Basin and beyond, such examples rather speak of fairly local trade between settled (mostly Han) inhabitants of Hexi corridor settlements and largely pastoralist people living in the region or its more immediate surroundings.[143] It is in these kinds of relatively small-scale and local trade in particular that the Hexi corridor developed into a region of intercultural economic activity during Han times, with

136 E.g., Wang and Li 2007, 28–29; Żuchowska 2013, 140.

137 The easternmost commandery of the Hexi corridor.

138 *Hou Hanshu* 89.2950.

139 The government seat of the southernmost 'corridor' commandery of Wuwei.

140 *Hou Hanshu* 31.109.

141 Xie, Li, and Zhu 1987, 348 (217.15, 217.19).

142 H. Wang 2004, 54–55.

143 For instance, Qiang people were, among others, living in the "Qiang dependent state of Zhangye" (*Zhangye Qiang shuguo* 張掖屬國), i.e., close to Han settlements in the Hexi corridor. See Weaverdyck et al., vol. 2, ch. 7, 327.

repercussion both on the Han settlers and the people of the surrounding areas engaging in trade with them.

Goods did, however, evidentially also move from the 'Western Regions' to the Han empire's center and vice versa. Some of them did, of course, move via direct diplomatic channels with the Han ruling house. For this, as we have seen, the Hexi corridor indeed functioned as a transit zone. Many others, as has also been mentioned, likely did not arrive there via the Hexi corridor at all, but on a 'detour' via the Xiongnu.[144]

But what role can we ascribe to long-distance private trading activities in the region? What role did merchants and private trading organizations play in this? In scholarship on this issue, the phenomenon of Central Asian merchants engaging in long-distance trading activities in the Hexi corridor and further east tends to be treated as widespread already during Han times. Typically, it is associated with the alleged 'opening of the Silk Road' by Emperor Wu under the mid-Former Han period, in statements such as "after Chinese-Western connections had first been established, merchant-Hu from the Western Regions immediately entered the stage" 在中西交通开通之后，西域贾胡迅即登场.[145]

To a certain extent, this must certainly have been true. It is likely that apart from non-Han actors from the more immediate surroundings, some merchants from more distant polities of and around the Tarim Basin were also trading with people inside the Hexi corridor or even further east. And at first sight, extensive collections of textual references create the impression of this phenomenon being omnipresent.[146] Reservations only come up when one looks at the individual references more closely. It then turns out that after excluding those passages that do not withstand closer scrutiny – e.g., because they stem from much later times and are thus likely to merely reflect later projections into the past, or because a closer philological analysis suggests them to have been misinterpreted – one is left with astoundingly scant evidence.

To give just two examples, one text passage that is quoted by default in this context is Fan Ye's 'appraisal' (*lun* 論) at the end of the *Hou Hanshu* chapter on the Western Regions, which at one point refers not only to the establishment of agricultural garrisons and postal stations for official communication, but also to "merchant-Hu and trading non-locals [who were] arriving at the frontier lines on a daily basis" 商胡販客, 日款於塞下.[147] First of all, this is a rather isolated and generalizing statement in the context of listing the military and administrative accomplishments of the Later Han, which is difficult to interpret with regard to any concrete scenarios it might refer to. The term "merchant-Hu" itself is problematic in its impreciseness: Are we supposed to imagine traders coming from distant Central Asian places here, or simply ones that were living close by, maybe groups of pastoralists connected to the Xiongnu

144 See sec. II.1 above.

145 Chen 1991b, 632.

146 E.g., Chen 1991b; Z. Wang 2018; Z. Wang 2015, 37–38.

147 *Hou Hanshu* 88.2931.

or other pastoralist communities who occasionally came by their neighboring Hexi corridor frontier settlements? The latter would indicate local or regional trade, possibly even on a north–south axis rather than east–west long-distance trade. But even more importantly, one must further not overlook that this is a statement being made by an author in the fifth century CE. Whereas Fan Ye used earlier materials for his compilation of *Hou Hanshu* chapters' main bodies, the concluding appraisals are clearly his own,[148] and this appraisal in particular shows that the interests of his own times guided what he was writing in them. This is manifest, for instance, in the fact that about half of the entire appraisal consists of a discussion of Buddhism and its origins, a topic which is by no means central to the main body of the chapter itself (which was based on Han sources) but was of utter importance to Fan Ye himself, as a critic of Buddhism, and for many of his fifth-century contemporaries. His casual remark on the foreign traders at the frontier – a topic that is likewise not dealt with in the chapter's main body – should therefore not be overrated as a reliable piece of evidence for a Han-era reality.

Another cited example is a text passage from the *Dongguan Hanji* with the following report:

> When Yang Zheng had been appointed [scribe of] the Bureau of Merits under the governor of the capital, [Emperor] Guangwu died. When the governor of the capital went out to the Western Regions, merchant-Hu together set up a canopy and prepared a sacrifice [for the deceased emperor], and when the governor's carriage passed by the canopy, the Hu guided the carriage so as to make him participate in the worshipping. The governor hesitatingly stopped his cart. [But] standing in front of him, [Yang] Zheng instructed [him], saying, "According to ritual rules, the emperor is not even taking sacrifices from collateral branches [of his own family], let alone from the Yi and Di [barbarians]!" They removed the sacrifice and then left.
>
> 楊正為京兆功曹，光武崩，京兆尹出西域，賈胡共起帷帳設祭，尹車過帳，胡牽車令拜。尹疑止車，正在前導曰：「禮，天子不食支庶，況夷狄乎！」刬壞祭，遂去。[149]

This translation reflects the interpunctuation as it was chosen by Wu Shuping in his standard edition of the *Dongguan Hanji* 東觀漢記. Both Wang Zijin and Chen Lianqing have, however, argued that the interpunctuation should be chosen differently, i.e., "When the governor of the capital went out, merchant-Hu from the Western Regions set up a canopy…", and that the whole scene must have taken place not somewhere in the northwest, but in Chang'an.[150] Accordingly, they thus interpret it as evidence for Central Asian merchants being active in the imperial capital. Chen even concludes in a generalizing manner, "from this we can see that during that time, merchant-Hu from the Western Regions were all over the place in Chang'an."[151] I would argue,

148 See, e.g., Hill 2015, vol. 1, 462.

149 *Dongguan Hanji jiaozhu* 10.379, my translation..

150 Chen 1991b, 633–634; Z. Wang 2018, 17.

151 Chen 1991b, 634.

however, that both from a contextual and a syntactical standpoint, Wu Shuping's interpunctuation is perfectly reasonable, whereas placing a punctuation mark behind the *chu* ("go out," "be sent out") and leaving the latter without an object indicating the destination appears too much of a stretch.[152] This would mean that the text depicts a scene in the Western Regions,[153] and by no means in Chang'an. It can thus not be regarded as evidence for foreign merchants being active in Han territory, let alone in an organized private trading network that spanned over the Han capital region.

Similar conclusions can be drawn from closer looks at other cases. For instance, for demonstrating that "merchant-Hu from the Western Regions" (*Xiyu shang Hu*) came to China via the land route to engage in trade," Chen Lianqing refers to biographical sources on several Buddhist translators who (or whose ancestors) at some time from the Later Han period onward reportedly settled down in the Hexi corridor. None of the quoted sources, however, mention anything that would indicate a merchant background. Similarly, his references to foreign delegations and foreign diplomatic hostages do, of course, provide indications of foreign people visiting or even staying in Han territory. But they do not as such provide evidence for the phenomenon of Central Asian merchants on Chinese ground. Further examples of doubtful validity could be given here. But I assume that the former cases already demonstrate well enough my impression that the textual evidence for foreign merchants in Han territory tends to be inflated. It appears as though an expected result – that Han expansionism led to a fast "internationalization" (*guoji hua* 国际化) of private trade on Han territory[154] – sometimes guides the interpretation of primary source material in this matter, rather than the other way around.

The very few substantiated pieces of evidence that persist among these reference collections do, of course, show that the phenomenon was not altogether nonexistent during Han times.[155] And certainly, our extant Han sources may further be biased on this point; possibly, future excavations and research will provide more evidence. But the point I would like to make is that until then, we would be better served not to overinterpret the evidence that we currently have. After all, this might make us overlook or underestimate historical change. It is striking, in any case, that evidence for

152 As for one indication, in all other Han text passages I was able to find that include the sequence *chu Xiyu* 出西域, *Xiyu* is clearly the syntactical object of *chu*, with no possibility of placing a punctuation mark between the two.

153 To what extent it is ficticious or real is yet a different question.

154 See Z. Wang 2018, an article explicitly dedicated to the topic of 'internationalization' of the market in Han-era Luoyang.

155 As one very rare potential indicator, *Hou Hanshu* 34.1182, mentions "merchant-Hu from the Western Regions" (*Xiyu gu Hu* 西域賈胡) being executed for unwittingly breaking a restriction by killing a powerful official's rabbit outside the capital's city walls, but it does not give any further detail about their mercantile activities or the general circumstances of their stay. For a few vague indications from transmitted poetry, which might reflect situations toward the end of the Han dynasty, see further Chen 1991b, 636.

private trade – including private trade conducted by private merchants of various Central Asian backgrounds in the Hexi corridor and in regions that constituted the more central parts of the former Han empire – is much easier to find when it comes to the post-Han period. Neglecting this, and projecting phenomena for which there is evidence in later times back into Han times, may make us overlook or underestimate profound long-term changes both within and outside the Chinese realm. Acknowledging them, by contrast, gives us an opportunity to requalify the role of Han imperialism and its demise in the development of economic connectivity between East and Central Asia. The next section, therefore, is dedicated to a diachronic perspective, including a step beyond the time of the Han imperial era.

V Toward a Diachronic Perspective: Historical Change and the Role of Imperialism and Postimperial Processes

One basic narrative connected to the question of increasing Afro-Eurasian connectivity seems to be that imperialism – centrally including military confrontations and fortifications in frontier regions such as the Hexi corridor – led to an increase in trade. And it would be ignorant and utterly wrong to deny this correlation altogether. But it is important to develop a more nuanced approach to this issue. First of all, as I have tried to show in the above, it is worthwhile differentiating between trade and other forms of transfers or movements of goods between the different actors, institutions, and channels of interactions in each. On the one hand, Han imperial expansion came along with certain institutions (such as those connected to diplomatic exchange) that facilitated the movement of goods via certain channels and actors. Among these, the diplomatic channel between Han and Xiongnu probably brought more Chinese goods westward than the geographically more direct diplomatic and private trading channels that in fact relied on the Hexi corridor as a transit zone. On the other hand, imperial institutions may also have curbed particular forms of transfers, including those happening in the context of private long-distance trade. As for the other side of this coin, we can also look into economic processes that happened alongside or may even have been facilitated by the demise and breakdown of imperial power, as was the case during and toward the end of the Later Han period and beyond.

During the period between the Han and Tang dynasties, the Hexi corridor unmistakably developed into a region that was strongly characterized by intercultural and economic connectivity, including border-crossing private trade. The region became notably ‘cosmopolitan,’ with people of Chinese, Indic, and Sogdian origins living side by side. As a result of several centuries of migration processes during this period, several administrative documents from the sixth to eighth centuries, among them a

tax register from Dunhuang, testify to many residents of Sogdian origin, with one documented township of Dunhuang even having a Sogdian majority.[156] People of Sogdian origin came to be so deeply associated with the Hexi corridor and one of its towns – Zhaowu – in particular that by Sui-Tang times, Chinese sources speak of Sogdians as all belonging to the "Zhaowu clan."[157] It is also for the period between the Han and Sui/Tang that our sources unequivocally testify to activities of non-Chinese merchants in this space. Apart from the Sogdian *Ancient Letters*, the Chinese dynastic histories also provide clear evidence for this phenomenon. For instance, regarding the early fifth-century Hexi corridor, the dynastic history of the Northern Wei (or Tuoba-Wei, 386–535 CE) reports the following:

> Earlier, many merchants from the country [of Sute, i.e., Sogdh] used to come to the lands of Liang [i.e., the Hexi corridor] to trade their wares. But when [the Tuoba-Wei] subdued Guzang [in 439 CE], all of them were taken captive.[158]
>
> 其國商人先多詣涼土販貨，及克姑臧，悉見虜。

Other passages refer more generally to "Hu 胡 merchants," an unspecific term for foreign merchants of the north and northwest.[159] Furthermore, sources such as the Sogdian *Ancient Letters* from the early fourth century document some of the merchants' far-traveling trading goods, including potential 'bulk luxuries' such as spices like pepper and different kinds of incense materials. These point toward consumption practices and consumers beyond the highest elite circles playing a role in the movement of goods across larger distances. They indicate regular channels of transactions that were clearly separate from those of diplomatic practice, with different kinds of actors in both consumption and distribution.[160]

With the so-called Sogdian *Ancient Letters*, we finally also have indisputable evidence for foreign merchants acting both inside the Hexi corridor and widely across the territory of the former Han realm.[161] Certainly, it seems obvious that this phenom-

156 De la Vaissière 2005, 130–131.

157 Yoshida 2003.

158 *Weishu* 102.2270; my translation. This action was obviously not restricted to Sogdians but was part of a large-scale forced resettlement involving tens of thousands of Liangzhou residents. Müller 1998, 29. Besides testifying to the activities of Sogdian merchants in the Hexi corridor during the early fifth century, the passage also provides an indication for how imperial ambitions – by the Tuoba-Wei, in this case, who famously unified northern China after a period of political fragmentation – could sometimes have disruptive (rather than supportive) effects on long-distance connectivity, including on established private trading networks.

159 See, e.g., *Weishu* 19A.444–445, referring to "merchant-Hu" (*shang hu* 商胡) whose possessions reportedly were extorted by a greedy regional inspector in the Hexi corridor during the early sixth century CE.

160 For the goods mentioned in the Sogdian *Ancient Letters*, see de la Vaissière 2005, 51–55, with further references. For aromatics, see Chen 1991a.

161 For a convenient online publication with translations of four out of five intact letters, see Sims-Williams 2004. See further de la Vaissière 2005; de la Vaissière and Trombert 2005; Hansen 2017, 197–

enon grew out of a "formative period prior to the 4th century,"[162] some cornerstones of which may have been laid during Han times. But I would like to argue that the increase in evidence for private border-crossing long-distance trade toward and especially after the fall of the Han dynasty should not simply be considered as a quasi-natural, long-term consequence of Han imperialism and its connecting effects. Rather, it appears useful to look both into external factors, i.e., developments that happened outside China, and internal factors, i.e., changes between the Han and the post-Han periods that occurred inside the regions that had constituted the Han realm, with a particular focus on its former frontier regions such as the Hexi corridor.

V.1 The Case of the Sogdian Trade Network

The case of the Sogdian trade network – which famously spanned not only Central Asia and China but also South Asia and Southeast Asia – is an illuminating example in this context. It shows how the Silk Road trade paradigm and the assumption of imperialism as a natural driver of economic connectivity and trade easily leads to an overhasty interpretation of our source material.

The current consensus seems to be that existing historical and archaeological sources still leave us in the dark about the early origins of the Sogdian trade network. Apart from sources such as the Sogdian *Ancient Letters*, which are indicators of the Sogdians' astounding mobility, migration, and engagement in border-crossing trade in the early fourth century, archaeological evidence suggests that major economic shifts occurred in Sogdiana during the fourth to fifth centuries, which are especially discernible in strong urbanization tendencies.[163] The origins of these major changes in Sogdiana itself are still unclear but tend to be imagined as a consequence of a successful trade network toward China that is assumed to have developed slightly earlier, beginning in the late third century CE.[164] Why this orientation toward commerce and extensive, long-distance migration from Sogdiana happened remain unclear. But along this well-trodden path of argumentation, the discovery by the allegedly intrinsically trade-loving Sogdians of alluring Chinese markets, made visible and accessible via prior Han expansion, seems an easy catch – easier, at least, than speculating about potential internal (Sogdian) developments playing a role. Again, while parts of this argumentation may not be entirely inaccurate, it is my impression that

203, with further bibliography on 198, n. 15; Morris, vol. 1, ch. 9, 413–414; Morris, ch. 4.A, sec. I; ch. 4.B, esp. sec. II.2, this volume.

162 De la Vaissière 2005, 11.

163 Kidd and Stark 2019.

164 Kidd and Stark 2019, 166.

these connections tend to be drawn too simplistically when it comes to the interpretation of Chinese sources.[165]

In his admirable book on the Sogdian trade network, de la Vaissière states very clearly that ultimately, there is no clear indication of a Sogdian trade network before the Sogdian *Ancient Letters* of the early fourth century, which is when it "suddenly emerges from obscurity."[166] He also points out that previous scholarship "enlarged [the formative period of this network] to an extreme degree."[167] Accordingly, his book has a strong focus on the period that follows, for which there is ample evidence.

Understandably, however, de la Vassière tries to incorporate earlier potential indicators into his considerations about the likely genesis of the network. In this context, he goes back to Han historical sources. He admits that Chinese sources "never explicitly mention Sogdian commerce," and that all we are left with are the aforementioned records about diplomatic transactions between Kangju and Han.[168] With regard to the latter, however, he accepts the assessment that these were "fake embassies." Furthermore, he identifies these "commercially inclined embassies of Kangju" with Sogdians altogether,[169] even though Chinese texts from the Han period do not conflate the Kangju, whom they associate with pastoral strategies, with individual oasis polities situated in the more southwestern region of what came to be called Sogdiana. Even though the texts do mention certain polities that were possibly located in Sogdiana as (maybe intermittent) clients of the Kangju, they (unlike some later texts) present them as separate entities.[170] At a fundamental level, the Kangju and Sogdiana are also distinct spatial and cultural entities from an archaeological perspective. The emergence of the Kangju is linked to the middle reaches of the Syr Darya, especially around the Arys river basin.[171] Sogdiana during this period encompassed a series of contiguous oasis regions situated along two major rivers (Zerafshan and Kashka Darya) further to the south of Central Asia.[172] As has been pointed out by several scholars, Kangju, at least during Han times, is by no means to be conflated with Sogdiana.[173]

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165 I am grateful to my colleague Lauren Morris for discussing and reaffirming some of the basic ideas I am presenting in the following. In the meantime, she has delved deeper into some of the questions I am raising here, for which see her ch. 4.B, sec. II.2, this volume.

166 De la Vaissière 2005, 43.

167 De la Vaissière 2005, 11.

168 De la Vaissière 2005, 39.

169 De la Vaissière 2005, 37–38.

170 For a collection and discussion of relevant passages in the dynastic histories of the Han and later periods, see Huber 2020, 11–103.

171 Kangju is now associated with three contiguous 'archaeological cultures': Otrar-Karatau, Kaunchi to the southwest (ancient Chach), and Kenkol to the east (inner Tianshan plus the Chu and Talas). See the contributions in Yatsenko et al. 2020. I am indebted to Lauren Morris with regard to these descriptions of geographic locations associated with Sogdiana and Kangju. For more details, see further her ch. 4.A, esp. sec. III.1, this volume.

172 Along the middle and lower reaches of the Zerafshan (Samarkand and Bukhara) and along the Kashka Darya (Kesh and Nakhshab).

173 E.g., Daffinà 1982, 324; Huber 2020, 12, inc. n. 6, both with further references on the issue.

De la Vaissière's reading of the Kangju envoys all being Sogdians blurs this distinction and leads him to his generalizing assumption that a direct line can be drawn from the "commercial" Kangju embassies to the Sogdian trade network of early medieval times. It can certainly not be ruled out that envoys from polities situated in Sogdiana themselves realized the "importance of their geographical position"[174] and their resulting commercial potential through their diplomatic contact with Han China. But with Kangju people not being the same as Sogdians, de la Vaissière's line of argument misses an important link and makes it even more speculative. Ultimately, the fact remains that, as de la Vaissière himself puts it, Han sources "never explicitly mention Sogdian commerce,"[175] and of the alleged process from diplomatic gifts of silk to the rise of commerce in the hands of long-distance Sogdian merchants, "no source speaks and we know nothing of it."[176] In this way, the argument also misses the opportunity to examine potential (e.g., socioeconomic) changes in the region of Sogdiana itself that may have played a role in the later developments.

All of this is not to say that any connection between Han-era diplomatic transactions and post-Han trading networks – via new information on markets and potential trading routes – ought to be outrightly repudiated. But what I would like to propose is that this connection is only one out of many potential factors that needs to be considered. One important fact that has to be taken more into account is that even those Sogdians who ultimately settled in the Tarim Basin, the Hexi corridor, and other places in China were far from all being merchants. In fact, quite the contrary seems to be true. The Sogdian *Ancient Letters* from the fourth century as well as later Chinese sources, including tax registers from Dunhuang (Hexi corridor) and Turfan/Gaochang (Tarim Basin) from the sixth to eighth century, suggest that the majority of Sogdian communities in these regions were farmers and artisans rather than merchants.[177] Many Sogdians further seem to have been slaves, sometimes owned by Chinese.[178] More eminent people of Sogdian origin in China in the pre-Tang and Tang periods (known from Chinese historical records, Buddhist biographical works, and tomb epitaphs) are associated with cultural functions (e.g., as translators) and, especially, military functions.[179] As de la Vaissière himself states very clearly at one point, the case of Sogdian diaspora communities was "not therefore simply a matter of a merchant community, but of a general migratory process involving all the levels of

174 De la Vaissière 2005, 32.

175 De la Vaissière 2005, 39.

176 De la Vaissière 2005, 31. For an example that might, however, illustrate how such a process might have worked, see the *Sanguo zhi* passage quoted below in sec. IV.4.

177 De la Vaissière 2005, 130–131; Huber 2020, 195, 181–182; Moribe 2005.

178 E.g., Hansen 2005, 299–300. For more details on slavery in fifth- to seventh-century Gaochang, see Skaff 2019.

179 De la Vaissière 2005; Huber 2020, 167–168, 274, 276; Moribe 2005 (the latter on Tang and later times).

society" and that Sogdian emigration was "socially diverse from the outset."[180] It seems justified to ask, therefore, what the driver of this extensive migration was. Were the alluring new markets, created by Han expansion, attracting the traders, and all the other people (farmers, artisans, slaves) came along as a by-product of this process? Or was it rather the other way around – different social groups of Sogdians emigrated from their homelands for some reason, and then some of them ended up engaging in commerce?[181]

Skaff has alluded to the possibility that certain push-factors inside Sogdiana, including population growth that may have put further pressure on disadvantaged social groups, rather than a simple pull by alluring foreign markets, may have been at the center of Sogdian emigration from the fourth century onward.[182] That military and commercial careers would be the most likely (if not the only) trajectories for members of diaspora communities – who from a central Chinese perspective kept being treated as 'outsiders' to a certain degree during both pre-Tang and Tang society – to climb up the social ladder does not, in any case, come as a big surprise.[183] That we see evidence for many successful merchants among the Sogdians in China may, therefore, also not be overly surprising. This is not to say that we should dismiss the indications that at least by early medieval times, merchants and merchant activities played a distinctively prominent role in Sogdian society more generally.[184] But the 'Sogdian as trader' also needs to be treated as a sociohistorical phenomenon of the societies in which the Sogdians formed diasporas, rather than simply as an intrinsic Sogdian characteristic that already existed during Han times and that naturally unfolded alongside flourishing 'Silk Road' trade between East and Central Asia.

180 De la Vaissière 2005, 130.

181 Skaff (2003) convincingly argues that during Sui-Tang times, Sogdians who had settled in Tarim Basin communities then under Sui/Tang rule and often worked as farmers on state-allocated land indeed took over roles in mediation and assistance for itinerant Sogdian merchants. This does not mean, however, that this had been the settlers' motivation to settle there in the first place.

182 Skaff 2019, 286. In the meantime, Lauren Morris has done more in-depth research on these issues. Citing further scholarship on the matter, she considers both agricultural and commercial incentives in a complex interplay of push and pull factors that drove the formation of Sogdian diasporas and economic networks. While stressing the commercial pull factors, she also acknowledges certain ruptures in Sogdiana itself – including, among other things, a "decline in the Zerafshan valley" in the second to third centuries CE – as likely playing an important role in the start of these developments in the first place. See Morris, ch. 4.B, esp. sec. II.2, this volume, with the accompanying references and further elaborations on the matter.

183 De la Vaissière 2005, 57; Huber 2020, 303, 305–306.

184 Skaff 2003 provides several pieces of evidence for this, especially with regard to the seventh and eighth centuries CE.

V.2 Late Han and Post-Han Structural Changes in the Hexi Corridor and Their Likely Effects on Economic Connectivity

I have argued above that the phenomenon of private long-distance trading connections and foreign merchants in China tends to be overrated with regard to Han times, and that the post-Han phenomenon of 'Sogdian traders' tends to be associated too simplistically with increasing connectivity resulting from Han imperial encroachment to the west. I further argued that, instead, external factors (i.e., factors growing out of Sogdian society) have to be taken into consideration to explain these developments. In the following, I will now look into some potential factors for increasing economic connectivity in the post-Han period inside the former Han realm itself and the Hexi corridor in particular. These factors were connected to postimperial processes and political decentralization rather than imperialism and centralization of imperial state power.

During the post-Han period, the Hexi corridor was recurrently either politically independent or cut off from the regions that had constituted the center of the Han imperial realm. Different ruling houses of both Han and non-Han origin ruled over the territory (and sometimes parts of the Tarim Basin) and established their dynastic capitals in various Hexi corridor towns that had formerly housed the seats of Han commanderies, i.e., Wuwei, Zhangye, Jiuquan, and Dunhuang. The former Han frontier zone thus developed into a political center in its own right.[185] Accordingly, its towns also came to play a larger role as consumption centers, and therefore, as final destinations of partly far-traveling goods. Furthermore, increasing political autonomy and intermittent cut-offs from central China, which had been a major supplier of the region during Han times, naturally demanded an increasing orientation – in both political and economic regards – toward other directions, including the Tarim Basin polities toward its west. To a certain extent, this tendency is already discernible with regard to certain phases of the Han period, during which the central Han government intermittently lost power over the northwest. The *Hou Hanshu* biography of Dou Rong, who ruled quite independently over the Hexi corridor during the Wang Mang period and after, has many indications of his ambitions to establish and maintain relationships with non-Chinese actors of and around the Hexi region. This may indicate that independence from central China provided increased opportunities for network-building in other directions.[186]

More generally, the Hexi region gets credited with economic and price stability, especially during times when the central Chinese regions were war-torn. It often turned into a safe haven for refugees from the former imperial center during times when the latter fell into political and economic turmoil. There was a considerable

185 For a short overview of the political history of the Hexi corridor during the post-Han period, see Juliano and Lerner 2001, 30–33.

186 *Hou Hanshu* 23.795–809; De Crespigny 2007, 166–169; Chen 1991b, 635.

population increase in this region during the post-Han period, with the region of Dunhuang commandery apparently attracting especially many people.[187] The latter further points toward an interesting development within the Hexi corridor itself. While post-Han tombs in the eastern Hexi corridor (closer to the former Han centers) rather exhibit a trend toward simplicity, tombs in the western Hexi corridor (closer to the Tarim Basin) become both more numerous and more elaborate. They exhibit "a hard turn towards artistic vibrancy and autonomy" including "an expansion of scale, alignment of formation, surge in refinement, and the establishment of two distinct styles at Jiuquan and Dunhuang."[188] The archaeological record more generally suggests that after the Han period, there was a distinctive "shift of regional power from the eastern Hexi Corridor to Jiuquan and Dunhuang in the west" indicating that "the nexus of power shifted westward, away from the [Chinese] heartland."[189] These are strong signs of an increasing westward connectivity of the Hexi corridor – facilitated (rather than hampered) by its postimperial breakaway and intermittent political autonomy. This also applies to the strong ties that certain prominent clans from the Hexi corridor evidently established and maintained over centuries between their clan members resident in their ancestral homes, most prominently Dunhuang, and those who had established themselves in some Tarim Basin polities, especially Gaochang in the Turfan region. One example is the 'Zhang clan of Dunhuang,' one of whose ancestors was Zhang Jun 張駿, who ruled over the Hexi corridor as ruler of the Former Liang 前凉 dynasty (320–376) and seized the Turfan region in 326 CE. The Zhang clan is only the most prominent example of such long-lasting network ties between the Hexi corridor and the Tarim Basin during the post-Han period.[190]

Next to political developments that likely affected the orientation of elite network-building, our sources also disclose certain economic concomitants. For instance, one text passage in the *Sanguo zhi* may be an illustration of how diplomatic channels could in fact be diverted into private trading networks, especially under the condition of the Hexi corridor being cut off from central China. The text describes a situation during the phase of the ultimate breakdown of the Han dynasty, during the early third century CE, when the commandery of Dunhuang had been "cut off [from the imperial center] and left neglected without a governor for 20 years, and great local families had massively expanded their power" 隔絕，曠無太守二十歲，大姓雄張. In the context of listing various kinds of mischief that local magnates had exerted over the region, the text also turns to the topic of foreign delegations:

> Furthermore, there often were various Hu people from the Western Regions coming to make tribute offerings. But the local magnate families often intercepted them and barred them [from

187 Clydesdale 2018, 9; Zhu and Li 2012. See also *Hanshu* 28B.1645 for an early reference to the region's stability.

188 Clydesdale 2018, 5; 8.

189 Clydesdale 2018, 3.

190 Selbitschka 2022, 285–286.

> moving onward]. The [magnates] then started trading with them, cheating and humiliating them, which [resulted in conflicts that] often could not be resolved. The Hu were resentful [about their mistreatment], but [Cang] Ci took charge of all of them. As for those who wanted to go to [the Han capital of] Luoyang, he saw to it that they were granted travel passports. And as for those who wanted to leave the commandery and return home, the government office saw to it that they were getting a fair [price for their goods], with the government agency inspecting all of [the goods] and then selling them on the market together with [the Hu, so as to protect them from being cheated], and ordered officials and other people to guard and accompany them on the road. On account of this, both [local] residents and foreigners (*Yi*) unanimously praised his virtue and kindness.
>
> 又常日西域雜胡欲來貢獻，而諸豪族多逆斷絕；既與貿遷，欺詐侮易，多不得分明。胡常怨望，慈皆勞之。欲詣洛者，為封過所，欲從郡還者，官為平取，輒以府見物與共交市，使吏民護送道路，由是民夷翕然稱其德惠。[191]

While diplomatic undertakings may always have had some private trading component, the passage illustrates how being cut off from central China and the increasing autonomy of locally powerful people, including merchants, could offer particularly ideal preconditions for diplomatic channels to be taken over by actors in a private capacity. This was, therefore, particularly likely to happen toward the end of the Han period and after.

But there are more institutional particularities during the post-Han period that may be worth considering when thinking about postimperial processes as facilitators of certain kinds of connectivity. One important aspect with a direct relation to trade concerns issues of monetization. With *wuzhu* coins, the Former Han government had introduced a copper currency that was used throughout the empire in all kinds of transactions, from officials' salary payments to private market purchases. There is quite a lot of evidence from the Hexi corridor region that here, too, *wuzhu* coins came to be the major form of money.[192] This, however, had already changed to a certain extent during Later Han times. As mentioned earlier, historical records suggest an official empire-wide switch to grain payment in official salaries under Wang Mang in 16 CE. And according to excavated documents, this also affected the Hexi corridor, where official salaries seem to have been paid in grain for several decades.[193] More generally, even though *wuzhu* coins came to be used to make up parts of salary payments again, the Later Han and even more the post-Han period witnessed a resurgence of payments in kind, with grain, silk, and other cloths, as well as silver, taking over various functions that had earlier been dominated by the use of the official copper currency.[194]

One may ask whether this trend toward in-kind payments, as a monetary concomitant of decentralization and imperial breakdown, may in fact have had a promoting

191 *Sanguo zhi* 16.512; my translation.

192 H. Wang 2004, 47–64.

193 Yuan 2018, esp. 110–113. See also above, sec. III.3.4.

194 E.g., Thierry 1993, 132–133. See also Leese-Messing, vol. 2, ch. 11, 553–555.

effect on border-crossing long-distance transactions. If in frontier regions such as the Hexi corridor, officials and other people were increasingly being paid in commodities such as silk rather than *wuzhu* coins, and state agencies were also accepting and using them more than before, this may in fact have facilitated trading transactions with people from neighboring or even more distant polities more than a standardized Han copper currency. Whereas the latter may have been an advantageous economic tool within the realm under direct Han administration, it was not widely accepted beyond its borders and was not particularly suited for being carried across large distances anyway. Textiles, including silk, as well as other commodities, provided a much more attractive and reliable store of value, especially to actors coming from far away, as their value promised to be more universally recognizable and accepted across large distances and political boundaries.[195] For non-Chinese merchants coming to the Hexi corridor, therefore, widespread use of commodity (rather than coin) payments among locals could have lowered transaction costs in trading activities with them. More abstractly, a retraction of imperial power over currency issues would in this case have facilitated long-distance and border-crossing trade.

In the long run, the Hexi corridor's increasing westward orientation after the Han period and its acquired flexibility with regard to currency use became manifest in another monetary characteristic. During the sixth century, the Hexi corridor was the only place in which the then-ruling Northern Zhou 北周 (557–581) administration tolerated "gold and silver coins of the Western Regions" 西域金銀之錢 as legal tender.[196]

Furthermore, the retreat of Han imperial power – which had been based primarily on agricultural strategies and tended toward reservations against pastoralists – came along with a massive influx of people from surrounding regions. Their traditional knowledge of pastoral strategies may have contributed to an increased and economically more efficient mix of agricultural and pastoral strategies.[197]

Other more complicated dynamics also played a role in and alongside all of these developments: Most famously, westward connectivity brought strong Buddhist influences to the post-Han Hexi corridor. Buddhism came along with new cultural practices and institutions such as temples, which again brought novel impulses for social structures as well as novel economic practices and consumption habits. Of the latter, the laborious investments into Buddhist grottoes, mural paintings, and sculptures, not to forget the immense production of text scrolls, are only some of the most prominent and easily discernible examples. Eventually, distinctive Buddhist art and construction styles of the Hexi corridor were transferred further east to central China, where they

195 Morris, ch. 4.B, sec. II.2, this volume, for instance, points to musk (mentioned as an export product to Samarkand in the Sogdian *Ancient Letters*) as a commodity that was "easily transferable into other forms of wealth" under the condition of a lacking common monetary unit.

196 *Suishu* 24.691. See also Thierry 1993, 98.

197 Q. Li 2006, 88.

became models for representative construction projects of ruling elites.[198] Widespread consumption (and import) of incense materials and other aromatics may be mentioned as one of many other economic aspects of adopting novel religious practices in the region.[199] These novel conditions and their impact on various economic processes on the ground deserve to be considered more closely. This is not only true for Buddhism, of course, but also for the economic impact of other religions that came to take root in the Hexi corridor, such as Zoroastrianism, which particularly affected Sogdian communities. In any case, the Hexi corridor's post-Han openness toward and intensified connections with the polities to its west definitely played a considerable role for all these religious and cultural – and at the same time economic – imports to take roots and have such a deep impact on the region. This development, too, therefore, can be considered as a postimperial phenomenon.

With this excursus on the role of the Hexi corridor in an extended historical perspective, my aim has not been to negate the obvious role that Han imperialism played in increasing Eurasian connectivity. Rather than seeing either imperial or post-imperial processes as the 'main' driver of trade or other forms of transfers, both played their part in a complex dialectical process. I argue, however, that the retraction of imperial power brought along certain institutional and other changes in the empire's northwest that in some ways had a facilitating effect on border-crossing economic connectivity, including private trade.[200] It is these post-Han developments in former Han frontier zones that the Tang eventually built upon when they established their empire, in which the value of foreign trade came to be very different from what it could ever have been during Han times.[201] It is by means of acknowledging these long-term changes that we can also perceive the particular historical characteristics

198 Tseng 2012, 138–141, including n. 390. On the impact of Buddhism on Chinese material culture more generally, see Kieschnick 2003.

199 On the increasing relevance of incense materials and aromatics in China especially after the Han period, see, e.g., Chen 1991a. For the relevance of far-traveled aromatics reaching the southern region of Lingnan from Southeast Asian regions already during the Han period, see Korolkov, ch. 6, this volume. As for the role of religious practices in the development of economic networks, however, Korolkov points to the "development of flexible, peer-to-peer frameworks for negotiating trade, diplomacy, and cultural relations" as a phenomenon of the post-Han period that "facilitated, and was reinforced by, the spread of new religions" during that time (ch. 6, sec. V.2).

200 Korolkov, ch. 6, this volume, comes to similar conclusions with regard to the overall role of the Han imperial breakdown in the post-imperial development of the coastal regions of southern China. For instance, Korolkov points to the "collapse of the Han Empire" and the breakdown of its "centralized economic institutions and networks" as central factors for the development of a new political and economic landscape that "released new actors that were strongly oriented towards maritime exchanges" (sec. VI) and that "offered more efficient mechanisms of transregional integration" (sec. V.2).

201 Despite obvious differences between the Han and the Tang regimes with regard to issues of foreign trade, Brown (2018, 105) reminds us that even with regard to Tang times, we should not readily succumb to the idea of "the invisible hand of the market that pulled goods along a Silk Road as if it were a modern commercial highway."

of the Han period itself more clearly, including its conditions for trade and other processes that enabled the movement of goods on its northwestern frontier.

VI Concluding Remarks

In this chapter, I have highlighted the Han-era Hexi corridor as a frontier zone that deserves to be considered as an important space for ancient connectivity, albeit in different ways than commonly acknowledged. I have argued that with regard to its role as a transit zone for the movement of goods between the central regions of the Han Empire and the polities of the Tarim Basin and beyond, the notion of market-based trade needs to be applied with more caution. The complex and ever-changing structures of power relationships that border-crossing long-distance transfers of goods were largely embedded in, as well as the restrictive channeling function of diplomatic networks, need to be taken into serious account. It is in this way that we can avoid creating a misleading picture of ancient globalization that is often implied in 'Silk Road' approaches to the region's history and that associates imperial expansion with a naturally unfolding, universal economic prosperity across political and social boundaries. Furthermore, I have suggested that beyond its oft-cited and partly overrated transit function, the Hexi corridor also deserves to be considered as a final destination region in the context of diplomatic undertakings that were negotiated between distant ruling houses. The local reception of diplomatic goods (including camels as long-distance means of transport) contributed to an accumulation of capital in the form of goods, infrastructure, and expertise that was novel to the region and provided important preconditions for its further historical development.

The acknowledgment of the social and institutional embedding of economic transactions also proved relevant for the consideration of transfers of goods that were taking place in the Hexi corridor itself on a more local level and in relationship to private trade. Highlighting not only the facilitating aspects of economic tools and other institutions in which local trade was embedded, but also their purposefully restricting functions and unintended limitations with regard to the reduction of transaction costs, helps to further qualify the 'Silk Road' imagination of the Han-era Hexi corridor as an established trade hub. The same holds true for a reconsideration of the related assumption that the Hexi corridor became a space of widespread long-distance trading activities by foreign merchants as soon as Emperor Wu 'opened' the routes to the west by his occupation of the region. While true to a certain extent, I have argued that this phenomenon tends to be inflated. Finally, I suggested that overrating the role of private trade from local to long-distance levels during Han times bears the risk of underrating the role of changes that were initiated not by imperial but rather by postimperial processes connected to imperial breakdown, decentralization, and political fragmentation. These processes were highly important for the Hexi corridor and its increasing role for long-distance economic connectivity in the long run.

References

Barfield, T. 2001. “Steppe empires, China, and the Silk Route: Nomads as a force in international trade and politics.” In A. Wink and M. Khazanov (eds.), *Nomads in the sedentary world*, 234–249. Richmont: Curzon.

Bertrand, A. 2021. “Anciennes et nouvelles ‘Routes de la soie’: Pour une déconstruction d’une appellation.” *Asia Focus* 155, 1–31.

Bi, B. 2019. “Recent archaeological discoveries regarding Kangju and Sogdiana.” In J. A. Lerner and A. L. Juliano (eds.), *New research on Central Asian, Buddhist and Far Eastern art and archaeology*, 49–62. Turnhout: Brepols.

Boltz, W. G. 1981. “Review of *China in Central Asia. The early stage: 125 BC–AD 23*, by A. F. P. Hulsewé.” *Bulletin of the School of Oriental and African Studies* 44.2, 400–403.

Brosseder, U. 2015. “A study on the complexity and dynamics of interaction and exchange in late iron age Eurasia.” In J. Bemmann and M. Schmauder (eds.), *Complexity of interaction along the Eurasian steppe zone in the first millennium CE*, 199–332. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität Bonn.

Brown, P. 2014. “The Silk Road in late antiquity.” In V. H. Mair and J. Hickman (eds.), *Reconfiguring the Silk Road*, 15–22. Philadelphia, PA: University of Pennsylvania Press.

–. 2018. “‘Charismatic’ goods: Commerce, diplomacy, and cultural contacts along the Silk Road in late antiquity.” In N. Di Cosmo and M. Maas (eds.), *Empires and exchanges in Eurasian late antiquity*, 96–107. Cambridge: Cambridge University Press.

Cable, M. 1929. *The challenge of Central Asia: A brief survey of Tibet and its borderlands, Mongolia, north-west Kansu, Chinese Turkestan, and Russian Central Asia*. London: World Dominion Press.

Chen Lianqing 陈连庆. 1991a. “Han Jin zhi ji shuru Zhongguo de xiangliao” 汉晋之际输入中国的香料 [Imports of aromatics to China during the period from Han to Jin]. In Tian Hu 田虎 (ed.), *Zhongguo gudai shi yanjiu: Chen Lianqing jiaoshou xueshu lunwenji* 中国古代史研究: 陈连庆教授学术论文集, 611–630. Changchun: Jilin wenshi chubanshe.

–. 1991b. “Han Tang zhi ji de Xiyu gu Hu” 汉唐之际的西域贾胡 [Merchant-Hu during the period from Han to Tang]. In Tian Hu 田虎 (ed.), *Zhongguo gudai shi yanjiu: Chen Lianqing jiaoshou xueshu lunwenji* 中国古代史研究: 陈连庆教授学术论文集, 631–659. Changchun: Jilin wenshi chubanshe.

Chin, T. 2013. “The invention of the Silk Road, 1877.” *Critical Inquiry* 40.1, 194–219.

Clydesdale, H. 2018. “Rethinking China’s frontier: Archaeological finds show the Hexi corridor’s rapid emergence as a regional power.” *Humanities* 7.3, 1–11.

Daffinà, P. 1982. “The Han Shu Hsi Yü Chuan re-translated: A review article.” *T’oung Pao* 68.4/5, 309–339.

De Crespigny, R. 1984. *Northern frontier: The policies and strategies of the Later Han empire.* Canberra: Faculty of Asian Studies, National University of Australia.

–. 2007. *A biographical dictionary of Later Han to the Three Kingdoms (23–220 AD).* Leiden: Brill.

de la Vaissière, É. 2005. *Sogdian traders: A history*. J. Ward (trans.). Leiden: Brill.

de la Vaissière, É. and É. Trombert, eds. 2005. *Les Sogdiens en Chine*. Paris: École française d’Extrême-Orient.

Di Cosmo, N. 2000. “Ancient city-states of the Tarim Basin.” In M. H. Hansen (ed.), *A comparative study of thirty city-state cultures*, 393–407. Copenhagen: Reitzels.

–. 2002. *Ancient China and its enemies*. Cambridge: Cambridge University Press.

Dongguan Hanji jiaozhu 東觀漢記校注 [The Han records of the Eastern Pavilion with collated commentaries]. 1987. Composed by Liu Zhen 劉珍. Compilation of commentaries by Wu Shuping 吳樹平. Zhengzhou: Zhongzhou guji chubanshe.

Fairbank, J. 1942. “Tributary trade and China’s relations with the west.” *The Far Eastern Quarterly* 1.2, 129–149.

Fei Zhengang 費振剛 and Hu Shuangbao 胡雙寶, eds. 1993. *Quan Han fu* 全漢賦 [*Complete collection of Han rhapsodies*]. Beijing: Beijing daxue chubanshe.

Feng Yu 冯玉. 2021. "Xibei Han jian suo jian Xiyu xian chu de guanli" 西北汉简所见西域献畜的管理 [The management of livestock presented by the Western Regions according to northwestern Han manuscripts]. *Xiyu yanjiu* 西域研究, no. 3, 1–10.

Gansu Juyan kaogu dui 甘肃居延考古队. 1978. "Juyan Handai yizhi de fajue he xin chutu de jiance wenwu" 居延汉代遗址的发掘和新出土的简册文物 [The excavation of Han-era ruins at Juyan and newly excavated texts]. *Wenwu* 文物, no. 1, 1–25.

Gansu Juyan kaogu dui jiance zhengli xiaozu 甘肃居延考古队简册整理小组. 1978. "'Jianwu san nian hou Su jun suo ze Kou En shi' shiwen" 建武三年候粟君所责寇恩事释文 [Transcription of the "case of Commander Su's accusation against Kou En from the third year of Jianwu"]. *Wenwu* 文物, no. 1, 30–31.

Gansu sheng wenwu kaogu yanjiusuo 甘肃省文物考古研究所 et al. 1990. *Juyan xin jian: Jiaqu houguan yu di si sui* 居延新簡: 甲渠候官與第四燧 [*New manuscripts from Juyan: Jiaqu company fort and watchtower no. 4*]. Beijing: Wenwu chubanshe.

–. 2000. "Gansu Dunhuang Han dai Xuanquan zhi yizhi fajue jianbao" 甘肃敦煌汉代悬泉置遗址发掘简报 [A short report on the finds at the site of the Xuanquan station in Dunhuang, Gansu]. *Wenwu* 文物, no. 5, 4–20.

Giele, E. 2015. "Private letter manuscripts from early imperial China." In A. Richter (ed.), *A history of Chinese letters and epistolary culture*, 399–474. Leiden: Brill.

Hansen, V. 2005. "The impact of the Silk Road trade on a local community: The Turfan Oasis, 500–800." In É. de la Vaissière and É. Trombert (eds.), *Les Sogdiens en Chine*, 283–310. Paris: École française d'Extrême-Orient.

–. 2017. *The Silk Road: A new history with documents*. New York, NY: Oxford University Press.

Hanshi waizhuan jishi 韓詩外傳集釋 [*The* Hanshi waizhuan *with collected explanations*]. 1980. Composed by Han Ying 韓嬰 (ca. 200–130 BCE). Beijing: Zhonghua shuju.

Hanshu 漢書 [*Documents of the Han*]. 1962. Composed by Ban Gu 班固 (32–92 CE). Beijing: Zhonghua shuju.

Hao Shusheng 郝樹聲 and Zhang Defang 張德芳. 2009. *Xuanquan Han jian yanjiu* 懸泉漢簡研究 [*Studies on the Han documents from Xuanquan*]. Lanzhou: Gansu wenwu chubanshe.

Hill, J. E. 2015. *Through the Jade Gate: China to Rome*. New updated and expanded edition. 2 vols. Self-published, CreateSpace.

Hirth, F. 1890. "Zur Geschichte des antiken Orienthandels." In F. Hirth, *Chinesische Studien*. Vol. 1, 1–24. Munich: G. Hirth's Verlag.

Høisæter, T. L. 2013. "Beyond the White Dragon Mounds: The polities of the Tarim Basin in the first three centuries CE, their rise and importance for trade on the Silk Road." MA thesis. University of Bergen.

–. 2020a. "At the crossroad of the ancient world: The role of the kingdom of Kroraina on the Silk Roads between the third and fifth centuries CE." PhD diss. University of Bergen.

–. 2020b. "Traces of trade in the Tarim Basin: A case for applying network models to the study of ancient trade." *Papers and Monographs from the Norwegian Institute at Athens* 9, 65–80.

Holcombe, C. 2019. "Foreign relations." In A. E. Dien and K. N. Knapp (eds.), *The Cambridge history of China.* Vol. 2, 296–308. Cambridge: Cambridge University Press.

Hou Hanshu 後漢書 [*Documents of the Later Han*]. 1965. Composed by Fan Ye 范曄 (398–445 CE). Beijing: Zhonghua shuju.

Hu Pingsheng 胡平生 and Zhang Defang 張德芳. 2001. *Dunhuang Xuanquan Han jian shicui* 敦煌懸泉漢簡釋粹 [*An annotated selection of the Han documents from Xuanquan, Dunhuang*]. Shanghai: Shanghai guji chubanshe.

Huber, M. 2020. *Lives of Sogdians in medieval China*. Wiesbaden: Harrassowitz.

Hulsewé, A. F. P. 1979a. "A lawsuit of AD 28." In W. Bauer (ed.), *Studia sino-mongolica: Festschrift für Herbert Franke*, 23–34. Wiesbaden: Franz Steiner.

–. 1979b. *China in Central Asia: The early stage, 125 BC–AD 23: An annotated translation of chapters 61 and 96 of the History of the Former Han Dynasty*. With an introduction by M. A. N. Loewe. Leiden: Brill.

Juliano, A. L. and J. A. Lerner. 2001. “The Silk Road in Gansu and Ningxia.” In A. L. Juliano and J. A. Lerner (eds.), *Monks and merchants: Silk Road treasures from northwest China (Gansu and Ningxia, 4th–7th century)*, 20–36. New York, NY: Abrams.

Kidd, F. and S. Stark. 2019. “Urbanism in antique Sogdiana? A view from the Bukhara oasis.” In C. Baumer and M. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids: Learnings and conclusions from new archaeological investigations and discoveries. Proceedings of the First International Congress on Central Asian Archaeology held at the University of Bern, 4–6 February 2016*, 163–183. Wiesbaden: Harrassowitz.

Kieschnick, J. 2003. *The impact of Buddhism on Chinese material culture*. Princeton, NJ: Princeton University Press.

Lee Kim, M. 2016. “Discrepancy between laws and their implementation: An analysis of granaries, statutes, and rations during China’s Qin and Han periods.” *Journal of the Economic and Social History of the Orient* 59.4, 555–589.

Li Jiansheng 李健胜. 2015. “Handai silu Qinghai dao shulüe” 汉代丝路青海道述略 [An overview of the Qinghai route of the Silk Road during Han times]. *Qinghai shifan daxue xuebao* 37.4, 61–65.

Li Qingling 李清凌. 2006. “Wei Jin Shiliu guo Beichao xibei de jingji kaifa sixiang” 魏晋十六国北朝西北的经济开发思想 [Ideas on the economic development of the northwest during the period of the Wei, Jin, Sixteen Kingdoms, and Northern Dynasties]. *Ningxia shehui kexue* 宁夏社会科学 135.2, 87–91.

Liu, F., H. Li, Y. Cui, Y. Yang, H. F. Lee, D. Ding, Y. Hou, and G. Dong. 2019. “Chronology and plant utilization from the earliest walled settlement in the Hexi corridor, northwestern China.” *Radiocarbon* 61.4, 971–989.

Loewe, M. 1967. *Records of Han administration.* 2 vols. Cambridge: Cambridge University Press.

–. 2000. *A biographical dictionary of the Qin, Former Han and Xin periods (221 BC–AD 24)*. Leiden: Brill.

Lunheng jiaoshi 論衡校釋 [*The Lunheng with collated explanations*]. 1996. Composed by Wang Chong 王充 (first century CE). Edited by Huang Hui 黃暉. Beijing: Zhonghua shuju.

Mischke, S., C. Zhang, C. Liu, J. Zhang, Z. Lai, and H. Long. 2019. “Landscape response to climate and human impact in Western China during the Han dynasty.” In L. E. Yang, H-R. Bork, X. Fang, S. Mischke (eds.), *Socio-environmental dynamics along the historical Silk Road*, 45–66. Cham: Springer International Publishing.

Moribe, Y. 2005. “Military officers of Sogdian origin from the late Tang Dynasty to the period of Five Dynasties.” In É. de la Vaissière and É. Trombert (eds.), *Les Sogdiens en Chine*, 243–310. Paris: École française d’Extrême-Orient.

Müller, S. 1998. “Die Gräber der Nördlichen Wei-Zeit (386–534).” PhD diss. Munich University.

Nienhauser, W. H., ed. 2019. *The Grand Scribe’s records.* Vol. 11, *The memoirs of Han China.* Part 4. Bloomington, IN: Indiana University Press.

Nishibayashi Shoichi 西林昭一, ed. 2009. *Kantoku meisekisen 7: Kanshuku hen 2* 簡牘名蹟選 7: 甘粛篇 2 [*A collection of famous manuscripts, vol. 7: Gansu, part 2*]. Tokyo: Nigensha.

Perdue, P. C. 2015. “Why do empires expand?” In G. Wade (ed.), *Asian expansions: The historical experiences of polity expansion in Asia*, 31–51. London: Routledge.

Psarras, S. K. 2004. “Han and Xiongnu: A reexamination of cultural and political relations (II).” *Monumenta Serica* 52, 37–93.

Sanft, C. 2013. “Send shoes: A letter from Yuan to Zifang.” *Renditions* 79, 7–10.

–. 2019. *Literate community in early imperial China: The northwestern frontier in Han times*. Albany, NY: State University of New York Press.

Sanguo zhi 三國志 [*Treatises of the Three Kingdoms*]. 1959. Composed by Chen Shou 陳壽 (233–ca. 297 CE). Beijing: Zhonghua shuju.

Selbitschka, A. 2010. *Prestigegüter entlang der Seidenstraße? Archäologische Untersuchungen zu Chinas Beziehungen zu Kulturen des Tarimbeckens vom zweiten bis frühen fünften Jahrhundert nach Christus*. 2 vols. Wiesbaden: Harrassowitz.

–. 2015. “Early Chinese diplomacy: ‘Realpolitik’ versus the so-called tributary system.” *Asia Major* 28.1, 61–114.

–. 2018. “The early Silk Road(s).” In D. Ludden (ed.), *Oxford research encyclopedia of Asian history*. New York, NY: Oxford University Press.
–. 2022. “Astana, Jiaohe, and other Turfan cemeteries: The movement of people, ideas, and objects in Gaochang Kingdom (422–640).” In X. Liu (ed.), *The world of the ancient Silk Road,* 278–294. London: Routledge.
Shiji 史記 [*The Scribe’s Records*]. 1959. Composed by Sima Qian 司馬遷 (145 or 135–ca. 87 BCE). Beijing: Zhonghua shuju.
Shi Yuntao 石云涛. 2017. *Handai wailai wenming yanjiu* 汉代外来文明研究 [*A study of foreign cultural assets during Han times*]. Beijing: Zhongguo shehui kexue chubanshe.
Sims-Williams, N., trans. 2004. “The Sogdian ancient letters: 1, 2, 3, and 5.” https://depts.washington.edu/silkroad/texts/sogdlet.html.
Skaff, J. K. 2003. “The Sogdian trade diaspora in East Turkestan during the seventh and eighth centuries.” *Journal of the Economic and Social History of the Orient* 46.4, 475–524.
–. 2019. “Slavery and foreign slaves at Turfan during the Gaochang Kingdom (442–640).” In Shing Müller, Thomas O. Höllmann, and Sonja Filip (eds.), *Early medieval north China: Archaeological and textual evidence*, 283–300. Wiesbaden: Harrassowitz.
Sou, D. S. 2018. “Crossing borders: Control of geographical mobility in Early China.” *T’oung Pao* 104.3–4, 217–250.
Thierry, F. 1993. “Sur les monnaies sassanides trouvées en Chine.” In M. Alram and R. Gyselen (eds.), *Circulation des monnaies, des marchandises et des biens*, 89–139. Leuven: Peeters.
Tse, W. W. K. 2018. *The collapse of China’s Later Han dynasty, 25–200 CE: The northwest borderlands and the edge of empire*. London: Routledge.
Tseng, C. Y. 2012. “The making of the Tuoba Northern Wei: Constructing material cultural expressions in the Northern Wei Pingcheng period (398–494 CE).” PhD diss. University of Oxford.
Tupikova, I., M. Schemmel, and K. Geus. 2014. “Travelling along the Silk Road: A new interpretation of Ptolemy’s coordinates.” Preprint 465. Berlin: Max-Planck-Institut für Wissenschaftsgeschichte. https://pure.mpg.de/rest/items/item_2289899_4/component/file_2289938/content.
van Ess, H. 2014. *Politik und Geschichtsschreibung im alten China: Pan-ma i-t’ung* 班馬異同. 2 vols. Wiesbaden: Harrassowitz.
von Richthofen, F. 1877a. *China: Ergebnisse eigener Reisen und darauf gegründeter Studien.* Vol. 1, *Einleitender Theil*. Berlin: Reimer.
–. 1877b. “Ueber die centralasiatischen Seidenstrassen bis zum 2. Jahrhundert n. Chr.” *Verhandlungen der Gesellschaft für Erdkunde zu Berlin* 4.1, 96–122.
–. 1882. *China: Ergebnisse eigener Reisen und darauf gegründeter Studien.* Vol. 2, *Das nördliche China*. Berlin: Reimer.
Wang, H. 2004. *Money on the Silk Road: The evidence from eastern Central Asia to c. AD 800, including a catalogue of the coins collected by Sir Aurel Stein*. London: British Museum Press.
Wang Zijin 王子今. 2015. “Handai Hexi shichang de zhipin” 汉代河西市场的织品 [Textiles on the market of the Han-era Hexi corridor]. *Zhongguo renmin daxue xuebao* 中国人民大学学报, no. 5, 31–40.
–. 2018. “Dong Han Luoyang de guojihua shichang” 东汉洛阳的国际化市场 [The internationalization of the market in Luoyang during Later Han times]. *Zhongyuan wenhua yanjiu* 中原文化研究, no. 1, 15–21.
Wang Zijin 王子今 and Li Yujie 李禹阶. 2007. “Handai beibian de ‘guanshi’” 汉代北边的‘关市’ [Han-era ‘border markets’ on the northern frontier]. *Zhongguo bianjiangdi yanjiu* 中国边疆史地研究 17.3, 24–32.
Winter, T. 2020. “Silk Road diplomacy: Geopolitics and histories of connectivity.” *International Journal of Cultural Policy* 26.7, 1–15.
Wikipedia contributors. 2022a. “Lan Xin tielu di er shuang xian” 兰新铁路第二双线. https://zh.wikipedia.org/w/index.php?title=兰新铁路第二双线&oldid=69591861. Accessed December 23, 2022.

–. 2022b. “Lanzhou–Xinjiang high-speed railway.” https://en.wikipedia.org/wiki/Lanzhou–Xinjiang_high-speed_railway. Accessed December 23, 2022.

Xie Guihua 谢桂华, Li Junming 李均明, and Zhu Guozhao 朱国炤. 1987. *Juyan Hanjian shiwen hejiao* 居延汉简释文合校 [*A collation of transcriptions of Han manuscripts from Juyan*]. Beijing: Wenwu chubanshe.

Yang, J. 2015. “Transportation, boarding, lodging, and trade along the early Silk Road: A preliminary study of the Xuanquan manuscripts.” *Journal of the American Oriental Society* 135.3, 421–432.

Yang, Y., L. Ren, G. Dong, Y. Cui, R. Liu, G. Chen, H. Wang, S. Wilkin and F. Chen. 2019. “Economic change in the prehistoric Hexi Corridor (4800–2200 bp), North-West China.” *Archaeometry* 61, 957–976.

Yantie lun jiaozhu 鹽鐵論校注 [*The Discourses on Salt and Iron with collated commentaries*]. 1992. Composed by Huan Kuan 桓寬 (first century BCE). Commentaries compiled by Wang Liqi 王利器. 2 vols. Beijing: Zhonghua shuju.

Yap, J. P. 2019. *The Western Regions, Xiongnu and Han: A collection of chapters from the Shiji, Hanshu and Hou Hanshu.* Self-published by Joseph P. Yap.

Yatsenko, S. et al. 2020. Археология и история кангюйского государства / *Archaeology and history of Kangju state.* Alem: Shymkent.

Yoshida, Y. 2003. “On the origin of the Sogdian surname Zhaowu 昭武 and related problems.” *Journal Asiatique* 291.1–2, 35–67.

Yuan Yajie 袁雅洁. 2018. “Qian xi jiance ‘Jianwu san nian Juyan duwei li fenglie’” 浅析简册《建武三年居延都尉吏奉例》 [A cursory analysis of the manuscript ‘Jianwu san nian Juyan duwei li fenglie’]. *Dunhuang yanjiu* 敦煌研究 171.5, 108–116.

Yü, Y. 1967. *Trade and expansion in Han China: A study in the structure of sino-barbarian economic relations.* Berkeley, CA: University of California Press.

Zhang Defang 張德芳. 2004. “Xuanquan Han jian zhong ruogan Xiyu ziliao kaolun” 懸泉漢簡中若干西域資料考論 [Investigation of some material on the Western Regions in the Han documents from Xuanquan]. In Rong Xinjiang 榮新江 and Li Xiaocong 李孝聰 (eds.), *Zhongwai guanxi shi: Xin shiliao yu xin wenti* 中外關係史: 新史料與新問題. Vol. 1. Beijing: Kexue chubanshe.

–. 2016. *Juyan xin jian jishi* 居延新簡集釋 [*A collection of new manuscripts from Juyan with transcriptions*]. Vol. 7. Lanzhou: Gansu wenhua chubanshe.

Zhang Qinglu 张庆路. 2020. “Jiandu suo jian Handai xibei bianjun de luotuo” 简牍所见汉代西北边郡的骆驼 [Information from manuscripts on camels in the northwestern frontier commanderies during the Han period]. *Nongye kaogu* 农业考古, no. 1, 162–167.

Zhang, Z. 2013. “Revisiting the AD 28 case from Juyan 居延: How was civil justice different from criminal justice in Han China?” *Journal of Asian History* 47.1, 51–79.

Zhu Yongzhen 汪永臻 and Li Qingling 李清凌. 2012. “Wei Jin Shiliu guo Beichao xibei renkou fazhan de qushi he tedian” 魏晋十六国北朝西北人口发展的趋势和特点 [Trends and characteristics of population development in the northwest during the Wei, Jin, Sixteen Kingdoms, and Northern Dynasties period]. *Xibei renkou* 西北人口 33.6, 116–119.

Żuchowska, M. 2013. “From China to Palmyra: The value of silk.” *Światowit* 52 (11) A, 133–154.

4 Merchants and Nomads: Political and Economic Organization in Sogdiana and the Middle Syr Darya under the Kangju Confederacy

Lauren Morris

4.A Political Organization

I Introduction: The Origins of the Sogdian Network Again

The Sogdians were Iranian-speaking people from southern Central Asia who have long been touted as critical players of the 'Silk Road'; they were highly active in managing trade, especially in the sixth to eight centuries CE with Sui- and Tang-period China, particularly through communities in the intervening lands of the Tarim Basin and Hexi corridor, all the while presiding over an impressive urban culture in their homeland (map 1). Twenty years have now passed since the first publication of a fundamental study on this topic: Étienne de la Vaissière's *Histoire des marchands sogdiens* (2002), followed by further editions in French (2004; 2016) and a translation into English (2005).[1] This study of the long-term commercial activity of Sogdian merchants came on the heels of renewed interest in these figures through the 1990s in

1 In the following, I refer to the English translation, de la Vaissière 2005. Of course, it should be noted – without entering into a full historiographic review – that this work builds on longer traditions of scholarship (already active from the late nineteenth century) on the Sogdians. Especially influential in this field are the later twentieth-century works of the scholars of the Leningrad 'school,' such as Evgenii Zeimal', Boris Marshak, Valentina Raspopova, and Grigorii Semenov.

Note: In developing this text I have been the beneficiary of impulses, help, and feedback from many of my colleagues. Discussions with my colleagues at BaSaR, and especially with Kathrin Leese-Messing, formed the central questions explored here, with Kathrin and I ultimately pursuing complementary lines of argumentation from different perspectives. This piece should thus especially be read in tandem with her chapter in this volume (ch. 3) dealing with exchange in the Hexi corridor. Otherwise, I am very thankful to Aleksandr Naymark for sharing his ideas and much forthcoming work with me, as well as for his considerable help with images of Sogdian coinage. I am also particularly indebted to Sören Stark. Our discussions and access to his forthcoming work shaped my understanding of this material, which was then sharpened through his detailed feedback. Forthcoming work on the Kul'tobe inscriptions and the Sogdian *Ancient Letters* was also kindly made available to me by Nicholas Sims-Williams and Frantz Grenet. I likewise benefited from discussions with Moritz Huber, Andrey Omel'chenko, and Zachary Silvia, who also helped in tracking down a few tricky references.

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diverse international academic contexts and has cemented itself as a key work to which anyone working on any aspect of Sogdian trade must respond.

Although I have elsewhere criticized the *topos* of 'Kushan middlemen' as the emblematic, profiteering beneficiaries of transit trade through Central Asia as being a vague historiographic construct with surprisingly little evidentiary support,[2] the slightly later case of the Sogdians seems like another beast entirely. As de la Vaissière put it at the outset of his study, "the extent of the Sogdian merchants' influence, once it has been freed from the matrix of an imprecise historiography, is genuine."[3] While that influence is progressively well documented from the fifth century CE onward, it is the origin of this story in Central Asia's preceding antique period that still remains somewhat hazy due to the limited evidence available to us. Nonetheless, a well-known set of texts show us how much explaining we still have to do: the Sogdian *Ancient Letters*, which emerged from obscurity in 1907 when they were excavated by Sir Aurel Stein in the ruins of a Han watchtower some 80 km from Dunhuang 敦煌.

Written in the Sogdian language (through a modified Aramaic script) in ink on Chinese paper around 313 CE and never delivered to their recipients,[4] the fragmentary remains of these eight letters give us a glimpse into a world through the interrupted correspondence between Sogdians of diverse means active along stations from Kroraina (the center of the Kroraina/Loulan 樓蘭 Kingdom), through the Hexi corridor, to the capitals of inner China. Among other points, these texts furnish us with insights into the humanity and adversities of their experiences, political crises in China, and the kinds of goods traded by these actors and the financial instruments they used – even if the meaning of much is still somewhat blurred by the diverse hapaxes in the language. Their contents will surely be subject to renewed interest and debate with the long-awaited publication of Nicholas Sims-Williams's comprehensive edition and translation with additional commentary by Frantz Grenet.[5]

For now, it is only necessary to highlight the longest letter of the group, *Ancient Letter* 2 (AL2), which had been wrapped in silk and a fabric outer envelope. This letter had been sent during June/July 313 CE from a station in the Hexi corridor (perhaps Zhangye 张掖, formerly Ganzhou 甘州)[6] by a commercial agent, Nanai-vandak, to two of his associates in Samarkand, over 3,000 km away.[7] The intended recipients were the "noble lord Varzakk," and "Nanai-thvar (of the family) Kanakk,"[8] who never received the letter in a context of deep instability, not least including famine in the Jin capital Luoyang 洛陽, the flight of the emperor, and the devastation of the city in 311 CE, which the letter makes reference to. But the text is equally rich with informa-

2 Morris, vol. 1, ch. 16.

3 De la Vaissière 2005, 2.

4 On the date of the letters, see discussions in de la Vaissière 2005, 45–46; Sims-Williams forthcoming.

5 Sims-Williams forthcoming.

6 As suggested by Grenet in Sims-Williams forthcoming.

7 See now the edition, translations, and commentary in Sims-Williams forthcoming.

8 AL2.R1, edition and all translations cited here in Sims-Williams forthcoming.

Map 1: Focus areas in Sogdiana and the middle Syr Darya region in their broader context of Central Asia, with sites mentioned in the text. © Peter Palm.

tion about the organization of Sogdian trade in this territory, as well as the capacity for some of these agents to manage capital at long distances. Thus, in the letter, Nanai-vandak communicates the grim state of their business – apparently largely concerned with textiles – in Dunhuang and "inside" (China): as he states, in China "there is no profit for you (to gain) therefrom."[9] He also remarks upon the whereabouts of several agents known to the recipients, including a certain Armat-sach in Jiuquan 酒泉, an Arsach in Guzang 姑臧, a Ghotam-sach, and a Saghrak and Farn-aghat sent "inside," among others.[10] In the second part of the letter, the author goes on to make arrangements for the management of his assets to increase the inheritance of a ward of his, a Takhsich-vandak. Thus, Nanai-vandak addresses Varzakk first in respect to an amount of capital – 10,004 (?) *styrch* (*staters*) – that he had left, presumably in Samarkand, with a certain Pesakk (son of) Dhruwasp-vandak. He indicates to Nanai-thvar that he and Varzakk should take this capital, using suitable transfer documentation, and ensure its appropriate management and investment, whether by Varzakk or someone else, "so that this money may thereby become more"[11] and contribute to the inheritance of Takhsich-vandak, should he live to adulthood. Here, Nanai-vandak also expresses that Nanai-thvar will be responsible for finding the boy a wife when he is

9 AL2.R31.
10 AL2.R5–7, 32.
11 AL2.R49–50.

older and makes reference to the anticipated death of a Takut, apparently Nanai-vandak's father. The letter continues by making the provision that Nanai-thvar may take 1,000 or 2,000 *styrch* should they need cash. Finally, the author indicates that he has also arranged for a large amount of musk to be sent back home and divided among Takhsich-vandak, Pesakk, and Nanai-thvar:[12]

> And Wan-razmak sent to Dunhuang for me 32 (vesicles of) musk belonging to Takut so that he (= Takut) might send them to you. When they are delivered you should make five shares, and therefrom Takhsich-vandak should take three shares, and Pesakk (should take) one share, and you (should take) one share.

One of the key reasons this letter is exceptional is because, as stressed by de la Vaissière, it represents the first clear demonstration of a Sogdian *network* of commercial operations underpinned by the maintenance of regular communication with home, rather than haphazard trade by a series of individuals.[13]

But what still remains less clear is why this network emerged at all. Our sources do not only present serious limitations to answering this question, but they also clearly shape hitherto-proposed answers. Of central importance is the textual information relating to political activity in the so-called 'Western Regions' (*Xiyu* 西域) during especially the latter second century BCE to the first century CE presented in Han standard histories that may reflect Sogdian activity in this formative period, especially mentions of envoys being sent between such countries and the Han. But as is well known, Sogdiana proper is largely outside of the purview of this early textual information. For example, the *Shiji* has envoys from Sogdiana (Suxie 蘇薤, probably specifically Samarkand as the region's traditional center)[14] accompanying Han envoys back from Anxi 安息 (Parthia) in the latter second century BCE.[15] Still less clear is a reference perhaps to Sogdians in the same text that describes general traits of people from southern Central Asia:

> Although the states from Dayuan 大宛 [Ferghana] west to Anxi [Parthia] speak rather different languages, their customs are generally similar and their languages mutually intelligible. The men all have deep-set eyes and profuse beards and whiskers. They are skilful at commerce and will haggle over a fraction of a cent.[16]

This passage seems to refer to developed commercial activity within this broader region, and thus it is tempting to read this as evidence of thriving Sogdian commerce as de la Vaissière does.[17] That being said, this passage also refers to a large area in

12 AL2.R57–60.
13 De la Vaissière 2005, 43.
14 See discussion in Bi 2019, 53.
15 *Shiji* 123.3173, trans. Watson 1993, 243.
16 *Shiji* 123.3174, trans. Watson 1993, 245.
17 De la Vaissière 2005, 26–28.

the vaguest terms, does not refer explicitly to transregional trade, and is directly followed by dubious claims about the emergence of metal casting and weapons manufacture in the area that are certainly inapplicable to Sogdiana.[18] Here, we encounter what is only our first reminder that information from these sources should not always be read literally.

What is still more interesting is that – rather than Sogdiana or nebulous bearded hagglers – it is an enigmatic nomadic polity called Kangju 康居 (ca. third century BCE–fourth century CE) that plays a far more significant role in these texts. Having emerged from the middle Syr Darya and exerting political control over Sogdiana perhaps already from the mid third century BCE, Kangju makes repeated appearances in Han political and military affairs especially in the first century BCE. Yet, due to an unlucky combination of Kangju's reputation as something of an archaeological ghost, the later eminence of the Sogdians, and toponymic information provided in later standard histories of the Sui and Tang periods connecting parts of Sogdiana with Kangju, modern translators have often glossed Kangju in the antique period *directly* as Sogdiana, even though they were hardly the exact same thing.[19]

Indeed, a well-known passage in the *Hanshu* relates to events in the latter half of the first century BCE in which a Han protector-general – in the larger framework of a complaint about Kangju's insulting diplomatic conduct – appears to directly accuse its envoys of using diplomacy as a pretense for conducting trade.[20] Similar ideas have been read into a legal complaint forwarded in Dunhuang by envoys sent by the Suxie and Kangju kings in 39 BCE, who felt that their gifts of camels were improperly received by officers in Jiuquan.[21] Therefore several have read such conduct of diplomacy as a 'cloak for trade' and supposed that we should be reading Sogdian agents specifically into such Kangju 'fake embassies'.[22] Thus, de la Vaissière speaks of the progressive development of the Sogdian network through the intersection of Chinese diplomatic activity and merchants seeking profit through exchanging silk brought by these envoys for goods from India.[23] Yet, as Kathrin Leese-Messing makes clear through an in-depth analysis of these texts, the matter is hardly so straightforward: the camel case is better read as the exchange of goods within a diplomatic framework,

18 The relevant passage is: "the casting of coins and vessels was formerly unknown. Later, however, when some of the Chinese soldiers attached to the Han embassies ran away and surrendered to the people of the area, they taught them how to cast metal and manufacture weapons. Now, whenever the people of the region lay their hands on any Han gold or silver they immediately make it into vessels and do not use it for currency." (*Shiji* 123.3174, trans. Watson 1993, 245).

19 A practice already criticized in Shiratori 1928, 84. See remarks and further references in Huber 2020, 12, 16–17.

20 *Hanshu* 96A.3892–3893.

21 II 90DXT0216②:877–883, Hao and Zhang 2009, 197–199.

22 See, e.g., Yü 1967, 144–145; de la Vaissière 2005, 38; J. Yang 2015, 429–430, with further discussion in Leese-Messing, ch. 3, II.2, this volume.

23 De la Vaissière 2005, 11.

and accusations about envoys 'desiring to trade' may rather be a rhetorical trope levied in cases where Han agents felt offended by breaches of diplomatic protocol (Leese-Messing, ch. 3, II.2–3, this volume). Therefore, although such diplomatic missions were certainly not irrelevant to the development of the Sogdian network, apparently the matter is more complex.

Of course, other factors leading to the emergence of the Sogdian network have been mooted. De la Vaissière also proposed that Sogdian merchants were the "students or apprentices" of Bactrian and northern Indian (i.e., Gandhāran) merchants via their emigration to the great cities of the Kushan Empire such as Bactra or Taxila and were able to become the most important figures in this trade with Kushan decline in the fourth century CE.[24] Yet something is also missing here: as above, the received historiographic eminence of 'Kushans' or Bactrians in transit trade of this period is something of a mirage, our sources are silent about Sogdian emigration to Bactra as well as the vast majority of Kushan territory, and although there is some evidence for Sogdian emigration to northwestern India, it is limited.[25] That said, there are hints of early Sogdian activity along the southern oasis states of the Tarim Basin (often called the 'southern route of the Silk Road'), for example among excavated texts from Niya (Caḍota) and Kroraina.[26] Some of the Sogdian commercial vocabulary attested first in the *Ancient Letters* also derives from Gāndhārī (rather than Bactrian) loanwords.[27] Gāndhārī had become a lingua franca especially in the Kroraina Kingdom from the third century CE as a result of high mobility from Gandhāra to this region. However, this linguistic transfer seems rather to have been driven especially by Buddhist missionary activity from Gandhāra, with monks coming to provide administrative, legal, and scribal services in these communities – roles which they also served in their homeland in the Kushan period.[28]

More recent works have also begun to reconsider the impact of internal processes within Sogdiana and western Central Asia on the development of the Sogdian network. Namely, Shenkar has proposed that Sogdian colonial expansion had already begun outside of the region in the first to third centuries CE and was encouraged to promote agriculture and trade by the Kangju overlords, with Sogdian self-governed, oligarchic civic communities (*nāf*) emerging in this context.[29] Alternatively, Stark has raised problems with the assumption of a gradual development of mercantile activity in Sogdiana spurred on by diplomatic gift exchange.[30] Instead, he highlights various major geopolitical changes in the second half of the third century CE as helping to instigate Sogdian prosperity, ultimately suggesting that a new influx of commercial

24 De la Vaissière 2005, 90–91.
25 See below, ch. 4.B, II.1.
26 See Sims-Williams and Bi 2018, 99–103.
27 De la Vaissière 2005, 76, 84.
28 See Morris, vol. 2, ch. 4, IV.2; ch. 13, II, V.2.3.
29 Shenkar 2020.
30 For this and the following, Stark forthcoming b.

profits into the region triggered the emigration of communities from the north, the emergence of the landholding *dihqān* class with vast development of the rural landscape through their castle estates, and the rise of true urbanism in the fourth and fifth centuries.

These important studies elucidate diverse, significant parts of the picture and will be discussed in more detail on their own terms below. What I do think remains limited in analyses thus far, however, is a deeper exploration of the internal conditions in Sogdiana between the third century BCE and third century CE which did – and more critically, for a long time *did not* – facilitate a high volume of long-distance Sogdian professional mercantile activity and the broader accumulation of wealth therefrom. Even in Stark's recent analysis, the constrained scope of the piece means that much about the role of longer term political and economic conditions during the last centuries before the Common Era in the development of long-distance trade remains unclear, as does the relationship between this trade and local consumption capacities for most of the antique period.[31] The still limited investigation into these questions seems to be shaped not only by our sources, but also by an underlying (and somewhat neoliberal) impression that the existence of independent Sogdian professional merchants – individuals engaged in profiteering through buying and selling goods as the main contributory component to their livelihoods – engaging in long-distance trade demands little further explanation. Surely this is also related to the romantic and neoliberal values baked into the historical framework of the Silk Road itself that are likewise central to modern geopolitical uses of the concept.[32] Similarly, it is probably influenced by the visibility of a merchant class in later Sogdian society,[33] and the humorously extreme *topoi* of Sogdians as emblematic merchants expressed in Sui- and Tang-dynasty Chinese texts.[34]

The goal of this chapter is thus to reexamine the conditions that eventually gave rise to the participation of Sogdian emigrant communities in trade on the Kroraina–China circuit. I do this by approaching Sogdiana and the middle Syr Darya region as frontier zones on multiple axes. To elaborate, these territories were already mixed ecological zones that provided affordances for both sedentary agriculture as well as mobile pastoralism and for interactions between practitioners of these subsistence strategies. However, these territories also constituted a broad zone of interaction between the oasis territories of southern Central Asia and the Eurasian steppelands to

31 Stark forthcoming b.

32 See e.g., Winter 2020; von Reden, ch. 1, this volume.

33 E.g., de la Vaissière 2005, 163–164.

34 See, for example, the *Jin Tangshu* 198.5310–5311 on the state of Kang (i.e., by then, Samarkand): "[When] a son is born, hard honey must be put into his mouth, [and] glue put on the palm [of his hands], [as they] hope that [when] he grows up, [his] mouth [may] ever [utter] sweet talk, [and his] palm grasp money, as if sticking to glue.... [They are] excellent merchants, disputing for the profit [of every] *fen* [and] *zhu*. When [their] sons turn 20, although [being] from a faraway state, they come to China. Wherever profit lies, they have gone." (Trans. Huber 2020, 50–51).

the north. Furthermore, Sogdiana and the middle Syr Darya were also loci of considerable institutional innovation and transformative development in antiquity – a point that I argue can be attributed to their specific configuration of political organization in this period under the Kangju confederacy.

I therefore proceed by first laying out the foundations of this picture, clarifying the ecologies of these regions as well as the types of subsistence strategies and patterns of interaction that they provided affordances for over time (section II.1). I then outline the dynamics of Sogdiana's brief integration into the Achaemenid and Seleukid Empires from the mid-sixth to mid-third centuries BCE, highlighting institutions of resource extraction and provisioning utilized by imperial agents in this period (II.2), which would subsequently be developed by the territory's rulers – elites of a nomadic polity known to Chinese informants as the Kangju, which was seemingly active from the third century BCE to the fourth century CE. This is followed by a discussion of the scope and limitations of sources available to us for examining this polity, where many ambiguities lead to the so-called Kangju problem (III.1). I thus posit that this 'problem' is best navigated with reference to comparative literature on the political organization of historical nomadic polities, reviewing debates on 'dependency hypotheses' for the emergence of complexity among nomadic polities, the structure of nomadic political economies, and the various organizational forms such polities could take, especially when integrating sedentary territories (III.2).

Stressing that the rise and fall of the Kangju polity in proper terms is epistemologically inaccessible to us, I treat this entire era as one dominated by a Kangju confederacy and analyze how configurations of political organization between rulers of its constituent territories fluctuated over time (IV); thus I define a first phase of the confederacy with a more heterarchical mode of organization (third–second centuries BCE, IV.1), a second phase shaped by a more hierarchical form of organization, including the development of a central institution of kingship (first century BCE–first century CE, IV.2), followed by a return to a more heterarchical mode of organization and the disintegration of the polity in any recognizable form (second–fourth centuries CE, IV.3). I simultaneously highlight transfers, developments, and innovations in institutions relevant to the extraction and mobilization of resources throughout this period, tracing the persistence of certain institutions introduced to Sogdiana in the Achaemenid and Seleukid periods, as well as the development of institutions from the broader orbit of northern nomadic steppe societies.

I then turn to examine how these dynamics of political organization intersected with contemporary patterns of economic organization in Sogdiana and the middle Syr Darya, focusing especially on how valuable goods were produced and moved in spheres of transregional and long-distance exchange within and through these regions. I first consider settlement patterns in these regions in order to outline dynamics in the production and distribution of surplus wealth, as access to such wealth is an important condition shaping economic capacity to acquire and consume valuable goods (ch. 4.B, I.1). I then draw parallels to these patterns with contemporary dynam-

ics in production and the transregional exchange of such goods, which I argue were especially driven and shaped by modes of political organization and institutions of this period (ch. 4.B, I.2).

Finally, I return to the question of how a network of Sogdian professional traders came to be active on the Kroraina–China circuit by the early fourth century CE, first by considering the possible role played by Sogdian merchants in the dynamics of exchange sketched here thus far (ch. 4.B, II.1). I then more closely examine the *Ancient Letters* for indications as to the development of this network, its organization, and how it intersected with economic activity back in Sogdiana (ch. 4.B, II.2). I conclude this chapter by outlining the arguments proposed here, adding some final thoughts on the curious eminence of Sogdians as managers of long-distance trade from a broader perspective (ch. 4.B, III).

My overall goal with this chapter is not to fastidiously recount every possible piece of relevant evidence for this story, but rather to lay out a broad explanatory framework for how we may understand what we have, with reference to comparative historiography and anthropology for a few new impulses. In doing this, I also draw heavily from several excellent studies and syntheses that have been published in recent years or are presently forthcoming, which provide tremendous new insights onto the phenomena examined here. That said, for limitations of scope and space, I cannot devote much attention to the neighboring regions of Chorasmia, the lower Syr Darya, Ferghana, Bactria, the middle Amu Darya, or Margiana, although the histories of each were also tightly connected to Sogdiana, the middle Syr Darya, and the Kangju polity in various ways. If the framework proposed here is found to be acceptable, it is the task of future research to elaborate upon the dynamics of these connections in still further detail.

II The Foundations: Ecologies, Interaction, and Institutions of the Achaemenid and Seleukid Periods

First, we may consider the broader ecological and institutional conditions foregrounding political and economic organization under the Kangju confederacy.

II.1 Ecologies, Subsistence, and Patterns of Interaction

Sogdiana (also Sogdia, Soghd) and the territory of the middle Syr Darya (kaz. Syrdariia, uzb. Sirdaryo, tgk. Sirdarye, the ancient Jaxartes) were both mixed ecological zones.[35]

35 For the following and further details, Stark 2020, 78–79.

Map 2: Sogdiana in antiquity. Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. © Peter Palm.

Although Sogdiana (map 2) is best understood as a set of oasis territories lying on the Zerafshan (uzb. Zeravshon, tgk. Zarafshon) river and Kashka Darya (uzb. Qashqadaryo) that could host sedentary agriculture facilitated by artificial irrigation, the fringes of these territories along desert-steppe, piedmonts, and mountains provided affordances for pastoral strategies and overall tended to facilitate mixed agropastoral economies.

The precise boundaries of Sogdiana as a historical region have been long debated,[36] but, in short, during antiquity it is widely agreed to have included the oases of Samarkand (uzb. Samarqand) along the middle Zerafshan (a space traditionally referred to in the literature as central or Samarkand Sogdiana/Soghd), the oasis of Bukhara (uzb. Buxoro) in its delta regions (western Sogdiana or Bukharan Soghd), the oasis of Kesh/Shakhrisabz in the middle Kashka Darya, and the oasis of Nakhshab/Karshi (uzb. Qarshi) in its delta regions (southern Sogdiana). Smaller, distinct oasis territories extended also to the west of Samarkand (historical Kharqana in the western middle Zerafshan, north of modern Navoi/Navoiy), beyond Bukhara (the Karakul/Qorakoʻl micro-oasis), and east of Nakhshab (the Guzar/Gʻuzor micro-oasis). The middle Zerafshan valley was framed to the north by the low mountains of the Nuratau range (uzb. Nurota tizmasi) and to its south by the Karatiube (uzb. Qora-tepa) piedmonts, both western spurs of the Hissar (uzb. Hisor, tgk. Xisor) range in the Pamir-Alai system. Good summer pastures could be found in the northern Turkestan flanks

36 See, e.g., Shishkina, Suleimanov, and Koshelenko 1985; Rapin 2021, 338.

of the Zerafshan range,[37] as well as sources of gold ore and placer deposits, iron, silver, and other minerals in the upper Zerafshan.[38]

To the northeast, through the Nuratau foothills and Tamerlane's Gates unfolded a territory before the Syr Darya known later as Ustrushana. This space was clearly understood as distinct from Sogdiana and rather part of 'Scythia' already in the Achaemenid and Hellenistic periods.[39] To the east opened the Ferghana (kir. Fergana, uzb./tgk. Farg'ona) basin, which seems to have been largely contiguous with the entity known as Dayuan in Han standard histories. To the west of Bukhara and to the north of the middle Zerafshan was the vast Kyzylkum (uzb. Qizilqum). The southern ranges of this desert held sources of gold, copper, lead, iron, turquoise, and other minerals.[40] Beyond the desert to the west lay Chorasmia, and to the north the Syr Darya. This river emptied via an expansive delta into the Aral Sea in the west, and also was linked via the arm of the Akcha Darya to Chorasmia.

The southern spurs of the Hissar range also created the northern and eastern boundaries of Kesh – where especially good summer pastures could be found[41] – and the eastern boundaries of Guzar, as well as effectively dividing southern Sogdiana from northern Bactria.[42] The major conduit between these two regions ran through the foothills rising east of Guzar, bolstered on the Bactrian side by a series of fortresses (such as Uzundara) and long walls most likely already under the Diodotids (ca. 250–235 BCE), the first kings of the Graeco-Bactrian kingdom, or perhaps already even under the Seleukid king Antiochos I during his coregency in the Upper Satrapies from 294 BCE.[43] Karshi oasis itself was surrounded by the Karshi steppe and framed further to the south by the middle reaches of the Amu Darya, the ancient Oxus.

The middle Syr Darya region (map 3), which was most plausibly the core region of the Kangju polity (see below, III.1), was also a mixed ecological zone, if with more expansive *adyrs* (foothills) and more limited floodplain territories. Chach, the historical oasis territory of Tashkent (uzb. Toshkent), was concentrated on two affluents of the Syr Darya, the Chirchik (uzb. Chirchiq) and the Akhangaran (uzb. Ohangaron), descending from the Chatkal (kir. Chatkal, uzb. Chatqol) range, itself part of the Talas-

37 Stark 2020, 78.

38 See Sverchkov 2009, 150–151.

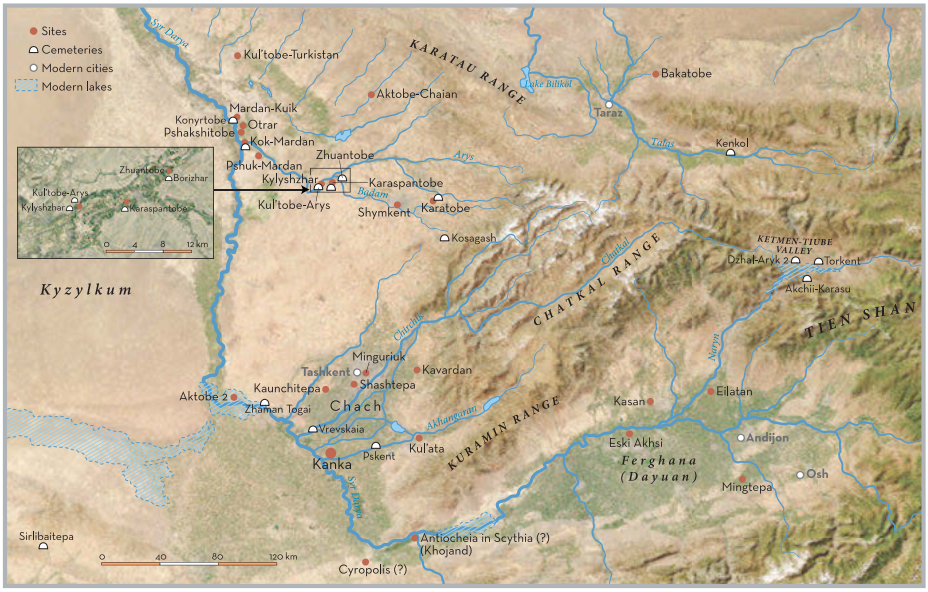
39 Rapin 2018, 258, nn. 4, 272; 2021, 344–347.

40 See Sverchkov 2009, 144–145.

41 Stark 2020, 78.

42 The location of the boundary between Bactria and Sogdiana has long been a topic of debate in the literature. Although the administrative boundary between Sogdiana and Bactria in the Achaemenid and the early Hellenistic period most plausibly ran along the Oxus, i.e., the Amu Darya and Vakhsh rivers (see, e.g., Rapin 2018, 258, n. 4; 2021), the space between the Vakhsh and Hissar – conventionally known as 'northern Bactria' in the archaeological literature – appears to have been effectively incorporated into Bactria as a cultural and political entity with the consolidation of fortifications along the Hissar range by the time of the Diodotids.

43 On these dates, see, e.g., Dvurechenskaya 2019; Stančo 2021, 87; Lyonnet 2020a. On the Seleukid period, see further below, II.2.



Map 3: The middle Syr Darya in antiquity. Imagery: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. © Peter Palm.

Alatau system of the Pamir-Alai, where significant mineral resources including ores bearing silver, gold, copper, and iron as well as turquoise could be found.[44] Further downriver to the northwest is a broad cultural territory referred to here as Otrar-Karatau (kaz. Otyrar-Qoratau). This constituted smaller oasis territories in the floodplains of the Arys basin (most importantly Shymkent, the junction of the Arys-Badam, and the Otrar oasis further downstream), the oasis of Turkistan to the north, the low Karatau range to the northeast, and just beyond this, the Taraz (Talas) oasis at the lower reaches of the Talas river. At the northeastern fringe of this zone, the Chu (kaz. Shu, kir. Chui) river ran through the southern Betpak Dala (kaz. Betpakdala), followed by a territory known historically as Zhetysu (kaz. Zhetisu, kir. Zheti-Suu, 'seven rivers,' known in Russian as Semirechye), beginning with the Ili (kaz. Ile) river emptying into Lake Balkhash (kaz. Balqash). Beyond the Kazakh uplands unfolded the vast grasslands of the steppe zone in central and northern Kazakhstan, and eventually the northern forest steppe zone of western Siberia in modern Russia, transected by the Irtysh (kaz. Ertis) river and its many tributaries. This zone was framed to the west by the Ural mountains, and to the southeast by the Altai mountains, where the modern borders of Kazakhstan, Russia, Mongolia, and China meet.

Importantly, the affordances provided for practices of long-distance, seasonal transhumant mobile pastoralism in the mixed ecological zones of Sogdiana and the

44 See Sverchkov 2009, 143–146.

middle Syr Darya seem to have also strongly shaped patterns of regional interaction between the northern and southern poles of this space, which certainly flourished from the Middle Iron Age.[45] Such mobility could occur at a diversity of different scales, for example from summer pastures in the Karatau and Chatkal ranges to the lowlands of the middle Syr Darya in the winter, or winter pastures in the desert-steppe lowlands of Semirechye to summer pastures in the neighboring northern foothills of the Tien Shan, or at a longer range from summer pastures in the northern steppe lands of Central Eurasia to winter pastures around the delta marshlands of the southern rivers.

At this juncture, it is useful to clarify why I specifically choose to foreground 'nomads' (rather than, e.g., mobile pastoralists or agropastoralists) in this chapter – especially because these terminological issues vis-à-vis Central Asia in the second and first millennium BCE have recently been raised again in western scholarly literature. In short, the question is whether such groups – who were often neither infinitely mobile nor purely specialized pastoralists – are most usefully and accurately described as nomads. Specifically, in reference to increasing evidence for the practice of intermittent and low-investment farming in the region's northeastern mountain piedmont zones (thus suggesting subsistence strategies better described as 'agropastoralist'), doubt has been cast on the existence of ('pure') specialized nomadic pastoralism in Central Asia's Iron Age, and accordingly the supposed influence of this production strategy in polity formation and sociopolitical complexity.[46] However, there remains a longer history of scholarship that assumes a more flexible understanding of pastoral nomadism which may incorporate mixed resource use,[47] and critically engages with models of nomadic political organization pivoting on interaction with sedentary societies (see discussion below, III.2). Here, I follow the idea that nomads may be simply be understood as groups who migrate for much of the year to sustain themselves primarily through pastoralism, although representation of people as such may outlast their actual pursuit of pastoralism, referring rather to a 'postnomadic' identity.[48] Of course, the investigation of mixed agropastoralist subsistence strategies remains an important pursuit; Rouse, Doumani Dupuy, and Baker Brite have recently pointed to the considerable potential for relevant archaeological data from Bronze and Iron Age central Eurasia to be mobilized towards more anthropologically oriented enquiries into the diverse and localized socio-economic contexts of the region.[49]

Not least because there are still many serious gaps in the data at our disposal for evaluating the structure of subsistence strategies in the time and space under examination, I maintain that in the context of the present analysis that it is useful to

45 Stark 2020, 78–79.

46 Spengler et al. 2021.

47 See, e.g., Frachetti's response in Spengler et al. 2021, 269.

48 Following Paul 2013, 18.

49 Rouse, Doumani Dupuy, and Baker Brite 2022.

understand the Kangju polity as a nomadic one, and its attached ruling elites likewise as nomads. After all, not only did they present themselves as nomads and were understood by outsiders in these terms, but – as I will argue below – bringing our material into dialogue with comparative historical scholarship on nomadic polities can produce new insights into dynamics of political organization in this period, as well as how those dynamics intersect with economic organization over time (see from III.2).

II.2 Institutional Transformation at the Fringes of the Achaemenid and Seleukid Empires

From around the mid-sixth century to the mid-third century BCE, Sogdiana constituted a territory at the northeastern frontiers of the Achaemenid Empire and subsequently the Seleukid Empire. Here, I aim only to briefly sketch how institutions of resource extraction and provisioning utilized by imperial agents in this period established a foundation for the later developments that are the focus of this chapter. Some comments on broader patterns seen in Central Asia's Iron Age are necessary to contextualize the importance of change in the Achaemenid period.

Specifically, the Achaemenid period in Sogdiana falls in the Late Iron Age of southern Central Asia. The Iron Age itself in this space (ca. 1500–329 BCE) followed the collapse of Bronze Age societies (during ca. 1700–1500 BCE) and is subdivided into three periods: the Early Iron Age (Yaz I), 1500/1400–1000 BCE; the Middle Iron Age (Yaz II), 1000–540 BCE; and the Late Iron Age (Yaz III), ca. 540–329 BCE.[50] From the Early Iron Age, Sogdiana existed in the sphere of a set of related regional cultures from Dehistan and the Kopet Dagh piedmonts in the southwest to the Burguliuk Culture of Chach and the Chust Culture in Ferghana in the northeast. This period is characterized by the production of handmade painted pottery, a dispersed settlement pattern among oasis territories with some evidence of the emergence of minor elites,[51] and agropastoral subsistence economies, although the relative importance of agriculture and pastoralism in each seems to have varied.[52] In Sogdiana and Bactria, mudbrick architecture was used in combination with semisubterranean pit houses, which would remain a popular form of habitation through antiquity. Such pit houses (rather than mudbrick architecture) were typical of the northern Burguliuk and Chust cultures.[53]

50 It should be noted that this terminology and periodization is a pan-regional one aligned with Yaz depe in Margiana; from a regional perspective, this partly overlaps with what can also be labelled as the Late Bronze Age in Sogdiana, Chach, and Ferghana.

51 Bendezu-Sarmiento, Lhuillier, and Luneau 2013.

52 Lhuillier and Mashkour 2017, 667.

53 It should be noted that the precise dating of the Burguliuk Culture remains somewhat unclear; it was dated to the ninth-seventh centuries BCE by Duke (1982, 92), with a popular solution also delineating between an early stage (ninth–sixth centuries BCE) and a late stage (sixth–third centuries BCE) (e.g., Shishkina 1979, 169–170; Buriakov 2011, 9–10). However, more recent work indicates that the key

At the same time, the majority of the Iron Age in southern Central Asia is characterized by the 'sine sepulchro cultural complex,' involving the large-scale absence of graves. This phenomenon is sharply distinct from the emergence of kurgan burials among Iron Age 'Scythian' populations of the Central Eurasian steppe from the turn of the ninth to eighth centuries BCE, as well as the slightly later emergence of mausolea in Chorasmia and the lower Syr Darya on the margins of the 'Scythian' sphere.[54] The 'sine sepulchro' phenomenon has often been taken to signify the formation of Zoroastrian belief with the prohibition of in-ground burial and the practice of excarnation, but Bendezu-Sarmiento and Lhuillier note that the link is not so straightforward, highlighting the diversity of funerary practices and belief systems suggested from the small corpus of known graves throughout this period.[55] Simultaneously, interactions between southern Central Asia (including Sogdiana) and northern 'Scythian' or 'Saka' groups (including in the Syr Darya delta, i.e., the Chirik Rabat Culture) are already indicated from the Middle Iron Age.[56] A few examples of kurgans in Sogdiana itself – namely the cemetery at Khazara (uzb. Hazora) – seem to reflect contact and mobility in this early period, judging from parallels drawn by Parzinger and Boroffka with ninth to eighth century BCE horse gear from the Scythian burials at Arzhan near the Altai.[57] While transfers of funerary practices and beliefs between the northern steppe and southern oases still remain to be fully investigated, it is the general long-term divide between the two spheres that makes the large-scale emergence of kurgan cemeteries in Sogdiana in the antique period especially remarkable and reasonably interpreted as the result of some level of population movement.[58] Here, it may also be noted that the first ossuaries (bone receptacles typically associated with Zoroastrian belief) appear in Achaemenid Chorasmia and are used in Sogdiana on a large scale from the fourth to fifth centuries CE, while formal Zoroastrian funerary buildings – *dakhmas* and mausolea, structures for the excarnation and deposition of remains – seem to appear in southern Central Asia only from the very late first millennium BCE, including at Erkurgan (Nakhshab).[59]

In the context of the Middle Iron Age, hints emerge of the concentration of political and religious power in Sogdiana, occurring around the eighth to seventh centuries BCE. Among other points, these included the large walled sites with some evidence of limited but monumental buildings established at Koktepa and perhaps also Marakanda-Afrasiab (Samarkand) in the middle Zerafshan, and Podaiataktepa-Uzunkyr-

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Tuiabuguz assemblage of the early stage can rather be backdated to the Early Iron Age, i.e., synchronizing with Koktepa IB (Lhuillier and Rapin 2013, 44–45).

54 See Bendezu-Sarmiento and Lhuillier 2013, 308.

55 Bendezu-Sarmiento and Lhuillier 2013.

56 Stark 2020, 81 with further references.

57 Khazara kurgans (k.) 12 and 16, Obeľchenko 1992, 66; Parzinger and Boroffka 2003, 277; Stark 2016, 135.

58 See further below, ch. 4.B, I.

59 See Bendezu-Sarmiento and Lhuillier 2013, 308, 310 with further references.

Sangirtepa (Kesh) and Erkurgan (Nakhshab) in Kashka Darya (see ch. 4.B, fig. 1).[60] Although such sites are often discussed with reference to the emergence of urbanism, the better-explored examples thus far do not suggest substantial concentrations of permanent residences within their walls, meaning that they are better described as elite power centers rather than cities proper. Such a configuration of power centers remains broadly characteristic of Sogdiana in the period under examination here, with important implications for the accumulation of surplus wealth among the broader population.[61] Concomitant to discussions of urbanism are attempts to date the establishment of large-scale artificial irrigation works to this period, particularly the massive Bulungur and Dargom canals (the latter over 100 km long) respectively running parallel to the north and south of the middle Zerafshan.[62] Such works would then seem to imply the existence of a strong centralized power capable of mobilizing a necessary labor force. Yet chronological indices for the construction and operation of these canals remain hazy, and ongoing work on the more thoroughly researched Dargom canal rather seems to suggest that it may have emerged in the third to first centuries BCE as a result of gradual, segmented development of former local *sai* (river-stream) irrigation systems.[63] In any case, the extensive walls surrounding the power centers noted above attest to the capacity for the mobilization of considerable labor during this period. Notably, such debates do not circulate around the Burguliuk Culture of Chach. Its basis seems to have been an agropastoral economy, with stockbreeders active in adjacent *adyrs*, mountain and steppe territories, while small-scale farming was undertaken in the floodplains of the lower Chirchik and Akhangaran rivers, perhaps facilitated by rudimentary irrigation techniques similar to those described by Mantellini.[64]

Our earliest textual references to Sogdiana emerge after its integration into the Achaemenid Empire. This began with the conquests of Cyrus the Great just after the mid-sixth century BCE and concluded in 327 BCE with Alexander the Great's campaigns. According to Strabo, at least part of the Syr Darya was conceived as the northern frontier of Sogdiana (although, as above, this was rather the Nuratau range), as well as the limit of Achaemenid rule; for Darius I, these northwestern limits lay with the Saka beyond Sogdiana.[65] The various 'Saka' groups, i.e., Iranian-speaking nomadic or seminomadic populations, indicated in our textual sources lived in the desert-steppe, river-delta marshes, and highlands running from the northwest to the northeast of Sogdiana, although they are typically difficult to place with precision. These groups operated in variously agreeable and antagonistic relations to Achaemenid au-

60 See, e.g., Lyonnet 2020a with further references.

61 See ch. 4.B, I.1 below.

62 E.g., Isamiddinov 2002, 30.

63 See Mantellini 2015 and discussion below, ch. 4.B, I.1.

64 See Mantellini 2015; Buriakov 1982, 101. See also Duke 1982, 82–83.

65 Strabo 11. 11. 4; see Briant 2002, 178–179.

thorities over time, including as military adversaries, contingent fighters, and partners in diplomacy and gift exchange.[66] At least part of the groups constituting the Massagetai (renowned foremost for the death of Cyrus the Great in 530 BCE) appear to have been active in the Kyzylkum, and those of the Amurgioi to the north of Sogdiana; it is difficult to localize either of these entities with any more precision.[67] It is worth noting here that a limited number of kurgan burials in cemeteries along the oasis fringes of Sogdiana – namely at Kalkansai, Khazara, and Kyzyltepa – are coeval to the Achaemenid period. All are variations of simple pit graves with wooden covers and suggest particular links in burial rite and inventory with the Tasmola culture in the Kazakh steppe and Saka burials of Semirechye.[68]

We have some dispersed impressions as to the operation of the Achaemenid imperial economy in Sogdiana during this period. Generally, the 'main satrapy' of Sogdiana with its capital at Marakanda (sometimes called Zariaspa and located at the site of Afrasiab) sems to have been administered via the 'great satrapy' of Bactria, incorporating also subsidiary 'minor satrapies.'[69] Marakanda-Afrasiab itself during this period was surrounded by a long fortification wall and had a separate acropolis and a palace, the seat of the ruler. By the time of Alexander's campaigns in 329–327 BCE, the *satrap* of the 'great satrapy' of Bactria was Bessos, while the *satrap* of the 'main satrapy' of Sogdiana was probably Spitamenes, known for coordinating several insurrections against the conqueror, including raids against the garrison that had been established at Marakanda-Afrasiab (see below).[70]

Parallel to this, the mid-fourth-century BCE Aramaic documents from Bactria provide some additional details about the management of affairs in southern Sogdiana (Kesh and Nakhshab) via local subordinate agents overseen by Bagavant, a governor (*pḥt*) based in Khulm (Bactria), who himself appears to report to an Akhvamazda, probably *satrap* at Bactra.[71] This also involved various subordinate officials ('magistrates'), *frataraka*, and, in the employ of governors, officials responsible for disbursement, managing correspondence, and scribes. Although much about the settlement pattern in Achaemenid Sogdiana remains poorly known, regional power centers at this time included at least the large walled sites at Koktepa (in the middle Zerafshan, perhaps ancient Gabae), Podaiataktepa (in Kesh, presumably Nautaka), and Erkurgan (in Nakhshab, presumably Xenippa), which however seem to have enclosed only lim-

66 See Stark 2012, 111–121; 2020, 82.

67 The Massagetai could be largely equivalent to the Sakā tigraxaudā and the Amurgioi to the Sakā haumavargā that are mentioned in some of the 'country lists' of Achaemenid royal inscriptions of Darius I and Xerxes I (for these, see Briant 2002, 173). Rapin (2021, 344) proposes to locate the Sakā tigraxaudā in the lower Syr Darya, and the Sakā haumavargā more firmly in Ustrushana.

68 From among the group Obeĭchenko dates between the seventh–third centuries BCE, see Obeĭchenko 1992, 62–68; Parzinger and Boroffka 2003, 279.

69 See, e.g., Jacobs 1994, 208–227.

70 Rapin 2018, 276–277.

71 See, specifically, documents A4 and A5 in Naveh and Shaked 2012.

ited permanent buildings.[72] Nautaka and Xenippa were plausibly the centers of 'minor satrapies.' The status of western Sogdiana during this period remains to be clarified through future research.

Moreover, the existence of the Aramaic documents themselves reflect the use of Official Aramaic as a technology of administration and record-keeping in this region. The continued use of this technology is implied by the gradual development of the Aramaic script to write the Sogdian language, with the first attested example of this known from around the beginning of the first century BCE, used to incise two personal names on the base of an Afrasiab III-type goblet at Marakanda-Afrasiab.[73]

Curtius Rufus and Arrian, historians of the campaigns of Alexander the Great writing under the Roman Empire, in particular provide further impressions of the power and activities of local agents, including the *hyparchs*, during the campaigns. As Briant has outlined, these figures are probably best interpreted as local dynasts who exercised autonomy while operating in a subordinate relationship to the *satrap*. Thus they controlled territories organized around their fortified acropolises, could mobilize their inhabitants into militias, and could impose taxes in kind on their territory's produce.[74] Plausibly, the Sisimithres and Dataphernes encountered during Alexander's campaigns were respectively the *hyparchs* of Nautaka and Xenippa.[75]

In broad terms, this imperial economy was managed by *satrapal* authorities and agents in power centers (best understood in terms of imperial estates) that were interlinked through the royal road network. It is unclear whether the royal tribute sent from Sogdiana to imperial centers in the 'great satrapy' of Persis might have been remitted via weighed precious metals. Achaemenid coinage, at least, neither was produced nor seems to have circulated in the region.[76] Perhaps tribute was more often made in kind, for example in the form of wealth goods (like the precious stones interpreted as lapis lazuli and carnelian brought for the construction of the palace of Darius I at Susa)[77] as well as in the form of corvée labor by serving as foreign *kurtaš* (dependent laborers).[78] Thus, ten texts in the Persepolis Fortification archive record the disbursement of rations like beer, wine, and grain products for varying groups of

72 See Rapin 2018.

73 Grenet 2006.

74 Briant 2002, 748; 2020, 39.

75 Rapin 2018, 276–277.

76 Despite, e.g., Herodotos's much-discussed list of tribute assessments, with amounts given in talents (converted from *darics*), see Briant 2002, 390–394. Note, however, a silver coin (dated to ca. 385–377/376 BCE) issued by Hekatomnos, the *satrap* of Karia, picked up at Marakanda-Afrasiab (Atakhodjaev 2013, 219, no. 1).

77 See Briant 2002, 172.

78 *Kurtaš* workers in imperial service were active in diverse domains, and we usually lack clarity about the circumstances bringing them to Persis. They may have served to fulfill taxation obligations, or been coopted as specialized craftspeople, or represented groups of deportees from conquered populations. See discussions in Briant 2002, 429–435; Henkelman and Stolper 2009, 281–282; Henkelman 2018, 225.

Sogdian men, women, and children (variously specified only as *kurtaš*, as well as without designation) in the core region of Parsa/Persis.[79]

We have some more details about the production, extraction, and distribution of resources within the Achaemenid imperial economy on a regional scale. Generally, the governor Bagavant had some remit for levying taxes within his jurisdiction, apparently including some customs duties that could be extracted in kind (including animals) upon entrance to a regional center, and further levies in that direction.[80] He was also charged with aspects of maintaining the *satrapal* 'house' (i.e., imperial estates), carrying out his superior's orders to have a wall built in Kish (Kesh), and mobilizing labor (via *ḥyl*, 'troops') for the construction of a wall and ditch around the center of Nikhshapaya (Nakhshab).[81] In the latter case, a group of regional subsidiary agents associated with the garrison had entreated Bagavant to first utilize this labor for the harvest, threatened by an influx of locusts; thus the governor sought his superior's permission to delay the work. The mobilization of 'troops' in these cases shows the intersection between military coercion and production in the regional imperial economy.[82] Although long debated, the extent of direct involvement of Achaemenid state agents in the management of irrigation projects remains unclear, with several now preferring to interpret these projects as the result of community action. In any case, from a fiscal perspective, state agents would also certainly be interested in the increased surplus production facilitated by such works, whether or not they directly managed them.[83] More broadly, our data are still too limited to assess whether the settlement pattern in the Zerafshan and Kashka Darya valleys during this period took a more nucleated form that might suggest administrative and economic centralization. It is worth noting that a fifth-century BCE site on the southwestern outskirts of Karshi oasis has been identified (Karaultepa) that exhibited fragments of storage jars and grinding stones but no architectural remains, suggesting that it was a specialized seasonal agricultural site.[84] Suleimanov thus suggests that dispersed sites of this period in the Karshi and Guzar oases were agricultural appendages of Erkurgan,[85] but admittedly the relationships between such sites and political centers are not so clear. Indeed, the existence of a specialized ceramic production center located 8 km to the northwest of Marakanda-Afrasiab dated to the fourth century BCE (Saratepa 2)[86] might rather suggest the dispersal of production activities among a population that was not nucleated around 'urban' centers. Similar dispersed, specialized agricultural and craft production sites are also known in Sogdiana from the antique period.[87]

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79 On these texts, Henkelman and Stolper 2009, 275, 306; Henkelman 2018, 225, n. 8.

80 See document A1 in Naveh and Shaked 2012, and comments in R. R. King 2021, 348–353.

81 Documents A4 and A5 specifically in Naveh and Shaked 2012.

82 See discussion in R. R. King 2021, 336–337.

83 See discussion and further references in Morris, vol. 2, ch. 13, III.3.

84 Suleimanov 2000, 45.

85 Suleimanov 2000, 45.

86 Ivanitskii 1992.

87 See below, ch. 4.B, I.1.

The Aramaic documents from Bactria also suggest the practice of institutionally driven stockbreeding (e.g., the camels of the king in document A1).[88] The possibility of contracting pastoralists to achieve this is raised by the collection of split tally sticks in this corpus; as argued by Henkelman and Folmer, such devices served as a technology of credit record-keeping and suggest interaction between state and nonstate actors.[89] Curtius in particular repeatedly highlights wealth in Sogdiana in the form of animals. These include vast herds that could be captured as booty or mobilized by figures such as the *hyparch* of Nautaka, Sisimithres, whether through the aid of an extractive regime or institutionalized breeding. Thus Sisimithres was able to muster "many pack-animals and 2,000 camels, besides flocks and herds" for Alexander and his troops and was rewarded in turn by the conqueror with 30,000 cattle that had been accumulated as booty.[90] Curtius also describes a vast, walled hunting park in the vicinity of Samarkand in reference to "no greater indications of the wealth of the barbarians in those regions than their herds of noble wild beasts."[91] This is often considered an example of an Achaemenid *paradeisos*,[92] but it also recalls the prestige associated with hunting among nomadic elites in Central Asia.[93]

Some of the Aramaic documents may also help to shed light on the management of long-distance exchange of prestige goods between Bactria-Sogdiana and the steppe during this period. For context, the kinds of gifts that flowed from Saka elites to the imperial center probably included horses, garments such as leggings and cloaks, and torcs.[94] Royal gifts made in the other direction may have included prestige goods such as precious metal plate, jewelry, textiles such as robes, horse decorations, and weapons; possible modes of transfer include gifting to visiting delegations, rewards for military service, or dowries exchanged through marriage alliances.[95] Among examples of Achaemenid and early post-Achaemenid prestige objects found in elite burials of the steppe, the famous pile carpet and saddlecloth excavated from barrow 5 of the Altai Saka tombs at Pazyryk have drawn particular attention for probably having been produced in Bactrian or Sogdian workshops.[96] Stark moots similar origins for some examples of metalwork found near Berel and a torc in the Siberian collection of Peter the Great, suggesting they were made specifically for a high-ranking customer in the steppes.[97]

88 Naveh and Shaked 2012.
89 Henkelman and Folmer 2015. See discussion in Morris, vol. 2, ch. 9, V.6.
90 Curtius (Curt.) 8. 4. 19–20, trans. Rolfe.
91 Curt. 8. 1. 11–12, trans. Rolfe.
92 E.g., Briant 2002, 297–298.
93 See also below, IV.2.
94 As depicted in Achaemenid sculpture, see Briant 2002, 175; Stark 2012, 111.
95 Briant 2002, 304–307; Stark 2012, 111–112.
96 Lerner 1991.
97 Stark 2012, 116.

Indeed, the manufacture of these extremely valuable goods and their transfer to the north refers clearly to the orbit of the highest elites, with their highly specialized production probably sponsored by figures connected with ruling powers in Bactria and Sogdiana (royal or court workshops?), and their transfer taking place in political spheres, broadly construed. In practical terms, the provision and transportation of wealth and prestige goods at this stage may have already been partly facilitated through semiautonomous traders coopted by institutional officials. Indeed, in many historical cases – including Mesopotamia during the late third millennium BCE – figures acting as merchants (i.e., without necessitating that their entire livelihoods depend on this strategy) can be found provisioning and converting resources for institutions such as palaces or temples and could simultaneously act independently too.[98] Accordingly, one Aramaic tally stick from Bactria recording the provision of credit in the form of "three white (and) resplendent [items not specified] in exchange for gifts" (document D2) might suggest the Achaemenid administration's cooption of traders to procure certain commodities; as Henkleman and Folmer explain, this interpretation could be supported by a reference in Ktesias' *Indika* to a Bactrian trader losing 477 gemstones he was transporting in a river, and another statement perhaps from Ktesias that Bactrian merchants and other figures take carpets from India to Parsa and resell valuable patterned examples, and that the Indian king sends such carpets to the Persian king as gifts.[99] Finally, two fragmentary Bactrian Aramaic documents perhaps reflect the regular official intake of a small number of such valuable animals and craft products by local state representatives, possibly for their own use; more specifically, the named items – horses, prestige goods such as garments and horse trappings, and other gifts – suggest their initial production amongst pastoralist groups, although the party responsible for their transfer is not named.[100]

98 See, e.g., Hirth 2020, 211–213.

99 Henkelman and Folmer 2015, 184–185; Henkelman 2018, 247.

100 Document C6 lists "Wild mountain animals (?) ...: 4. Gulps (?) of ... / ... purple wool, a garment of Cappadocia (?), gifts (?) ... / ...: 2. Purple brocade (?): 1. / ... harness (?) of black colour: 1. / [H]arne[ss decorated by a pictu]re [...]" (edition and trans. Naveh and Shaked 2012, 217–219), and document C7 lists on the *recto* "By this ... [of?] / Cappadocia, blue (?) ... / burnt, for the horse of Fra... / harness (?) decorated by a picture, 2. / hemp cords for horses (?), 30. ... / ..." and on the *verso* "the number [*blank space*] horses" (edition and trans. Naveh and Shaked 2012, 222–223). Although these documents are described by their editors as lists of supplies, King has rightfully pointed out the absence of foodstuffs and presence of low-weight craft goods such as textiles and harnesses in these demonstrably different documents. Instead, he argues that they should be interpreted as customs accounts, although he admits through a comparison to a customs account from Achaemenid Egypt that types of goods and their quantities are listed in C6 and C7 but the amount of (putatively) levied tax is not (R. R. King 2021, 355–357). Likewise, it is suggested that the final line of C7 might refer to the size of the caravan according to the number of horses in a manner parallel to the documentation of the size of ships for the purposes of the taxation of their cargoes in Achaemenid Egypt. But in this regional context, it would be surprising to find horses (rather than donkeys or camels) used as pack animals in an ordinary caravan. Therefore, these documents may not be best interpreted as customs accounts.

Curtius and Arrian also clearly illustrate ties between Sogdian nobles and regional 'Scythian' nomadic groups, who had also apparently formed important military contingents in the late Achaemenid Empire. The best case of this is the flight of Spitamenes, plausibly the former Sogdian *satrap*, to the Massagetai 'Scythians,' who were probably active just north and west of the middle Zerafshan in the Kyzylkum. Thus Spitamenes came to command escalating numbers of horsemen in the insurgency against Alexander – although they betrayed the former ruler when their position was no longer militarily favorable.[101] Likewise, Dataphernes, perhaps *hyparch* of Xenippa, commanded contingents of the Dahai (at this point seemingly active to the west of Karshi oasis or near to Chorasmia), although they eventually also handed over the Sogdian noble.[102] Arrian clearly expresses that the Massagetai Scythians were "in great poverty, and … have no cities and no settled habitations, so … are easy to persuade to take part in any war" for the prospect of spoils.[103] Although this statement is obviously colored by Graeco-Roman beliefs about civilization, the historian also describes the successful capture of such booty – in this instance, doubtlessly referring to livestock – after an assault on Marakanda-Afrasiab.[104] As Stark has highlighted, such activities probably predicate a longer-term pattern: Such contingents of nomadic warriors (including warbands) might have been called upon by the later rulers of the neighboring Graeco-Bactrian kingdom, including to act as mercenaries.[105]

Apparently, seven fortresses had been established in the Achaemenid period in 'Scythian'/'Saka' territory beyond Tamerlane's Gates up to the Jaxartes (Syr Darya), subsequently captured by Alexander during his campaigns. The largest was a Cyropolis/Cyreschata reportedly founded by Cyrus II, which is usually assumed to be located in the region of modern Kurkat.[106] These had probably served as administrative points and refuges for the local population, and perhaps also as sites of borderland exchange.[107] As Stark suggests, the name of another fortress in this zone, Gazaka (in Greek), appears to relate to the OP **ganza-*, 'treasure, treasury,' and may have thus functioned as a collection point for tax revenue used to pay the fortress garrisons.[108]

Among the varying number of foundations in Bactria-Sogdiana hazily attributed to Alexander in the Graeco-Roman literary tradition, most prominent is Alexandria Eschate, the location of which remains unconfirmed, but might have been sited just beyond Sogdiana's northern frontier, past Tamerlane's Gates at Zaamin; apparently, this was a fortress partly populated by retired Macedonian soldiers and Greek mercenaries with a view to the protection of the northeastern frontier as well as an invasion

101 Arrian *Anabasis* (Arr. *Anab.*) 4. 16. 3–17. 7, with analysis in Rapin 2018, 273.
102 Curt. 8. 3. 16, with analysis in Rapin 2018, 273–274.
103 Arr. *Anab*. 4. 17. 5, trans. Robson.
104 'Zariaspa' in the text, Arr. *Anab*. 4. 16. 5.
105 Stark 2016, 142–143; 2020, 82, 84. On warbands, see further below, IV.1.
106 Arr. *Anab*. 4. 2. 1–3. 5; Curt. 7. 6. 16–23.
107 Briant 2002, 745–747.
108 Stark 2021, 697.

of 'Scythia' which did not eventuate.[109] But although Alexander ultimately did conquer Sogdiana, substantial instability followed in the region, culminating for example in revolts of settled mercenaries in 326/325 and 323 BCE, as well as a revolt of locals in Bactria and Sogdiana prior to 315 BCE.[110] Perhaps this instability might be partly explained by Alexander's disruption of the local political order via his own *satrapal* appointments, as well as long-standing cooperative relations between sedentary populations and Saka groups.[111] Indeed, it appears that the installation of a Greek individual (Stasanor) as *satrap* of Bactria-Sogdiana in 321 BCE was an attempt to stabilize the region, and this ruler had apparently gained a strong foothold among the Greek elites settled in the region by 315 BCE.[112] It may be noted that a small number of lifetime issues of Alexander's coinage have been reported in Sogdiana, including *tetradrachms* and *drachms* in southern and western Sogdiana, and perhaps a copper alloy *chalkos* in Samarkand.[113] Thereafter, the pre-Seleukid rulers intermittently minted coinage, including silver and copper alloy issues following Greek models, variously following the Attic standard and a slightly lower 'local' one (usually lower denominations, perhaps intended only for local circulation).[114] While their production is still generally attributed to Bactria, three local-standard 'eagle' *drachms*, and a smaller copper alloy unit have been picked up at Marakanda-Afrasiab,[115] demonstrating that they also circulated in Sogdiana.

Graeco-Macedonian rule in Sogdiana would continue under the Seleukid Empire. It was captured by Seleukos I around 308–306 BCE but seems to have been lost only half a century later, most likely to new nomadic rulers.[116] It would seem that Seleukos met little military resistance and was largely able to win over the region's rulers through diplomatic means.[117] Presumably, he was helped by his marriage in 324 BCE to Apama, the daughter of Spitamenes. Their son Antiochos I was eventually made coregent and responsible for the Upper Satrapies (including Bactria-Sogdiana) in 294 BCE, and is thought to have used Bactra as one of his capitals.[118] We lack details as to how the administrative system established by the Achaemenids (and then Alexander) was developed in this period, but at the least organization on the basis of *satrapies*

109 On these foundations with further references, Iliakis 2021, 40; on Alexandria Eschate as Zaamin, Rapin 2018, 272. On Alexandria Oxiana/Alexandria in Sogdiana perhaps in the Sherabad Darya region of southern Uzbekistan (still technically Sogdiana in this early period, but usually 'northern Bactria'), Rapin 2021, 342–343.

110 See Iliakis 2013; Mendoza 2017.

111 See e.g., Holt 1988, 54–59; de la Vaissière 2005, 20, n. 18; Iliakis 2021.

112 Mendoza 2017, 49–50.

113 Atakhodjaev 2013, 222–224, nos. 5–7; Naymark 2014, 15; Atakhodjaev 2021, 28, nos. 1–4.

114 See now Bordeaux 2021.

115 Atakhodjaev 2013, 219–222, nos. 2–4.

116 See III.1 below.

117 Capdetrey 2007, 39–43.

118 See Capdetrey 2007, 269.

continued; Diodotos I, founder of the Graeco-Bactrian kingdom in ca. 250 BCE, had formerly served as Seleukid *satrap* of the region. Institutional changes seen elsewhere in Seleukid Asia were probably also implemented, including the elevation of the role of the *strategos* ('general') to a position of civic-military governance of a territory of varying size and importance, eventually replacing *satraps* over time.[119] This institution seems to have continued in use under the Greek kingdoms of Central Asia,[120] and perhaps its persistence in Sogdiana after the Seleukid period may be indirectly suggested in the later Kul'tobe (kaz. Kultobe) inscriptions.[121] Greek would have also been used as a chancellery language during this period, indirectly implied by two Greek personal names inscribed respectively on an astragal and on the side of a ceramic cup found at Marakanda-Afrasiab.[122]

Broadly speaking, it now seems that Seleukid activity in Central Asia was wide-ranging, with the dynasty – and particularly Antiochos I – credited with bringing in waves of colonists, founding and refounding settlements (including Ai Khanum in Bactria), and driving monetization via coinage produced in royal mints.[123] Less clear is how much of this appraisal applies specifically to Sogdiana. Some 50 examples of silver and copper alloy Seleukid issues from throughout the Zerafshan and Kashka Darya valleys demonstrate clearly that Seleukid coinage circulated in the region, and a small number of copper alloy 'crab/bee' (or 'tarantula/wasp'?) issues minted in the name of Antiochos (probably I or II) speak to the existence of a local mint in the vicinity of Samarkand.[124] The recent discovery of two Attic-weight silver and copper alloy unstruck beveled flans from this area suggests also the contemporary regional production of silver coinage.[125]

Our texts do not attribute foundations to the Seleukids in Sogdiana proper. That said, the dispatch of a general, Demodamas of Miletus, to stabilize territories across the Jaxartes (Syr Darya) plausibly resulted in the foundation of an 'Antiocheia in Scythia' (perhaps only a fortress, at the site of modern Khujand)[126] and would seem to suggest ongoing security issues with the northeastern frontier. Indeed, it seems that sites established in Sogdiana were similarly oriented, taking the form of small fortresses guarding major routes and borderlands (e.g., at oasis frontiers) of the region,[127]

119 See Capdetrey 2007, 284–294.

120 See Coloru 2009, 265; Morris vol. 2, ch. 9, II.1.

121 See below, IV.1.

122 Rougemont 2012, 259, nos. 152–153.

123 See e.g., Capdetrey 2007, 79–81; Martinez-Sève 2015, 26–35; Mairs and Fischer-Bovert 2021, 61.

124 Atakhodjaev (2021, 42–43) suggests that this mint may have been located some 15 km to the west of Marakanda-Afrasiab in the vicinity of Durmentepa. For the attribution of these coins to Antiochos I or II, Naymark 2014; Gorin 2015.

125 Atakhodjaev 2021, 42, nos. 33–34.

126 Rapin 2021, 346.

127 See especially Stark 2016, 136–138, pointing to examples of military strongholds in the lower Zerafshan securing communication to Margiana to the south (Paikend, Bukhara, Khodzha-Buston, Burkuttepa, Kuzimontepa), and to Chorasmia to the west (the Bashtepa cluster, Varakhsha, and Ra-

as well as the reconstruction of fortification walls and installation of garrisons at preexisting power centers such as Marakanda-Afrasiab.[128] Somewhat more development seems to be visible in Kesh, as the first large canals began to be built, and the power center of the oasis was transferred from Podaiataktepa to a new foundation at Kalandartepa-Kitab.[129]

In light of this overall picture, Lyonnet observes that the Seleukid presence in Sogdiana seems not to have been truly colonial, but rather militaristic, a point also apparently reflected in the quality of the pottery associated with this period at Marakanda-Afrasiab (Afrasiab IIA), which lacks examples of luxury wares seen in neighboring Bactria in Ai Khanum.[130] Concerns with the control and defense of this territory also seem to be reflected in other aspects of the material record. For instance, the remains of a large granary with an estimated capacity of 450 tons dating to this period have been excavated at Marakanda-Afrasiab, which (having been destroyed by a later fire) still held substantial remains of broomcorn millet and barley. This plausibly served as the food stores of the center's garrison.[131] Moreover, the existence of these stores demonstrates that effective official extractive mechanisms were play. What remains less clear is whether this grain was extracted from diverse subsidiary territories, or if it derived from fields in the site's immediate hinterland. All this being said, a small number of kurgan burials with inventories relating to the Achaemenid through the Seleukid period (including weapons with parallels to 'Sarmatian' find complexes) are known from cemeteries on the northern and southern fringes of the middle Zerafshan,[132] indicating continued connections with northern groups during this period.

The coinage produced and circulated by the Seleukids in Sogdiana was most probably used foremost as a tool of state finance, facilitating expenditure as well as the intake of revenue. More specifically, the need to pay soldiers is usually taken to be a key factor driving the initial production of Hellenistic coinages,[133] a point which aligns

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mish). The identification of many possible examples remains to be validated through excavation. See, for example, the small fortresses surrounding Karshi and Guzar oases dated broadly to the third–first centuries BCE in Suleimanov 2000, 52–54. Likewise, Shishkina and Inevatkina list numerous Hellenistic fortresses (including sites expanded in the early Middle Ages, or fortresses from that period with possible Hellenistic layers) in the middle Zerafshan west and south of Marakanda-Afrasiab, but apparently largely in reference to topographic observations (Shishkina and Inevatkina 2012, 58–60). Note that small fortresses were also a characteristic of the settlement pattern of Hellenistic Bactria, Leriche 2007, 130–134.

128 On the Greek walls at Marakanda-Afrasiab, see, e.g., Rapin and Khasanov 2016.

129 See Omel'chenko 2011, 170.

130 Lyonnet 2020a; 2020b, 324.

131 See Baratin and Martinez-Sève 2013, 9.

132 K. 4, 9, and 10 at Agalyk, burial 1 in the kurgan Sirlibaitepa, k. 3 and 7 at Yangi-Rabat, and k. 4 at Akdzhartepa, for which see with earlier literature Parzinger and Boroffka 2003, 283; Franceschini 2007, 143–144; Vallée-Raewsky 2013, 407; Lyonnet 2020a.

133 See discussion regarding Bactria in Morris, vol. 2, ch. 9, II.3.

well with the impression of garrisons dispersed across Sogdiana during this period. Noting the apparent presence of many fortresses along border zones during this period, one may hypothesize that these fortresses also had the capacity to function as sites of borderland exchange. Thus, they may have simultaneously helped to spread the use of coinage from soldiers to the broader population, and subsequently its eventual return to state treasuries through taxation.[134] Perhaps two Seleukid copper coins recently picked up beyond the northeastern frontier in Ustrushana might speak to such a pattern of exchange activity.[135] More broadly, through the use of Seleukid silver and copper coinage struck to the Attic weight standard, Sogdiana was incorporated into a wider monetary zone of recognizable and exchangeable Hellenistic coinage, theoretically lowering transaction costs within this sphere.

Indeed, the model of Hellenistic coinage was ultimately enormously influential in Sogdiana; the adoption of this technology of coin production and the system of the Attic weight standard, as well as aspects of iconography, legends, and denominations, can be traced in the region's coinage production through to the early Middle Ages. This clearly demonstrates the long-term utility of this model among varying parties issuing coinage, as well as the coin-using population. That being said, as we will see further below, coinage production seems to have been useful to issuing authorities in the centuries after Seleukid rule for somewhat different reasons.

III The 'Kangju Problem': Approaching an Elusive Nomadic Polity

Although it has long been evident that the entity Chinese informants called Kangju was a significant cultural and political presence in antique Central Asia, our understanding of this presence is still very limited, in large part related to the difficulties of the textual, archaeological, and numismatic sources at our disposal. Indeed, our textual sources do not even give us explicit information about the emergence or collapse of this polity.

The polity was already formed when substantively described in the *Shiji* for the first time in reference to the 120s BCE, via the report of Han envoy Zhang Qian who had visited Kangju territory in pursuit of allies against the Xiongnu. Kangju is thus qualified as a small, moving 'country' or 'state' (*xing guo* 行國)[136] with similar customs

134 See a similar case in Uzundara fortress in Bactria in Morris, vol. 2, ch. 4, III.

135 These are specifically issues of Seleukos I and Antiochos I found on the upper Sangzar, for which see Atakhodjaev 2021, nos. 6, 18.

136 In Chinese texts, Kangju (as other diverse polities and entities in the Western Regions) is typically qualified as a *guo* 國, a general term that may be variously translated as nation, country, or state and allowing no further precision in respect to their political organization.

to Da Yuezhi 大月氏, themselves described later explicitly as mobile pastoralists: people "moving from place to place with their herds."[137] This at the very least refers to an elite ruling group who styled themselves as nomads. The polity is noted to be located between Dayuan (Ferghana) to the southwest and Da Yuezhi (at this point, northern Bactria) to the south and to have 80,000 or 90,000 archers at its disposal.[138] Thereafter, in reference to information from the first century BCE, this description is updated to suggest Kangju's probable territorial expansion: they are in possession of "120,000 households, 600,000 individuals, and 120,000 men able to bear arms,"[139] and now also border Anxi (Parthia).[140] New indications are also provided as to the Kangju king and subsidiary rulers of named seats in the first century BCE,[141] as well as vassal territories belonging to the Kangju by the first century CE (see below).[142]

Later, in reference to the Northern and Eastern Wei (386–550 CE), Kang 康 (Samarkand) is named as a successor state of Kangju, making clear that the latter was no longer perceived to exist.[143] But it would seem that the polity's contraction began earlier. As I will discuss in more detail below, the content of the proto-Sogdian Kul'tobe inscriptions (second century CE?) implies a capture of the Kangju 'core' area of the Arys river valley via collaborative military activity and seizure of territory between leaders from Chach, a group of 'nomads,' and the Sogdian centers of Samarkand, Kish (Kesh), Nakhshab, and Nawak-methan (Bukhara);[144] here, it seems at first glance that 'Kangju' is nowhere to be seen.[145] Likewise, recent discussions have considered again information that probably relates to the 260s CE in the *Jinshu*, which certainly suggests some kind of political change as there the Kangju king in placed in Suxie (see comments below, IV.3).[146] Such scraps of information have long been debated in an attempt to construct a coherent political history of the Kangju polity, but much remains ambiguous and contested. Rarely do we find 'smoking gun' answers for our historical questions. Hence, following a convention stemming from Soviet-era archaeology, one may still speak of a 'Kangju problem' (кангюйская проблема, *kangiuiskaia problema*).[147]

137 *Shiji* 123.3161, trans. Watson 1993, 234.
138 *Shiji* 123.3161, trans. Watson 1993, 234.
139 *Hanshu* 96A.3892, trans. Hulsewé and Loewe 1979, 126.
140 *Hanshu* 96A.3889.
141 *Hanshu* 96A.3894.
142 *Hou Hanshu* 88.2922.
143 *Weishu* 102.2281, see trans. Huber 2020, 28. This is a standard history compiled in the mid-sixth century CE.
144 Nawak-methan is understood here to refer to the power center of the Bukhara oasis, following Grenet, Sims-Williams, and Podushkin 2007, 1024; Sims-Williams forthcoming (*pace* Schwarz 2022, 69–72).
145 See further below, IV.3.
146 *Jinshu* 97.2544, trans. Huber 2020, 22. The *Jinshu* is the standard history of the Jin Dynasty (266–420 CE) and was compiled in the mid-seventh century CE.
147 Yatsenko 2020a.

III.1 The Sources – and Their Weaknesses

At this point, some further remarks on the sources available to us and how they are usually approached are pertinent. The nomadic groups relevant to the Kangju polity are mentioned and described by outsiders of diverse literary traditions (foremost Greek, Roman, and Chinese), and scholars have long deliberated upon the localization, movements, and relations of these groups, usually with recourse to linguistic arguments and material cultural patterns. The fundamental historical material speaking to the organization of the Kangju polity is information pertaining first to the period from the 130s BCE to the fourth century CE in Chinese transmitted texts (primarily the standard court histories *Shiji*, *Hanshu*, *Hou Hanshu*, *Weilüe*, *Sanguozhi*, and *Jinshu*), some excavated Chinese texts from Xuanquan (near Dunhuang) falling largely in the first century BCE, the Sogdian inscriptions excavated at Kul'tobe on the Arys (second century CE?), and the coinage produced in Sogdiana during this period. Each of these bodies of evidence presents unique challenges. Most centrally, the relevant information conveyed in Chinese transmitted texts is often flawed and deeply partial, being mediated through the knowledge and interests of their informants, authors, and audiences. The difficulty of confidently locating relevant toponyms and ethnonyms in these texts, combined with their propensity for using fossilized politonyms, compiling information from earlier texts, and articulating what they understood about political institutions through Chinese terminology means that it is overall often best to avoid the temptation of reading them too literally. A different set of problems is presented by the Kul'tobe inscriptions, which are not yet finely dated and are replete with Aramaic ideograms, with the effect that their precise historical significance is still somewhat uncertain. Furthermore, scholarly understanding of the localization and development of production of relevant coinages in Sogdiana has developed enormously in the last decades, but many aspects of this picture are still hypothetical and subject to ongoing refinement.

The haziness of this picture is compounded by attempts to link 'archaeological cultures' – spatially and temporally circumscribed groups of settlements and burials – to the Kangju. Indeed, this picture has also changed over time: the absolute chronologies of potentially relevant archaeological cultures continue to be refined (sometimes radically), and the connections of the 'Kangju' (rus. Kangiui) phases in Chorasmia and Dzhetyasar Culture in the Syr Darya delta now seem less clear.[148] A solid current perspective is that Kangju's core area may be understood in terms of a set of contiguous and closely related cultures located along the middle Syr Darya and the western

148 For antique Chorasmia, the so-called Kangiui phases (fourth century BCE to first century CE) are apparently something of a misnomer (see Minardi 2015, 58–59, 87–97). Levina (1996, 10) dated Dzhetyasar Ia between the seventh–fourth centuries and the last centuries BCE, Ib to the last centuries BCE to the first centuries CE, and Ic to the second–fourth centuries CE. However, it seems that most burials associated with this culture date from the third century CE onward (see Yatsenko 2020a, 18).

and northern foothills and valleys of the Tien Shan and its spurs: Otrar-Karatau (including the Arys basin, Turkistan oasis, Karatau mountains, and Talas and Chu valleys), Kaunchi I and II in Chach, and the later Kenkol culture (i.e., monuments of the inner Tien Shan from the third century CE).[149] A small number of elite kurgan burials that have been discovered thus far among the foothills surrounding the middle Zerafshan oasis have also been proposed to be linked to the Kangju.[150] But especially persistent difficulties and debates hinge on the cultural ties suggested by the diverse burial constructions and inventories of grave goods in burials throughout this time and space. These variously elicit comparisons to graves in a wide range of chronologically and spatially diverse domains: to earlier 'Altai Sakas' of the Pazyryk culture, to the 'Sarmatian' or 'Alano-Sarmatian' spheres of the Pontic-Caspian steppe and the southern Urals, and to the Xiongnu. Such links have then often been mobilized in scholarship to interpret the ethnic identities of the interred, frequently in reference to nomadic groups mentioned in literary sources, as well as to track the ethnogenesis and migrations of such groups and/or the expansion of the Kangju polity. However, less often acknowledged in this genre of scholarship is the typical incongruity between emic and etic conceptions of such *ethne*, and likewise between ethnicity (a social phenomenon) and material culture or biological data obtained through scientific analysis.[151]

The most recent and thorough treatment of the diverse material relating to the Kangju is the volume *Археология и история Кангюйского государства* (*Archaeology and history of Kangju state*, 2020) published by Yatsenko and collaborators.[152] Here, the Kangju state is considered, on the basis of its first appearance in Han standard histories, to have emerged by the 130s BCE in the middle Syr Darya region and expanded to include a set of five vassal territories or 'principalities' by the first century BCE ruled over by 'lesser kings' (*xiao wang* 小王) referred to by their places of rule: the Suxie 蘇筹 king, the Fumo 附墨 king, the Yuni 窳匿 king, the Ji 罽 king, and the Aojian 奥鞬 king.[153] These are difficult to locate with any precision, but *contra* Yatsenko,[154] Suxie at least does seem to clearly refer to a center in Sogdiana, and other seats also seem to be identifiable in the same region.[155] Additional vassals are mentioned in sources from the first century CE onward, one clearly identifiable with a transcription of Sogdiana (Liyi/Suyi 栗弋).[156] On the basis of indications in textual sources combined with apparent destruction and abandonment levels in the core

149 Yatsenko 2020a, 7. For the dating of Kenkol, Malashev and Torgoev 2018, 46.
150 Discussed further below, ch. 4.B, I.2.
151 On such incongruities, see, e.g., remarks in reference to the Sarmatians in Dan 2017.
152 Yatsenko et al. 2020.
153 *Hanshu* 96A.3894.
154 Yatsenko 2020c, 31–32.
155 See further below, IV.2.
156 *Hou Hanshu* 88.2922.

territory of the middle Syr Darya, the polity is then understood to have collapsed in the mid-fourth century CE.

However, even such a minimalist account of the polity's history and its entanglement with Sogdiana has its problems. As has long been recognized, the name 'Kangju' appears to refer to a place rather than strictly an ethnonym. This place, plausibly also related to a region known as Kaŋha already in the Avesta, can be located with reference to diverse historical toponyms (including the name of the site of Kanka in Chach) in the middle Syr Darya zone.[157] This leaves open the possibility of considering the history of groups related to the polity in the third century BCE, prior to its first descriptions in Chinese texts, and that Sogdiana was entangled with this history from already an early stage.[158]

Indeed, as Stark as recently observed, is plausible that Kangju is connected in some way to nomadic rulers who seem to have assumed power in Sogdiana already in the mid-third century BCE.[159] For the present purposes, it is useful to lay out the relevant material. Increasingly refined analyses of numismatic and archaeological data pertaining to Graeco-Macedonian rule in Sogdiana suggests the widespread if nonuniform loss of territory from the mid-third century BCE, whether late in the rule of the Seleukid king Antiochos II or early in the reign of the Graeco-Bactrian Diodotids (ca. 250–230 BCE). At the least, Graeco-Macedonian rule had almost certainly ended in Sogdiana by the beginning of the reign of the Graeco-Bactrian king Euthydemos I (ca. 230–200 BCE).[160]

Around this time, silver coinages imitating Graeco-Macedonian prototypes began to be produced in three different oasis regions of Sogdiana: imitations of Antiochos I in three denominations in Samarkand and the eastern Zerafshan valley, imitations of Alexander *drachms* in Kesh, and imitations of *tetradrachms* of Euthydemos I in Bukhara (fig. 1). Following the sequence reconstructed by Naymark, these imitations continued in several stages of production, with Antiochos imitations also beginning to be produced around the western Zerafshan in the mid-first century BCE.

Then, around the turn of the Common Era, Sogdian-language legends and new design features begin to emerge, culminating in the first depictions of their issuing rulers around the mid-first century CE: a certain Hyrkodes in the western Zerafshan, an Ashtat in Nakhshab, an unnamed figure with the reverse legend *phseigha charis*

157 However, the extent of this region is hardly clear, and it is often considered to include also the lower Syr Darya. See discussions with earlier literature in Buriakov 1982, 107–108; Czeglédy 1983; Lurje 2010a; P'iankov 2013, 318; Yatsenko 2020c, 24–25; Stark 2020, n. 16. Compare older (and sometimes resurgent) perspectives accepting the link between toponyms of this region and the Kangju, but rather posing onomastic arguments to identify the latter as originally a Turkic people, e.g., extensively in Shiratori 1928, 84–90.

158 Alternatively, the existence of Kangju in this period is ruled out by Yatsenko (2020c, 23) as having no confirmation in archaeological or written sources.

159 Stark 2020, 83.

160 See discussions in Naymark 2014; Stark 2020, 83–84; Lyonnet 2020a; Atakhodjaev 2021.

Fig. 1: Early Sogdian imitation coinages, ca. 230–170 BCE. 1. Silver imitation *tetradrachm* of Euthydemos I produced in Bukhara, ca. 230–206 BCE. Diameter 26.8 mm, 13.43 g. Ashmolean Museum HCR93745. Courtesy of the Ashmolean Museum (image reproduced at 1.75 scale); 2. Silver imitation *drachm* of Alexander produced in Kesh, ca. 200 BCE. Diameter 17 mm, 4.19 g. British Museum IOC.375. Courtesy of the Trustees of the British Museum, photo courtesy of Joe Cribb (image reproduced at 2.0 scale); 3. Silver imitation of Antiochos I produced in Samarkand, ca. 180–170 BCE. Diameter 16.0 mm, 2.07 g. Sergeev Collection (no. 675). Moscow Historical Museum, photo courtesy of Vladimir Kleshchinov (image reproduced at 2.0 scale).

(probably expressing something like 'lord's grace') in Kesh (fig. 2.1–3).[161] Large denominations based on Greek models were still minted in Samarkand and Bukhara (fig. 2.4–5), with imitation Eukratides *obols* in Samarkand and Nakhshab too.[162] More-

161 See Naymark forthcoming a.

162 See now Naymark 2016; 2020; 2022; forthcoming a; forthcoming c.

Fig. 2: Main Sogdian coinages of the second half of the first century CE. 1. Large silver unit of Hyrkodes produced perhaps in Kharqana, ca. 50–100 CE. Diameter 16.1 mm, 2.56 g. British Museum 1875,0502.151. Courtesy of the Trustees of the British Museum (image reproduced at 2.0 scale); 2. Large silver unit of Ashtat produced in Nakhshab, ca. 50–100 CE. Diameter 18.6 mm, 3.88 g. British Museum 1987,0112.2. Courtesy of the Trustees of the British Museum (image reproduced at 2.0 scale); 3. Large silver unit of *phseigha charis* type produced in Kesh, ca. 50–100 CE. Diameter 14.5 mm, 2.31 g. Zeno.ru 70347. Courtesy of Vetra 55 (image reproduced at 2.0 scale); 4. Silver imitation of Antiochos I produced in Samarkand, ca. 50–100 CE. Diameter 14.8 mm, 1.52 g. Courtesy of Konstantin Kravtsov (image reproduced at 2.0 scale); 5. Silver imitation tetradrachm of Euthydemos I produced in Bukhara with Sogdian legend on reverse to right, ca. 50–100 CE. Diameter 26 mm, 11.3 g. British Museum 1984,0506.1733. Courtesy of the Trustees of the British Museum (image reproduced at 1.75 scale).

over, as Naymark stresses, while some elements of Hellenistic models were selectively drawn upon in these portraits, they also unambiguously depict rulers styled as non-Greeks: they have artificial (annular) skull deformation, long faces with large noses, with long hair pulled back (in the case of the Hyrkodes and Kesh issues), moustaches, goatees (in the case of the Hyrkodes and Kesh issues) or braided sideburns (in the case of Ashtat), and – when this part of the design is sufficiently detailed and not off flan – they wear torcs and garments (a jacket or robe) with a high surplice neckline and prominent trim.[163] These features make it obvious that the portraits depict men styled as nomads. As a point of comparison, contemporaneous anthropomorphic terracotta figurines from Samarkand indicate that male dress for the settled population typically included garments such as conical caps, tunics worn with trousers, and cloaks.[164]

Of course, the earlier coinages are imitations and do not identify their issuers directly: they retained preexisting designs that spoke to the region's established coinage tradition in the Hellenistic period and hence were oriented toward acceptability more than anything else.[165] Theoretically, they could have been produced by local authorities of whom we know nothing, but the slightly later parallel production of imitation coinage associated with (post)nomadic authorities in Bactria's post-Hellenistic Saka-Yuezhi period is by now well documented – such as the case of Heliokles, Eukratides, and Demetrios imitations.[166]

These data seem to align quite well with well-known, laconic passages in Justin's epitome of Pompeius Trogus, as well as in Strabo and Polybios, that reference movements of nomadic groups in Bactria and Sogdiana already during this period and in the following centuries;[167] during the reign of Diodotos I (ca. 250–235 BCE) in Bactria and Sogdiana, at least two 'Scythian' groups reportedly invaded and/or occupied his domains – the Saraucae and Asiani.[168] Presumably, it was such groups of nomads who were cited as an existential threat when Antiochos III besieged Euthydemos I at Bactra (ca. 208–206 BCE).[169] Such nomads turn up again in reference to the fall of the Graeco-Bactrian kingdom under Eukratides (ca. 171–145 BCE), a reign already marked by internecine and external conflict.[170] Specifically, in a discussion of diverse groups of Scythians, Strabo states that nomads – Asioi, Pasianoi, Tokharoi, and Sakarauloi –

163 See Naymark 2020, 215–216.

164 See, e.g., Kidd 2004, 280.

165 Naymark 2022.

166 On these imitations, Gorin 2014.

167 See the discussion in Rapin 2007.

168 Justinus *Epitome* (of Trogus) (Just. *Epit*.) Prologus 41.

169 Polybios 11. 34. 5. It should be noted that the location described by Polybios is actually Zariaspa, a toponym traditionally identified as Bactra but evidently confused by ancient authorities in some cases with Marakanda; thus Atakhodjaev (2021, 43–48) proposes that the siege rather took place at Marakanda, although this alternative reconstruction remains to be taken up in wider scholarship.

170 Just. *Epit*. 41. 6.

coming from Saka-occupied country across the Syr Darya that adjoins territory of the Sakai and Sogdiana were famously responsible for taking Bactria from the Greeks.[171] Information from Justin on 'Scythian affairs' again suggests that the Asiani were active in the late first century BCE, and likewise the Tochari kings (if we do not hear precisely where), and that the demise of the Saraucae occurred around this period.[172]

The identities of these groups have long been debated. Put simply and cautiously, the Tochari/Tokharoi are usually accepted as largely equivalent to (Da) Yuezhi,[173] and the Sa(ca)raucae/Sakarauloi are evidently a 'Saka' group, the equivalent term for Saka in slightly later Han texts being Sai 塞. The identity of the Asioi/Asiani/Pasianoi is still blurrier.[174] Plausibly an Iranian-speaking group, the onomastic component *ās- also suggests a link between at least part of this group with a component group of the Alans, attested in Greek and Latin sources from the first century CE.[175] Of course, the question of the ethnogenesis of the Alans is intensely complex and long debated; Greek and Latin sources diversely describe them as Scythian, Sarmatian, or Massagetai,[176] while modern scholarship has variously blended linguistic and archaeological arguments to postulate ties with Sarmatians (e.g., Alans as ruling aristocrats) and potential origins of its constituent groups, including from Central Asia and perhaps from among the Kangju.[177] But for present purposes, much of this debate is a red herring. Judging also partly from a process of elimination, the Asioi were plausibly at least one of the eminent groups among the early Kangju.[178] Likewise, the Kangju has long been proposed to have emerged from local late 'Saka' populations, i.e., of the Syr Darya region and Tien Shan foothills.[179]

It should also be noted that the form the Kangju polity had taken by the time it came to the attention of Chinese informants must have been impacted in some way by the rise of the Xiongnu polity from the late third century BCE in the Mongolian steppes. Han standard histories describe subsequent military confrontations and movements of populations in their orbit, allegedly including the Wusun 烏孫 and part of the Yuezhi, reportedly also displacing the 'Sai' as they moved west.[180] As Stark notes, these processes are better understood as the movement of elite households and

171 Strabo 11. 8. 2.

172 Just. *Epit*. Prologus 42. On the interpretation of this passage, Baratin 2009, 349; Falk 2015, 81.

173 On Tokharoi, see e.g. Bailey 1985, 110–141.

174 'Asiani' represents an Iranian adjectival form of this name, 'Pasianoi' plausibly a textual corruption of the same. On Asiani/Asioi, Thordarson 1987; on Pasianoi, Rapin 2007, 58, n. 43; Falk 2015, 60.

175 This component is preserved in the name of the modern Ossetes in the northern Caucasus. On the ethnonym, Alemany 2000, 5–7; on the link between the two, Rapin 2007, 59; Grenet 2012, 3.

176 Alemany 2000, 1; Dan 2017, 103, n. 17.

177 See discussion in Yatsenko 2020b, 57–67.

178 They are considered as essentially identical in Czeglédy 1983; Torday 1997, 308; Stark 2020, 83; Rapin 2021, 350.

179 Litvinskii 1967, 33–36.

180 The various sources are discussed in detail in Falk 2015, 37–57.

their dependents rather than migrations of entire populations.[181] Furthermore, already by the 120s BCE the polity at least reportedly acknowledged both the Yuezhi and the Xiongnu,[182] complexifying the picture of their political organization and interdependencies even by this early stage.

Ultimately, the picture presented by our sources alone is something of a conundrum: rulers, groups, and a polity (or polities) known as Kangju seem to have been active for as long as six centuries – far longer than any other historical polity in Central Asia – but it is immensely difficult to make our information work together and say anything concrete as a result. Indeed, at this point it does not seem that Kangju's political organization can be understood through continuing source-critical autopsy of our material alone. Rather, I would contend that the main 'Kangju problem' is a theoretical one: the question of how we approach this material in the first place. Indeed, working with reference to broader scholarship on nomadic polities holds particular heuristic promise.

III.2 A Comparative Perspective on Nomadic Political Organization

By now, there is a considerable body of anthropologically oriented literature concerned with the emergence, organization, and sociopolitical complexity of nomadic polities, particularly those of the Inner Asian steppe and the Turko-Mongolian tradition. Although these historical examples from diverse contexts hardly promise exact parallels, the broader issues explored by this literature are relevant to the present case. The classic pivot of this scholarship is the question of specialism in mobile pastoralism. A long-standing tenet is that this subsistence strategy is risk-prone and does not facilitate consistent surplus production, also creating little impetus for sociopolitical complexity. Accordingly, Khazanov posited that this strategy equally instigates mutual economic dependency with agriculturalist groups, and that such nomadic interaction with the sedentary states of the 'outside world' was a key driving force for complex sociopolitical organization among nomadic groups.[183] Others have furthermore stressed the high importance of luxury and prestige goods as well as weapons and armor among the elite in nomadic political economies, inciting organization and the development of strategies for their procurement from sedentary neighbors, as well as for their internal redistribution.[184] That said, scholars have also long been aware of flexible subsistence strategies utilized among nomadic groups[185] and have

181 Stark 2020, 85–86.
182 *Shiji* 123.3161, trans. Watson 1993, 234.
183 Khazanov 1994.
184 E.g., Allsen 1997; Barfield 2001; Paul 2003.
185 See Salzman 1972; Di Cosmo 1994; Honeychurch 2014.

increasingly sought to further nuance 'dependency hypotheses' and receptions of the dichotomies between the nomadic and sedentary worlds. An important topic of research in the last decade has thus been the development and manifestation of sociopolitical complexity within mobile pastoralist societies.[186] Honeychurch in particular has critiqued the frequent implicit association of complexity with hierarchy and centralization, as well as a classic understanding of the 'state' as the epitome of such complex organization. Instead, he proposes to understand nomadic groups as innovative agents able to manage large-scale polities through their inherent political mobility and flexibility, thus expressing an alternative form of complexity.[187]

In parallel to this, various forms taken by nomadic polities have been evaluated in the literature, although this enterprise is complexified by the potential applicability of several classifications and models to one and the same group. On the foundational level, conceiving of nomadic social organization first on the basis of clans (a kinship group with at least claimed shared descent) and tribes (an aggregate of clans) is still of some use, although the analytical utility of these terms has long been criticized in anthropology, especially when used in evolutionary terms.[188] Likewise, the concept of a chiefdom as a form of sociopolitical organization preceding the complexity of states has been variously defined and criticized in the literature, but Kradin has argued for its heuristic utility in reference to diverse Inner Asian nomadic societies. He has pointed to commonly expressed attributes of chiefdoms (i.e., hierarchical organization of power, social stratification, a prestige economy involving redistribution, and common ideological system), as well as their varying complexity in terms of hierarchies (i.e., simple, complex, or supercomplex).[189] Comparably, states have been defined in vastly different ways,[190] and the 'nomadic state' is sometimes understood in pragmatic terms, as by Paul, who considers it a polity within which a significant part of the elite have a clear nomadic tradition in their culture and maintain a nomadic lifestyle while exerting considerable, long-term power over a large number of people, which may include sedentary populations.[191] In a similar way, many nomadic polities may also rightfully be understood as empires, in their capacity to project power beyond their core territory and integrate diverse populations.[192]

Simultaneously, the concept of the confederacy – a "formal alliance of peoples who act in mutual support to achieve common ends"[193] – has long been a mainstay of the literature. Thus, some nomadic polities may be understood as imperial confed-

186 See, e.g., complexity in institutions explored by Frachetti 2012; Rogers 2019.

187 Honeychurch 2014; 2015.

188 See discussions with earlier literature in Kradin 2011a; Sneath 2016.

189 Kradin 2011b; 2011a; 2018.

190 Compare, e.g., the typology of characteristics of early states in Claessen and Skalnik 1978 to states as a social relationship in Honeychurch 2014, 283–284 (with earlier literature).

191 See Paul 2003, 27, 29.

192 See, e.g., Di Cosmo 2011; Kradin 2011b; 2018 on the Xiongnu.

193 Birch 2022.

erations that are "autocratic and statelike in foreign affairs, but consultative and federally structured internally,"[194] or chiefdom confederacies consisting of "a number of genealogically related and unrelated chiefdoms which were unified through coercion or common agreement."[195] These concepts have been productively leveraged by Kradin to argue that some nomadic polities may shift over time (e.g., with the emergence or death of a charismatic leader) between a hierarchical complex chiefdom within which power and prestige goods are centrally and vertically arranged to a heterarchical confederacy of chiefdoms, within which the organization and the accumulation and distribution of resources is based on more egalitarian, 'corporate' terms.[196] Somewhat parallel concepts of 'network' versus 'corporate' political economies for the emergence of elites – additionally oriented respectively toward long-distance versus local interaction – have been applied by Di Cosmo in reference to elite Xiongnu burials, although he ultimately highlights the disjuncture between ideas generated from textual and archaeological approaches.[197] Others rather use a network metaphor to interpret long-distance interaction between nomadic elites and the spheres of cultural expression and identities that may converge among them as a result ('salient affiliation'), especially in respect to the accumulation and redistribution of shared repertoires of prestige goods.[198]

Others have further explored the diverse forms taken by nomadic polities incorporating mixed agricultural and pastoral systems.[199] Kradin, for example, distinguishes between three variations of this nomadic empire: the typical (nomads and farmers coexisting at a distance, with surplus extracted through raids and compulsory gifts), the tributary (nomads extracting tribute from farmers), and the aggressive or conquest form (nomads conquering and migrating into an agricultural society, with extraction through regular taxation).[200] Wink further distinguishes between nomadic and postnomadic empires in terms of the preservation or abandonment of this subsistence strategy among an empire's creators, as well as the establishment of the empire in an environment with primary affordances for pastoral nomadism versus anywhere else.[201] This kind of transformation in elite lifeways is immensely clear, for example, among the nobility of the postnomadic empire of Mughal India (which also had extremely limited environmental affordances for pastoral nomadism).[202] In parallel and practical terms, Paul has considered what happens after a nomadic army conquers a sedentary territory and installs a ruler to administer it, i.e., taking charge

194 E.g., on the Xiongnu, Barfield 1981, 47.
195 Gibson 1995, 123; 2011.
196 Kradin 2011a; 2018.
197 Di Cosmo 2013, 37–50, drawing on concepts in Shepherd 2012 and others.
198 See, e.g., Brosseder 2015.
199 Such as, e.g., Khazanov 1984, 231–233.
200 Kradin 1992, 166–178; 2011b, 80.
201 Wink 2011, 125.
202 Wink 2011, 128–129.

of extractive mechanisms already in place with a key aim of redistributing these resources to their retainers and armies.[203] This could manifest in diverse forms: from the nomadic ruler extracting resources from a conquered sedentary population via its preexisting elites at a calculated distance to the ruler physically entering the sedentary world and discursively adapting to its political and administrative traditions, with the possibility of eventually contributing to a fusion of these institutions and their own.[204] On this topic, Barfield has also highlighted several historical examples of the difficulties (and even lack of interest) experienced by rulers of Turko-Mongolian imperial confederacies when they needed to adapt and develop the administration of their conquered sedentary territories; their power had been built on extorting wealth (e.g., through military means) and redistributing it, rather than creating it in the first place.[205] These observations sit a little uncomfortably with scholarship of the last decade seeking to nuance the predatory image of nomads and highlight alternative forms of complexity among their societies.

As I hope to have illustrated, many ideas in this literature are contested as well as highly abstract, and in applying them to the case of the Kangju polity, it would be easy to fall into many conceptual and terminological traps. The empirical terms of this enterprise also remain shaky to the core: the actual extent to which the Kangju polity's ruling elites, including in Sogdiana, maintained a 'nomadic' lifestyle is unclear, and even the varying iterations of agropastoralist production strategies practiced by their constituents are difficult to assess with any precision. In any case, as seen above, the people of the Kangju polity were clearly understood by outsiders as nomads, and the rulers depicted on the coinage minted in Sogdiana during this period also presented themselves as nomads, further underlining that approaching the polity as a broadly 'nomadic' will still be productive.

But what kind of polity are we dealing with in more specific terms? In a manner recalling diverse perspectives as to the nature of the Xiongnu polity (i.e., as an early state or supercomplex chiefdom, but also certainly an empire),[206] others have already noticed that some of the ideas outlined above are relevant for the Kangju polity, if analyses do not usually enter into much further detail. Hence in recent works with quite different understandings of Kangju's political history, the polity is often described generically as a state and quite commonly as a confederation (if perhaps a loose and noncentralized one).[207] Yatsenko dismisses the interpretation of a confederation as groundless in favor of describing Kangju as an early state (in Claessen's terms) by the first century BCE, as well as a nomadic empire.[208] At the same time, the centers

203 Paul 2003, 48–50.

204 In reference to cases in Ilkhanid Iran and the Seljuks, Paul 2003, 50–51.

205 Barfield 1991, 170–174.

206 See, e.g., Brosseder, vol. 1, ch. 5, II.

207 Grenet, Sims-Williams, and Podushkin 2007, 1026; de la Vaissière 2013, 324–325; Stark 2020, 87; Sims-Williams 2022, 51.

208 Yatsenko 2020c, 25–26, 44–45.

of power distributed across Sogdiana's oases during this period are – with varying conceptions of their relation to the Kangju over time – often glossed as principalities,[209] sometimes city-states,[210] and sometimes collectively as a distinct confederation when putatively broken away from the Kangju.[211]

Of course, the utility of any of these terms lies more in their heuristic value than their applicability alone. I already doubt that Claessen's understanding of an early state is really valid in this case,[212] but even describing Kangju as a state or empire may not add much more nuance to our understanding. However, as I will now show, I do think it is especially productive to broadly conceive of Kangju as a confederacy in the terms outlined above; indeed, this may also help to explain why it is so difficult to pin down its political history in the conventional terms of the rise and fall of a state.

IV The Kangju Confederacy: Political Organization and Institutions

To briefly recapitulate, our sources indicate that 'Kangju' political history might run from the third century BCE to the fourth century CE. The shape of this polity in something like its 'classical' form is most visible to us around the first century BCE, but the limits of our sources mean that the strict beginning and end of this configuration of political organization are essentially epistemologically inaccessible to us. Furthermore, such a rise and fall are equally difficult to pin down because the Kangju polity seems to have been organized persistently in a confederate manner: although probably representing something like a 'conquest' form of a nomadic polity at its outset (i.e., with the implantation of nomadic rulers and at least their retainers into the sedentary oasis territories of Sogdiana), Kangju appears to have been dynamically constituted over time from smaller 'tribes' and polities (including the 'principalities' of Sogdiana), taking basic forms probably not dissimilar from chiefdoms. Moreover, the ruling elites of these units – typically styled as nomads – frequently acted in apparently quite formal alliances to achieve common ends.

Thus, my approach here is to simply treat this entire era as one dominated by the 'Kangju confederacy,' which fluctuated in its configurations and tendencies of political organization over time among its ruling elites, specifically between more

209 E.g., in Stark 2020, 53; Naymark 2016; 2022.

210 As in Shenkar 2020.

211 E.g., Rtveladze 2009, 139; de la Vaissière 2013, 187.

212 For example, we have no evidence speaking to the emergence of salaried bureaucratic functionaries and the codification of law under the Kangju.

heterarchical and hierarchical modes of operation.[213] I divide this history into three broad phases according to tendencies (rather than categorical types) of upper-level political organization along a rough chronological framework. Thus, rulers associated with the Kangju seem to emerge following a relatively heterarchical form of organization between one another (phase one, third–second centuries BCE). A phase marked by a more hierarchical form of organization follows, with the development of a central institution of kingship, the elaboration of hierarchies among subsidiary ruling elites and external vassal relationships, and indications of both cooperation and competition among the confederacy's elites (phase two, first century BCE–first century CE). Finally, a breakdown of the central institution of kingship occurs, as do hierarchical relationships between subsidiary rulers, leading to a more heterarchical form of political organization and the ultimate disintegration of the Kangju confederacy in any recognizable form (phase three, second–fourth centuries CE). As I progress through this analysis, I also highlight transfers, developments, and innovations in sociopolitical institutions that are particularly relevant to the extraction and mobilization of resources and wealth goods. More specifically, I highlight how some such institutions introduced into Sogdiana in the Achaemenid and Seleukid periods – elements of organization, extractive mechanisms, coinage as a tool of elite finance, and the use of Aramaic as a tool of administration – were adapted by rulers over this period. Moreover, these were amalgamated with institutions deriving from the broader orbit of nomadic steppe societies, such as that of the warband and the *nāf*, with additional possible examples of this explored further below.

To be clear, this analysis is largely offered in respect to the (upper) confederate level of organization of rulers associated with the Kangju and the Kangju polity rather than internal organization within its constituent groups. However, I will propose later that one can draw parallels between the broad trends outlined here and contemporary economic phenomena in each of these territories, specifically in respect to the accumulation and distribution of surplus wealth and valuable goods (ch. 4.B, I).

IV.1 Phase One (ca. Third to Second Centuries BCE): Emergence and Heterarchy

As discussed above (III.1), we may already be able to see the emergence of rulers linked with the Kangju – and perhaps even an incipient form of confederate organization among them – in the probable capture of Sogdiana in the mid-third century BCE by elites of the Asiani and Saraucae groups. Judging from how Justin and Strabo list these groups together (with the latter also listing them alongside the Tochari/Tokharoi taking Bactria from the Greeks in the mid-second century BCE), they may have already

213 Obviously, this approach especially draws ideas from Kradin 2011a, among others; see above, III.2.

been acting in a confederate mode of organization to achieve the shared goal of military conquest by this early period. This interpretation seems more plausible in respect to Strabo's information relating to the second century BCE, but the laconic limits of Justin's text means that its possible retrojection still further back into the third century BCE remains still more speculative. In any case, as the picture presented by these sources seems to smack of the trope of predatory nomads conquering sedentary populations, it would be easy to fall into the trap of assuming a 'dependency hypothesis' explanation of these conquests, i.e., that the political organization of these groups was determined by interactions with the Seleukid and Graeco-Bactrian rulers of Bactria and Sogdiana. That being said, the same set of sources – in addition to the broader sense of regional instability following Alexander's conquests – suggest that southern Hellenistic rulers cultivated a rather antagonistic relationship to northern nomadic groups, helping to contextualize the conquests.[214] Political and ecological changes in other neighboring regions may also have contributed to this process. The population linked to the Chirik Rabat Culture of the lower Syr Darya abandoned this territory in the late third or early second century BCE, perhaps due to the breakdown of the local political organization managing the irrigation system, culminating in the drying up of two major branches of the river's delta.[215] This process must have also stimulated population movement in the broader region – perhaps even into the nascent Kangju confederation.

No Kangju king is mentioned in our sources before the first century BCE, and this may indeed reflect reality rather than deficient information alone; among the many references to the kings of neighboring regions in the *Shiji* (some of which Zhang Qian did not even personally visit), it is only the 'men of Kangju' who hand over the fleeing Dayuan king of Yucheng 郁成 (located somewhere in the east, perhaps near Osh) king of Dayuan to the Han in the course of the latter's military assault in 104–102 BCE (see below).[216] The question of which sociopolitical institutions Sogdiana's new rulers may have brought with them to the south during this early phase is largely a matter of speculation,[217] with the probable exception of the warband (which also does not need to have been new to the region). A warband is a personally defined, sociopolitical institution comprising essentially a leader and their sworn retainers, usually a personal fighting force permanently attached to this leader. Variations of the institution are widely attested among other historical nomadic and postnomadic elites, such as the smaller *comitatus* discussed by Beckwith (e.g., with loyalty extending to suicide pacts), or the larger elite fighting forces or 'inner armies' found in the Islamic peri-

214 See II.2 and III above.

215 Bonora 2019, 400.

216 *Shiji* 123.3178; trans. Watson 1993, 250.

217 Note, at least, examples of institutions structuring pastoral production and redistribution within various nomadic societies, such as concepts of pasture rights and reciprocity discussed in Khazanov 1984, 156.

od.[218] This institution in its various iterations formed the core of political and military organization in many nomadic and postnomadic polities, and the very bonds of personal loyalty of such retainers were shaped by the leader's ability to ensure that resources (at the most basic level including booty but also prestige goods) were redistributed to them, which is hence also clearly relevant for understanding economic organization in the present context. Indeed, the presence of this institution in Sogdiana already in the second half of the third or beginning of the second century BCE may be reflected by a group of 48 tumuli at Kyzyltepa at the northeastern boundary of Bukhara oasis, which included a monumental kurgan framed by two rows of smaller satellite kurgans.[219]

The new rulers of Sogdiana also adapted to certain institutions of the political economy already established in this territory. Settlement seems to have largely continued, particularly at the preexisting power centers of Marakanda-Afrasiab, Erkurgan, and Kalandartepa, although Koktepa was abandoned.[220] Simultaneously, this period seems to herald the beginning of wider development in the territory south of Samarkand during the third to first centuries BCE, the implications of which will be discussed further below (ch. 4.B, I.1). Moreover, these rulers continued the production of silver coinage from around 230 BCE in Samarkand, Kesh, and Bukhara. Respectively, these coinages imitated models from three different Graeco-Macedonian rulers: those of the Seleukid king Antiochos I (three denominations – *drachms*, *hemidrachms*, and *obols*), Alexander (*drachms*), and the Graeco-Bactrian king Euthydemos I (*tetradrachms*) (fig. 1). As these types were 'immobilized' through replication over the subsequent centuries albeit with variations (with further mints and types developed from the mid-first century BCE), the very fact of their production was, again, evidently shaped by local acceptability.[221] Moreover, these coinages circulated within Sogdiana (with the Euthydemos-imitation *tetradrachms* eventually also moving outside of the region), perhaps already implying that their diverse mints were established in a 'corporate' manner, with the outputs of different mints oriented toward specific types of transactions (i.e., regional and small-scale versus transregional and large-scale).[222] Indeed, although these coinages were certainly minted as a financial instrument for their issuing parties, it is also doubtful that they were foremost produced directly to

218 See, e.g., Beckwith 2009, 12–13; Paul 2003, 42–43; Gommans 2018.

219 The main kurgan (Kyzyltepa-SC-K13) had been looted, but an excavated satellite kurgan revealed the burial of a young man, with an arrow among the grave goods (Stark 2020, 84, n. 19; Wang, Mirzaakhmedov, and Stark 2020, 72).

220 See further below, ch. 4.B, I.1.

221 See generally Naymark 2008; 2022.

222 This is a point seen more clearly with the parallel emission and circulation of the Hyrkodes coinage (late first century BCE to the second quarter of the third century CE, perhaps minted in Kharqana in the western Zerafshan valley) and the Euthydemos-imitation *tetradrachms* in Bukhara, see Naymark 2022, 48–49.

pay soldiers (as under the Seleukids);[223] rather, they were probably oriented toward the ruling elite's expenditure in other domains.[224]

It also seems that Sogdiana's new rulers instigated the transfer of institutions of the political economy utilized in this region to the middle Syr Darya. Specifically, the first iteration of the major site of Kanka, located on a former pit-house settlement on the lower Akhangaran in Chach, is reported to have been built in the third century BCE to include a well-fortified 'citadel' surrounded by two successive walled '*shakhristans*,' altogether enclosing an area of some 150 ha (ch. 4.B, fig. 1.4).[225] The use of mudbrick, as well as certain forms of architecture and ceramics associated with this building phase, has long been observed to indicate particular ties with contemporary Sogdiana.[226] Thus, Shenkar has recently considered this alongside further material links between Sogdiana, sites in Chach, and in the neighboring region of Shymkent to suggest that Kanka's development may be attributed to the Kangju ruling elites' encouragement of Sogdian immigration and settlement in order to promote trade or agricultural production.[227] I would rather go a little further: Kanka would seem to be a planned construction implying the mobilization of some labor from Sogdiana. This perhaps suggests that a variant of the *kurtaš* system known from the Achaemenid period was used to bring or deport this group to Chach in order to build a new seat of power – partly modeled on those known in Sogdiana – for a ruler tied to the Kangju.[228] However, perhaps the Achaemenid lineage for such an institutional context of construction need not be insisted upon. The construction of broadly comparable planned walled sites serving a variety of functions is also known among imperial steppe polities, beginning with the Xiongnu from the second century BCE; in some cases, there are also indications that sedentary groups were (forcibly?) relocated to such sites, including to establish agricultural communities.[229] Admittedly, the interpretation suggested here might still be more convincing if the foundation of Kanka was found to have occurred in the next phase of the Kangju polity as understood here, and a systematic review of the archaeological data would be a desideratum to clarify this.[230]

Indeed, the later Kul'tobe inscriptions (ca. second century CE?) from the middle Arys also indirectly speak to the earlier transfer, via Sogdiana, of Achaemenid and Seleukid institutions of administration to Chach, although obviously we cannot pinpoint when precisely this occurred. Briefly, for context, these are a corpus of inscrip-

223 See II.2 above.

224 See below, ch. 4.B, I.2.

225 According to Buriakov 2011, 12–21.

226 E.g., in the work of Buriakov (1975, 31–36; 1982, 104–106; 2011, 16–17), who, however, thinks of a link to Seleukid initiative.

227 Shenkar 2020, 372.

228 On *kurtaš* workers, see above, II.2.

229 See Rogers 2017, 10.

230 I thank Sören Stark for a helpful discussion on this topic.

tions made in proto-Sogdian (still suffused with Aramaic ideograms) now known from 27 fragments of ceramic plaques dispersed in secondary contexts of reuse around the site of Kul'tobe.[231] As a result of the continued discovery of more fragments and Sims-Williams's updated editions and translations, it is now clear that these inscriptions represent the largely duplicated contents of two different texts (text 1 and text 2). These indicate respectively the ownership of the 'city' by a certain Spadhni of the *nāf* of Chach and recount the city's foundation in a military context alongside to the distribution of booty between leaders of different polities, including (probably) Chach, a group of nomads ('tent-dwellers'), and the four Sogdian centers of Samarkand, Kish (Kesh), Nakhshab, and Nawak-methan (Bukhara). Their date and initial locus of display remain uncertain, but it seems plausible that the inscriptions were made around the second century CE and refer to events following the disintegration of central power within the Kangju confederacy.[232] The latest editions of the texts indicate some substantive changes in historical interpretation, especially in terms of the socio-political institutions of Sogdiana and the middle Syr Darya during this period, which I will discuss in more detail below (IV.2–3). Only in relation to the early phase of the confederacy, one may note that the existence of these texts demonstrates that scribal staff trained in the use of Aramaic for record-keeping according to the Achaemenid tradition were available to the (implied) leader of Chach; moreover, his very name (Spadhni, literally 'army-leader') appears to be a calque on *strategos*,[233] perhaps speaking to the transfer of the Seleukid iteration of this position of civic-military governance (i.e., not simply referring to a general)[234] at an early stage in the region's development under the confederacy.

During this phase, the transfer and adaptation of institutions may further have flowed in the other direction – from north to south. Perhaps we see this manifested in the construction of Kala-i Zakhoki Maron some fifteen kilometers to the southeast

231 An early and widely accessible edition and translation was published in Grenet, Sims-Williams, and Podushkin 2007, 1022–1023. This has been superseded by Sims-Williams 2022 (which concludes with an updated text incorporating finds in 2020), and will be again by Sims-Williams forthcoming, which is drawn upon here.

232 The inscriptions certainly predate the *Ancient Letters*. One inscribed fragment of brick had been deposited in a context of use in association with a worn Soter Megas coin (copper alloy, of the Kushan king Wima Takto, ca. 90–113 CE), which at least indicates that the dismantled texts were deposited at some point after this coin was minted (Podushkin 2018; 2020, 906–911). Linguistic and orthographic factors, as well as the sense of Kangju's fragmentation, lead Grenet (in Grenet, Sims-Williams, and Podushkin 2007, 1030) to point to a date in the second or early third century CE. Recently, Yatsenko (2020c, 37) considers the inscriptions as dating to the first century CE according to information on apparently forthcoming material from Podushkin, but also cites personal communication with Torgoev and Lurje, who point to a date in the second century CE.

233 Observed in Sims-Williams forthcoming. One recently discovered fragment of Kul'tobe text 2 indicates that 'Spadhni,' understood in past translations and historical reconstructions as 'general,' is being used as a personal name rather than a title; see already Sims-Williams 2022, 53.

234 See above, II.2.

of Erkurgan in Nakhshab, only partially explored but perhaps first built at the turn of the second to first centuries BCE.[235] This enormous site featured a fortified citadel at its center, surrounded by three successive fortification walls, ultimately enclosing a space of some 220 ha that was largely devoid of internal constructions.[236] The precise origins of the plan as well as the function and significance of the site remain unclear, but it does seem to represent some kind of nomadic power center with empty space left for mobile constructions such as tents;[237] Rapin has more specifically considered it as a Kangju capital and parallel 'nomad' city for Erkurgan.[238] Stated with a slightly different emphasis, perhaps the ruler of Nakhshab (otherwise based in Erkurgan) might have had Kala-i Zakhoki Maron built as a periodic (seasonal?) residence and ceremonial power center. Some of the sizeable empty spaces in the broad class of 'citadel plus enclosure' sites in Sogdiana may indeed have been intended to host the 'inner army' of rulers, i.e., a personal army essentially extended from the warband, in this case predominantly heavy cavalry.[239] Thus perhaps Kala-i Zakhoki Maron was also oriented toward certain kinds of military organization.

Finally, relations to external polities during this heterarchical phase of the confederacy seem to have been organized along two axes: collective and autonomous action. As above, on the collective side, perhaps a military alliance was struck with the Tokharoi/Yuezhi toward the capture of Bactria in the mid second century BCE. The *Shiji* also reports that Kangju was in a partly subordinate relationship to both the Xiongnu and the Yuezhi (now in northern Bactria) in the 120s BCE, and furthermore that Kangju forces were expected to provide aid to Dayuan when invaded by Han forces at the end of the second century BCE.[240] Simultaneously, rulers in Sogdiana could also exercise autonomy, seen for example in Suxie sending envoys to the Han after 105 BCE.[241] At a lower level of relations, it is also plausible that elite warbands active in Sogdiana could have been recruited as mercenaries by Graeco-Bactrian rulers during the first

235 Suleimanov 2000, 26–28. Lyonnet (2020a, 12), however, points out the low number of Afrasiab III type goblets in collected pottery, indicating that this date may need to be revised. On Afrasiab III goblets, see also below, ch. 4.B, I.2.

236 See the description in Suleimanov 2000, 26–28.

237 Abdullaev 2007, 84–86; see also comments on such 'citadel plus enclosure' sites in Kidd and Stark 2019, 166.

238 Also with prophylactic quotation marks in Rapin 2007, 53. Alternatively, Suleimanov (2000, 26–28) suggests that this was an urban center that took over the position of Erkurgan during its operation.

239 Mooted in Kidd and Stark 2019, 166 (referencing the inner army in Paul 2003, 42–44).

240 *Shiji* 123.3161, 3177, trans. Watson 1993, 234, 249. Perhaps the information about the Yuezhi here is dubious (as in Stark 2020, n. 47).

241 *Shiji* 123.3173, trans. Watson 1993, 243. Specifically, envoys from a set of smaller states west and east of Dayuan accompanied Han envoys back from Anxi to China to bring gifts to court; to the west are Huanqian 驩潛 and Dayi 大益, and to the east Gushi 姑師, Wumi 扜罙, and Suxie 蘇薤. Huanquan and Dayi may refer respectively to the right bank and left bank of Chorasmia (see, with further references, Stark 2020, n. 23). The 'east' in reference to Suxie appears to be a mistake (see e.g., Huber 2020, 13).

half of the second century BCE and conducted raids into this territory in the pursuit of booty.[242]

IV.2 Phase Two (ca. First Century BCE to the First Century CE): Hierarchy and Competition

This phase of the Kangju confederacy is defined by a significant shift toward a more hierarchical mode of political organization. Most importantly, this entailed the development of a central institution of kingship and the elaboration of hierarchies between ruling elites and new vassal territories. However, the polity's subsidiary elites not only operated cooperatively during this phase but also competitively, managing to exercise a considerable amount of autonomy in various domains.

At this point, a Kangju king, evidently a supreme ruler, begins to be mentioned several times in the Chinese transmitted and excavated texts, although he is never named personally. It is worth noting that leadership among historical Inner Asian polities was constructed in a variety of ways, although often taking the form of hereditary kingship. It is unfortunate that we have no information as to whether this institution amongst the Kangju emerged from a prominent lineage (e.g., an eminent clan) or was established through other means. At the least, several historical examples show that, even when hereditary kingship was in play, succession was often a point of friction, with personal assets like charisma and prowess in warfare shaping a leader's rise and success.[243] Succession struggles even within the context of hereditary kingship could also be mediated through some relatively more formal approaches and institutions for choosing leaders, e.g., following a principle of tanistry and/or with important roles played by councils (e.g., especially among the Mongols and the Türks).[244] In any case, the king's authority was evidently projected from two locations: a winter seat of governance in the area of Leyueni 樂越匿, most plausibly the site of Kanka, and a summer residence in Beitian 卑闐 'city,' located seven days' ride from the winter seat and perhaps situated in the northern foothills of the Tien Shan around Chu-Talas.[245] A peripatetic court with rotating seasonal residences is not necessarily

242 See below, ch. 4.B, I.2.

243 On charisma, see, e.g., Osinsky 2021.

244 Respectively, Fletcher 1979–1980; Drompp 1990. I thank Sören Stark for drawing these references to my attention. See also diverse examples of leadership selection discussed in Rogers 2012.

245 Part of the relevant text in *Hanshu* 96A.3891–3892 (trans. Hulsewé and Loewe 1979, 124–126) is apparently corrupt and missing, and likewise any distances provided from Chang'an are rough if not inaccurate. A far later emendation in the Tang period puts the king's seat ('winter' not specified) in Beitian in the area of Leyueni (see Hulsewé and Loewe 1979, 124–125, n. 299); thus many others also speak of a winter capital at Beitian in the area of Leyueni (see, e.g., Yatsenko 2020c, 32). The latter toponym, Leyueni(di) 樂越匿地 (i.e. [the area of] Leyueni), could perhaps transcribe a name of the Jaxartes (Pulleyblank 1962, 94). Many proposals have been made for the location of the winter seat, but only two really seem plausible: somewhere in the Arys basin, especially in light of the apparent

a marker of an inherently 'nomadic' political structure and can serve various practical or ideological purposes, but the practice is certainly known from several nomadic polities active in historical Central Asia.[246] The king's potential use of Kanka as a periodic residence also does not automatically exclude the possibility that a subordinate ruler or governor was otherwise responsible for Chach during this period.[247]

A small group of high elites surrounded the king, although we have only a few hints about their composition as well as the hierarchies and institutions governing their behavior. From the royal household, we see that descendants could be used as tools of high-level diplomacy with external polities and rulers: some sons and heirs were evidently sent as hostages to the Han court in the first century BCE (a familiar practice for rulers with diplomatic ties to the Han),[248] while some daughters were used for marriage alliances, for example in the ultimately ill-fated arrangement in 45 BCE with the Xiongnu *chanyu* claimant Zhizhi, who established himself in Kangju territory. Another such marriage alliance was conducted later with the Yuezhi king (i.e., presumably the Kushan king Kujula Kadphises, ca. 50–90 CE) in 84 CE.[249]

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importance of this territory vis-à-vis Kangju (see, e.g., Baipakov, Smagulov, and Erzhigitova 2005, 164; Lin 2017; Yatsenko 2020c, 33), or as long mooted, in Chach, more specifically Kanka (Buriakov 2010, 19). This identification has been recently supported by Stark (2020, 87, n. 45) not only in reference to the plausible derivation of the site's name from Kangju itself (see above, III.1) but also noting the position of the Western Türk winter capital in the seventh century CE in the same region. Thus far, sites of comparable size to Kanka are not known in the Arys basin; the largest is the much smaller enclosure site Karaspantobe (ca. 16.3 ha, not far from Kul'tobe-Arys), making Kanka seem far more important by comparison. The summer residence (here Beitian) is additionally specified as *fannei* 蕃內 – either 'within the realm' or qualified with the name Fannei – and, following an amendment of the probable corruption of the text, was located 901 *li* from the winter seat, as well as 1,510 *li* north of Dayuan, although these numbers are probably not very accurate (*Hanshu* 96A.3892, trans. Hulsewé and Loewe 1979, 126, n. 300). Beitian may have been located near a lake (see Hulsewé and Loewe 1979, 125, n. 299). It is impossible to propose a location with any confidence, but presumably the residence was located at a higher altitude than the winter seat and/or in proximity to summer pastures. Thus, I suppose a location on the northern flanks of the Tien Shan or closer to Talas or Chu is plausible; a Western Türk summer capital was located also in this area, specifically at Suyab near to modern Bishkek. Alternatively, Lin 2017 proposes that the summer capital should be located at Kul'tobe-Turkistan.

246 See some examples discussed in Morris 2021, 138–139, and more generally on mobile rulers and courts, Kobishchanow 1987; Atwood 2015; Neuman and Sending 2016. I thank Sören Stark for these references.

247 Note the use of governors' palaces as residences of the peripatetic Seleukid court (Strootman 2011, 71) and, more hazily, the existence of a governor at Kapisa-Begram in the Kushan period while the region was also putatively the location of the summer capital of the court (Morris 2021, 136–142).

248 See *Hanshu* 96A.3892 and slip II 90DXT0215④:17 from Xuanquan dating from 21 BCE in Hao and Zhang 2009, 199. During the reign of Emperor Cheng (r. 32–7 BCE), Chen Tang accused the Kangju of having sent a fake heir to Chang'an, but the heir was determined to be genuine after all (*Hanshu* 70.3020).

249 Respectively, *Hanshu* 70.3009; *Hou Hanshu* 47.1579.

It appears that the position of a crown prince endowed with special military and political authority was also formalized in this period. Such a figure (Baosuni 保蘇匿, *taizhi* 太子 of Kangju) is met without much context around 21–18 BCE, apparently intending to surrender to a Han protector-general with over 10,000 men, even if he ultimately changed his mind.[250] A figure with the same position might also be found slightly earlier in the course of the unauthorized Han military expedition led by Chen Tang into Kangju territory in 36 BCE in pursuit of Zhizhi; apparently by this point the Xiongnu potentate was using his new power base, perhaps around the lower Talas (as usually assumed), with Kangju's approval, to harass both the neighboring Wusun (a Han ally at this juncture) and Dayuan. Thus at the northeastern frontiers, the Han army crossed paths with a Kangju 'viceroy' [of?] Baotian (*fu wang Baotian* 副王 抱闐)[251] returning from a raid with thousands of horsemen to the east of the Wusun royal seat of Chigu 赤谷 (which Zhizhi had himself raided just earlier); he and his men had killed a thousand and driven off their livestock. This title *fu wang* is apparently used elsewhere in the Han standard histories only in reference to figures in neighboring Dayuan and Da Yuezhi.[252] In the latter contexts of use, it may approximately express a high military-political position assumed by the crown prince or even a title of the crown prince himself.[253] In any case, the men attached to the 'viceroy' took this fortuitous encounter as an opportunity to plunder the Han baggage carts, before a good number of them were killed by the Han, and a certain Yidunu (a nobleman [*guiren* 貴人] associated with the viceroy) was arrested, presumably in an attempt to gather intelligence.[254] Some familiar institutions are already visible by this point, certainly the use of raids as a mechanism for the transfer of livestock and booty, but also the personal following attached to successful military leaders, in this case evidently including nobles. We meet more such Kangju nobles again shortly afterward, as the Han commanders are successfully able to coopt various members of a family antagonistic

250 *Hanshu* 70.3030, see brief comments in Yu 2004, 11; Tse 2021, 253.

251 *Hanshu* 70.3011. The first instance in the text clearly seems to suggest a personal name (Kangju viceroy Baotian), but the second instance in reference to the nobleman seems to rather say 'in Baotian', suggesting a toponym; thus it remains unclear whether this position was tied to a specific territory or not. I thank Moritz Huber for discussing this passage with me.

252 Twice in *Hanshu*, with the second instance being a reference to this position as well as an auxiliary king (*fu guo wang* 輔國王) in neighboring Dayuan (*Hanshu* 96A.3894). It is also in *Hou Hanshu* 47.1580 relating to 90 CE, when a Yuezhi figure with this title and apparently named Xie 謝 – perhaps pronounced in a way sounding similar to the first syllable of [Wima] Takto, the second Kushan king (ca. 90–113 CE), and confirmed independently to be the son of his predecessor, the king Kujula Kadphises – is sent with an army to attack Ban Chao west of Kucha (see discussion with further references in Falk 2015, 97–100).

253 Perhaps this position is also expressed in the reference to the Guti (Tochari/Yuezhi) 'crown prince' (son of the king) who was unsuccessfully pursued by Arsakes in the Babylonian *Astronomical Diaries* 2, 118A, A19–A22 concerning 119 BCE. The text is briefly discussed in Falk 2015, 61–62. Alternatively, Stark (2020, n. 35) raises the possibility it may be a calque for *yabgu*/*xihou*.

254 *Hanshu* 70.3012.

to Zhizhi to procure intelligence about his position.[255] Thus, although the precise base of their power is unknown, some nobles and their families also evidently exercised the agency to break with the will of the king.

A group of high nobles also seems to emerge around the king in this phase of the confederacy. In the report of a Han protector-general's complaint about the Kangju's diplomatic comportment in the second half of the first century BCE,[256] we find some information about feasting as a sociopolitical institution amongst them, which was evidently coded with hierarchies in respect to seating positions and order of consumption; specifically, we are told that when foreign envoys are received in Kangju, the king and noblemen (*guiren* 貴人) eat and drink first, and in this case, Han officials (who were seated below the Wusun and other envoys) would only be served when the king and nobles were finished.[257] Perhaps these noblemen might be largely equivalent or overlap with a circle of *xihou* (歙侯, 翕侯) strategizing with the king regarding a conflict with the Wusun around 44 BCE.[258] This title appears elsewhere during the Han period in reference to the Yuezhi, Wusun, and Xiongnu, and its meaning and origins have been much debated; in the case of the Kangju, at least, these *xihou* can only be safely interpreted as high nobles surrounding the king.[259] Whether this elite circle were permanently at court and functioned as the king's personal council, even his *comitatus*, is a matter of speculation.[260]

This phase of the confederacy also seems to witness the consolidation of a hierarchical relationship between Kangju's central power (i.e., the king) and the rulers of the subsidiary polities located within its territory. Namely, we learn of five 'lesser kings' (*xiao wang* 小王) subject to the Kangju and located within its territory; these

255 *Hanshu* 70.3012. Specifically mentioned are a Tumo 屠墨, his mother, her brother Beishizi 貝色子, and his son Kaimou 開牟, with both Tumo and Beishizi qualified as noblemen.

256 This is also the source of the often-cited assertion of Kangju's diplomatic interaction with the Han as being driven by their desire to trade, probably best interpreted as a rhetorical device, for which see Leese-Messing, ch. 3, II.3.2, this volume.

257 *Hanshu* 96A.3893.

258 *Hanshu* 94A.3802. Less clear is the role of such figures in Chen Tang's assault on Zhizhi's seat. Beforehand, *Hanshu* 70.3013 has the *chanyu* raising a five-colored banner from his 'city' (fortress) walls, while Liu Xiang's post hoc defense of the operation has it conclude with the massacre of the five-walled city (屠五重城), capture of a *xihou* flag (or flags), Zhizhi's beheading, and the raising of a Han banner (*Hanshu* 70.3017, see also trans. Tse 2021, 242; the same passage is replicated in *Qian Hanji* 23.2; I thank Moritz Huber for discussing these passages with me). Cribb (2018, 3) instead reads the latter passage as referring to the destruction of five main towns and thus considers whether these *xihou* might be equivalent to the five 'lesser kings' (*xiao wang* 小王) encountered elsewhere. I do not think the texts imply a correspondence between the two sets of figures. Stark (2020, n. 50) considers that the use of this title in *Hanshu* 94A.3802 might simply be attributed to Wusun informants.

259 The title is usually taken as equivalent to *yabgu*, but there is a lack of agreement on whether it transcribes the title of a foreign institution (thus indicating a tribal chief or a secondary rank of authority), or is rather a title first bestowed by Chinese authorities to friendly 'allied princes'; Cribb (2018) does not rule out the former option, but argues for the latter.

260 For similar roles among the Xiongnu, Di Cosmo 2013, 31–32.

appear to have emerged at least by the second half of the first century BCE.[261] These kings are listed and indicated as ruling from synonymous 'cities' (*cheng* 城, perhaps better understood here as fortresses), with their rough distances from the Yang Barrier and the seat of the protector-general indicated with somewhat corrupt figures.[262] They are the Suxie 蘇筹 king,[263] the Fumo 附墨 king, the Yuni 窳匿 king, the Ji 罽 king, and the Aojian 奥鞬 king. The location of these seats has been long debated with vastly different solutions offered over time; at least, in respect to spatial information provided in the *Hanshu* and broader historical considerations, these seats were plausibly distributed between Chach and Sogdiana and might respectively refer to Samarkand (Suxie), perhaps a seat in Kesh or Nakhshab (Fumo), Chach (Yuni), Bukhara (Ji), and Kharqana (Aojian).[264] The existence of at least the Suxie king is independently attested elsewhere: already in the 'camel case' document from Xuanquan dated to 39 BCE we find parties sent by the king of Kangju (an envoy and vice envoy) and king of Suxie (an envoy, vice envoy, and nobleman) bringing camels to the Han, apparently as gifts for use by authorities at Jiuquan.[265] That these lesser kings are named according to their seats might suggest that the confederacy was organized on the basis of territorial 'fiefs' presided over by subsidiary rulers.[266] It is also possible that the order they are listed in might reflect a hierarchy between their rulers (i.e., with Suxie named first),[267] although this is not clear. Some of these lesser kings and the nobles

261 *Hanshu* 96A.3894. See discussion in Bi 2019, 55.

262 On these figures, Huber 2020, 18–19.

263 筹 here is a variant for 薙, see Huber 2020, 18, n. 32.

264 A central problem is that the much later *Xin Tangshu* purports to place Ji in An 安 (Bukhara), Yuni in Shi/Zhezhi 石 (Chach), Fumo in He 何 (Kushaniyya), Suxie in Shi 史 (Kesh), and Aojian in Huoxun 火尋 (Chorasmia), but these might be confused or even guessed-at locations (see translations and discussions in Bi 2019, 51; Huber 2020, 54–67). It seems that Suxie, a transcription of Sogdiana, probably refers to Samarkand in this period as the traditional main center of the region (Bi 2019, 53–54). Otherwise, the (corrected) spatial information in *Hanshu* might generally suggest that Yuni is located closest to the east out of all of the seats, and the name could indeed be a transcription for a location in Chach; roughly equidistant are Suxie and Fumo, located some 250 km further away from Yuni, but it is not clear what toponym Fumo may transcribe, hence a location in southern Sogdiana here is simply speculation. Aojian is some 150 km further away and plausibly is a transcription for an ancient name of Kharqana in the western Zerafshan (which was often tied to Bukhara throughout its history), while Ji, located some 100 km still further away, may then partly transcribe an ancient name for Bukhara; here I partly follow the scheme proposed in, e.g., Yu 1998, 100–102, 105–107, with Stark and Naymark both tentatively taking up this location of Aojian (Stark 2020, 95, n. 53; Naymark 2022, 50). See, however, still other proposals discussed in Bi 2019, 51; Yatsenko 2020c, 31–32.

265 II 90DXT0216②:877–883; Hao and Zhang 2009, 197–199; see translation and analysis of the first part of the document in Leese-Messing, ch. 3, II.2, this volume, and translation of the full document in Bi 2019, 50.

266 Compare, for example, the appanage system of the Xiongnu, parceled out to rulers described in Chinese texts as various kinds of kings; however, as the kings responsible for each fief were drawn from the royal family and these positions were hereditary (Di Cosmo 2013, 26–29), the comparison does not have to be precisely parallel.

267 As mooted by Bi 2019, 52.

surrounding them were also able to act with considerable autonomy, as indicated by the Suxie king sending envoys to the Han.[268] Furthermore, the Aojian king was also directly entangled in Xiongnu politics;[269] in reference to events in 60–58 BCE, the Xiongnu *chanyu* attempted to install his own son to the Aojian 'King of the Left' (a title perhaps implying a designated heir following a Xiongnu institutional model), although this was thwarted by Aojian's noblemen, who established the previous king's son instead. Later, a Aojian king even appeared as a claimant for the position of *chanyu* and served as the head of a military campaign to the Western Regions.[270]

It is tempting to assume that the lesser kings named in the *Hanshu* align in some way with entities named in the (slightly later) text 2 of the Kul'tobe inscriptions (Chach, the 'nomads,' Samarkand, Kesh, Nakhshab, and Nawak-methan/Bukhara),[271] as well as the five main mints producing coinage in Sogdiana by the mid first century CE (located in Samarkand, Kesh, Nakhshab, Bukhara, and perhaps Kharqana).[272] However, they do not need to be precisely contiguous, especially as the numismatic landscape was more complex: coinage seems to be minted in Chach only from the early fifth century CE, and smaller mints in Sogdiana were also active producing imitations of (Bactrian imitations of) *obols* of Eukratides in the east and south, as well as two other coinages elaborating the Antiochos type somewhere in the Zeraf-shan valley west of Samarkand.[273]

Although the Kul'tobe inscriptions seem to refer to historical events in the next phase of the Kangju confederacy's political organization – i.e., the breakdown of central authority from the second century CE – it is now necessary to discuss in more detail what these texts may already indirectly suggest about patterns of political organization during the first century BCE to the first century CE. As noted above, the two texts these inscriptions represent relate to a 'city' (*knth*) founded in the area in an apparent military context, as well as collective action taken by various parties. Text 1 expresses the ownership of this site – "this city … belongs to Spadhni, the (leader) of the people [*n'p*] of Chach, in person"[274] – while the largely identical versions of text 2

268 Stark 2020, 87.

269 See Stark 2020, 87.

270 *Hanshu* 94A.3788, 3790, 3795. See discussions, vis-à-vis the persistent autonomy of local leaders under the Xiongnu and emergence of potential leaders outside the royal core in Miller 2014, 18, 20 and in respect to Xiongnu titulature in Di Cosmo 2013, 32–33.

271 See e.g., Bi 2019, 52; Shenkar 2020, 369.

272 On Kharqana as the hypothetical location of the Hyrkodes mint, see discussion in Naymark 2022, 50.

273 On these Sogdian coinages, Naymark forthcoming a with further references. The first Chach coinage is a series of copper issues with designs featuring a portrait of a ruler, a *tamga*, and a legend referring to a ruler (*khūv*) of the *nāf* of Chach (discussed in, e.g., Rtveladze 2009; Shenkar 2020, 367). Although varying dates for this coinage have been proposed, ongoing research now suggests that they were produced not earlier than the first quarter of the fifth century CE (Aleksandr Naymark, personal communication).

274 Sims-Williams forthcoming; 2022, 43.

contain far more detail. The latest edition of the main version of the text may be quoted here (also indicating root forms of important terms for reference):

> This city was built by the son of the (leader) of the people [*n'p*] of Chach, Spadhni by name. He went (?) here when … was killed. And the people's representative [*n'p ḤLYK*] (of the people of Chach?), and the people's representative [*n'p ḤLYK*] of the nomads, and the lord [*MR'Y*] of Samarkand, and the lord [*MR'Y*] of Kish, and the lord [*MR'Y*] of Nakhshab, and the lord [*MR'Y*] of Nawak-methan – they took all the treasure [*GNZ*]. And the family representative(s) [*n'p ḤLYK*] of the ruler(s) commanding (the army) (took a share?) for (his/their) own relatives [*γwtm*].[275]

Notably, some versions of the text also seem to list the Sogdian centers in a slightly different order: Nakhshab, Samarkand, Kish, and Nawak-methan;[276] this is of some interest in reference to their specific political organization when the inscriptions were composed (see below, IV.3).

In any case, this latest edition of text 2 suggests several significant points about political organization among these groups – especially as *ḤLYK* (probably an Aramaic ideogram) was previously interpreted to refer to the distribution of land allotments among them. First, it now seems clear that two basic forms of political organization are represented among these groups acting in cohort. The Sogdian polities each had a lord, probably using the ideogram *MR'Y* to express the later-attested Sogdian princely title *khūv*; the same ideogram appears on some Sogdian coin legends already in the first century CE and is used to refer to a ruler in Samarkand in 313 CE in the Sogdian *Ancient Letters*.[277] Otherwise, (presumably) Chach and the apparently unspecified group of nomads (literally 'tent-dwellers')[278] both had something like an 'chosen/allotted representative' of their *nāf* (*n'p ḤLYK*).[279]

The meaning of the term *nāf* is of some interest here. Etymologically, it refers to relatives or family; by the time of the eighth-century Arab conquests in Sogdiana, it had come to express a specific institution of sociopolitical organization – self-governed civic communities with a strong oligarchic component represented by powerful citizens, nobles, and merchants.[280] Thus Shenkar interprets the Kul'tobe inscriptions as evidence that a recognizable form of this institution (i.e., without a ruling 'lord')

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275 Edition and trans. Sims-Williams forthcoming, updated from Sims-Williams 2022, 52–53.

276 I.e., the first order is represented by K19, K4, presumably also K1 and K10, the second K13 (Sims-Williams forthcoming); see also Bi 2019, 52.

277 In the *Ancient Letters*, the title is in AL2.V62, discussed below, IV.3. For the coins, see, e.g., Bukharan Euthydemos-imitation *tetradrachms* with Greek legend to left and Sogdian to right, produced around the first half of the first century CE (Naymark forthcoming c), and the 'reformed archers' of Nakhshab from perhaps the late second century CE (Naymark 2016, 58–59; 2020, 232–236). Bi Bo (2019, 52) tentatively suggests that MR'Y should thus indicate titles equivalent to the *Hanshu* lesser kings (*xiao wang*), and that the absence of this title in reference to Chach would indicate it is not the location of one of these seats. Again, perhaps these sources do not need to correspond so precisely.

278 De la Vaissière (2013) alternatively proposes to interpret this as a name for the Wusun.

279 On the reinterpretation of this expression, Sims-Williams 2022, 54; forthcoming.

280 See discussions with earlier literature in Grenet 2020; Shenkar 2020; 2022.

may already be found in Chach in this early period and suggests that it emerged in the context of early Sogdian colonial expansion.[281] Grenet has also considered the same inscriptions to indicate that the *nāf* was the main political institution in Sogdian city-states already by the second or third century CE.[282] But, alternatively, perhaps the term is used here rather more in line with its etymological sense, to express a basic institution of sociopolitical organization shared by the 'nomads' and Chach, i.e., something like the anthropological clan or tribe,[283] which was only later transferred and adapted into the distinct form of political organization seen in Sogdiana in the early Middle Ages.[284] Indeed, the seeming reference to 'chosen' leaders in these cases is hardly unfamiliar in the broader landscape of political organization among nomadic polities that I have discussed above.

Furthermore, while the main part of the text seems to recount the distribution among the named parties of booty or spoils of war – expressed with the ideogram *GNZ*, again suggesting the long-term influence of Achaemenid-era administrative terminology[285] – the last lines also seem to refer to the *nāfs*' chosen representatives taking part of these spoils for intended redistribution among their own 'relatives.' Perhaps here we may once again see the key institution of the warband (although this is not the only possible interpretation of the text). Although warbands were typically recruited and organized on personal bonds rather than real kinship lines, in many cases retainers were practically as close as their lords' family members; the group could moreover include relatives, or the relationship between leader and retainers could be framed in kinship terms (i.e., as a brotherhood).[286] Indeed, even with respect to the variant of this institution attested in Sogdiana from the seventh to ninth centuries CE – the *čākar*, personal soldier-retainers attached to nobles – the relationship between leader and warband seems to have been framed in one case as that of adoption.[287] While Shenkar considers that the *čākar* was able to flourish in Sogdiana because of the specific institution of the *nāf*,[288] it would seem that both of these institutions ultimately derive from sociopolitical institutions of northern nomadic groups, and that

281 Shenkar 2020, 370.

282 Grenet 2020, 27–28.

283 See above, III.2.

284 A possibility already noticed in Stark forthcoming b.

285 Aram. *gnz*, for OP **ganza-*, 'treasure, treasury'; likewise Aram. *gnzbr* for **ganzabara-*, 'treasurer' (uses in non-Iranian languages in the Achaemenid period, Tavernier 2007, 422, 443). This term usually refers to stored wealth in an official context, often in connection to a context of tribute or taxation; see from Central Asia the use of the Aramaic ideogram in the Parthian ostraca from Nisa, e.g., in referencing wine brought to the kings' treasury, in Diakonoff and Livshits 1977, no. 1949. See also the case discussed above (II.2) of the fortress Gazaka of the Achaemenid period near the Syr Darya frontier, the toponym of which leads Stark (2021, 697) to suggest precisely such a treasury function.

286 See generally Paul 2003, 40–41; the example of the Chinggisid *keshik* in Gommans 2018.

287 Namely, during the Sogdian general An Lushan's rebellion in the mid-eighth century CE; see discussion with further references in de la Vaissière 2006.

288 Shenkar 2020, 383.

the form they manifested in Sogdiana during the early Middle Ages was shaped by centuries of interaction. Much of this history remains blurry; in any case, it is certainly reasonable to conclude that the period of Sogdiana's integration into the Kangju confederacy was an important one of institutional transfer and development.

Patterns of institutional transfer and development can also be highlighted in Sogdiana during this phase of the confederacy. By around the beginning of the first century BCE, the Aramaic script had begun to be used to write the Sogdian language, as indicated by an example of personal names incised on an Afrasiab III-type goblet at Marakanda-Afrasiab.[289] Furthermore, turning to the numismatic record, the endurance and expansion of coin production in this phase demonstrate this instrument's ongoing utility for issuing parties. As before, it seems that this coinage was not produced primarily to pay soldiers and probably rather was intended to facilitate expenditure in other domains.[290] Patterns of coin production also shed light on developments in political organization and institutions within Sogdiana. Most importantly, the broader changes in design seen in the first century CE entail the first portraits of their issuing rulers, who are clearly styled as nomads, and express the names of the rulers (Hyrkodes and Ashtat) for the first time (fig. 2.1–3).[291] In addition to this, the designs of these coins draw variously on other vocabularies of power in order to express the legitimacy of their issuers: broadly, these are of Hellenistic (e.g., in legends, iconography of royal paraphernalia, and visual style) as well as Iranian origin (e.g., the use of Sogdian legends, the Zoroastrian name 'Ashtat').[292] These coinages moreover suggest some political cooperation between their issuing parties, in that the simultaneously but separately produced Bukharan Euthydemos-imitation *tetradrachms* (if being gradually reduced in weight) and two smaller denominations of Hyrkodes (minted perhaps in Kharqana) circulated within the same monetary zone of Bukhara oasis. As Naymark suggests, this seems to indicate a deliberate distribution of roles between these mints, with the Euthydemos imitations oriented toward external transactions, and the Hyrkodes issues toward local smaller-scale ones.[293]

The stylization of these rulers as nomads on their coin portraits moreover recalls comparable depictions of male elite nomads known from a small number of carved bone, ivory, and horn artefacts – especially examples of belt plaques (fig. 3) and composite-bow overlays – that probably date to the first and second centuries CE. Specifically, these have been found in Bactria (deposited at the Oxus Temple, Takht-i Sangin), Sogdiana (in burials at Kuiumazar and Orlat), the middle Syr Darya (a burial at Kylyshzhar), and in the northern foothills of the Tian Shan (at the site Kyzylbulak-IV); they variously depict men engaged in hunting and battle, as well as

289 See above, II.2.
290 See below, ch. 4.B, V.2.
291 See above, III.1.
292 See Naymark 2020, 236–239; forthcoming a.
293 Naymark 2022, 48–49.

Fig. 3: Engraved bone belt plaques from kurgan 2 at Orlat, first to second centuries CE. Width of each 13.5 cm. Institute of Art Studies of the Academy of Sciences of Uzbekistan, Tashkent IX/278 and IX/279. Courtesy of Institute of Art Studies, Tashkent, photographs by Andrey Arakelyan.

perhaps a memorialized scene of victory.[294] These figures are portrayed with varying physiognomic traits, hairstyles, dress, and armaments that do not precisely align with the combinations of these features seen on contemporary coin portraits. However, the carvings that depict several figures with largely homogenous traits seem to do this intentionally in order to express group belonging.[295] Indeed, as one of the main belt plaques from kurgan 2 at Orlat portrays a battle scene between two virtually identical groups of heavily armed figures, this may have been intended not only to depict internecine strife, but even conflict between two closely connected leaders and their warbands. I do not think that any figures depicted on the known carvings thus far may be identified to represent the emblematic 'Kangju'; instead, they simply show that diverse groups of nomadic elites were active in the territories within which these artefacts were found.

Taking again a broader perspective on trends toward hierarchization within the Kangju confederacy, the *Hou Hanshu* and the *Weilüe* (as quoted in commentary in the *Sanguozhi*) suggest that a set of further territories came to be subject to the polity around the first century CE, although the precise nature of these dependent relationships is mostly obscure. Specifically, relating to information most probably obtained prior to 125 CE, the *Hou Hanshu* names Liyi 栗弋 as a dependency of Kangju, as well as Yancai 奄蔡 (renamed by then Alanliao 阿蘭聊) and Yan 嚴.[296] Liyi/Suyi certainly represents a transcription of Sogdiana, which was perhaps meant to replace Suxie as a general regional designation (with the latter instead used to refer to Samarkand) to avoid confusion,[297] but how this information corresponds to the picture of the lesser kings in the *Hanshu* is unclear. In any case, Yancai/Alanliao and Yan are certainly to be understood as territories tied to the nomadic sphere of the steppe, probably located respectively in the Syr Darya delta region (or perhaps the north Caspian steppe) and the forest steppe zone of the southern Urals.[298] Yan is further specified at this point as producing small animal pelts (*shu pi* 鼠皮), which it delivers to Kangju, presumably as tribute.[299] These furs could have derived from a variety of rodent-like animals – presumably not rats or mice as implied by *shu*, but rather

294 For the Oxus Temple carvings as belt plaques, Ilyasov and Rusanov 1997, 109; Ilyasov 2003, 274–300. For the Kuiumazar k. 19 bone plate, see discussion in Abdullaev 2007, 88–89. For the Orlat belt plaques, Pugachenkova 1989, 148–154, figs. 70–72; Ilyasov and Rusanov 1997. For the Kylyshzhar k. 14 horn overlays Podushkin 2022. For the Kyzylbulak-IV plaque, Goriachev, Yatsenko, and Ergorova 2016.

295 A point, incidentally, also comparatively reiterated by the long-observed similarities between princely imagery associated with the Yuezhi/Kushans: the portrait of the ruler on the 'Heraios' coinage, the clay sculptures of Khalchaian, and depictions on figures of embroidered textiles produced in Bactria that were discovered in the royal Xiongnu tombs of Noyon-uul; see, for example, Francfort 2013, 1573–1574.

296 *Hou Hanshu* 88.2922–2923.

297 As in Bi 2019, 54.

298 Yancai is specified elsewhere to be located on a great marsh (*Shiji* 123.3161; *Hanshu* 96A.3893); see, e.g., the discussion in Yatsenko 2020c, 35–36.

299 *Hou Hanshu* 88.2922.

martens, weasels, or mink.[300] Information obtained before 239 CE and transmitted in the *Weilüe* bolsters this impression; by this period, it is noted that Beiwuyi (or north Wuyi) 北烏伊 and Liu 柳 (apparently both steppe territories, the former in the north of Kangju), as well as Yan and Yancai, had formerly been dependencies of Kangju, and that they moreover have many famous sables (here, *diao* 貂).[301] I will return to the topic of these furs later below (ch. 4.B, I.2 and II.1).

Having laid out the scope of political organization in this phase of the Kangju confederacy, we can further consider how these different actors interacted with one another. It seems that the sphere of high-level diplomatic relationships with neighboring and distant polities was largely dominated by the king, although he apparently did not exercise a complete monopoly on these interactions,[302] speaking to a broader landscape of competition as well as cooperation among the confederacy's ruling elites during this period. These diplomatic relationships were opportunistic, flexible, and dynamic. Positive relationships were variously fostered with gift exchange, receptions with feasts, marriage alliances, exchanges of royal hostages to foreign courts, and promises of military aid (when not perceived as detrimental to the Kangju), while negative relationships were expressed through predatory raids and swift betrayals when tides turned. These dynamics are nicely captured in a Han protector-general's assessment of Kangju's interaction with the Wusun and the Xiongnu in the latter part of the first century BCE:

> Amongst themselves these three states are sending each other presents and communicating as they did previously. Likewise they keep a watch on one another; and if they see a suitable opportunity, they then send out troops [against each other]. If they unite, they are incapable of enjoying each other's friendship or trust; if they are split apart, they are unable to make subjects of one another.[303]

The Xiongnu especially continued to command an important presence in the Kangju political sphere, although the relationship between the two became more fraught from the mid-first century BCE alongside the fragmentation of the original Xiongnu royal dynasty. Thus the king's optimistic entanglement with the Xiongnu ruler Zhizhi had been inaugurated with a marriage alliance, although the relationship ultimately devolved when Zhizhi had a Han envoy killed, followed by his Kangju wife and further nobles.[304] It is worth noting that Zhizhi's reported capacity to compel 500 men

300 See Hill 2015, 388.

301 *Sanguozhi* 30.862.

302 Unlike the Xiongnu *chanyu*, see Di Cosmo 2013, 28.

303 *Hanshu* 96A.3892, trans. Hulsewé and Loewe 1979, 127. The full passage is discussed and translated in Leese-Messing, ch. 3, II.3.1, this volume.

304 For the entire episode, *Hanshu* 70.3009–3029, which is described in more detail by Leese-Messing, ch. 3, II.2, this volume. Incidentally, this fortress of Zhizhi is the same settlement brilliantly – if certainly erroneously – argued by Dubs (1940; 1957) to have been built and defended by Roman soldiers, putatively having been taken captive to Antioch in Margiana by the Arsakid king Orodes after the defeat of Crassus in 53 BCE, who are then supposed to have gone on to help build a new

over two years to build him a fortress within the northeastern frontiers of Kangju territory – where he was eventually besieged and killed by Chen Tang's men – probably also reflects his access to an underlying institution of extraction (i.e., of corvée labor or deportees) like the one I have suggested to have facilitated the earlier construction of Kanka.[305] But again, the case of the Aojian king mentioned above shows that relationships with the Xiongnu were not monopolized by the Kangju king alone.

Entanglements with the neighboring Wusun also mirror some patterns seen in the Zhizhi affair. In two separate periods of violently contested succession (further exacerbated by Han interference) – after 33 BCE and around the end of the first century BCE – we find a relative of a murdered lesser *kunmo* absconding to the Kangju, apparently searching for military backing.[306] In the first case, the culprit Rier 日貳 was eventually assassinated. In the second case, a Beiyuanzhi 卑爰寔 – evidently a formidable military leader who had previously undertaken raids in the western Xiongnu borderlands – had brought a force of some 80,000 seeking support for a takeover of Wusun territory. He was killed by a Han protector-general just a few years later. Again, all of this occurred in a wider political landscape of dynamic elite competition and cooperation. As seen above, the Kangju king strategized with his nobles about the Wusun problem in 44 BCE, and some years later the Kangju 'viceroy' had the autonomy (and ability) to have a raid conducted near the Wusun royal seat of Chigu; shortly after this, disaffected Kangju nobles fed Han agents intelligence about Zhizhi. Kangju relations with the Han also cooled and warmed over time as they intersected (or clashed) with the interests of Kangju's own elites.[307] Still, as we have seen, the king dominated but did not exercise a monopoly over Kangju diplomatic relations with the Han. Furthermore, the allusion to the contemporary downfall of the Saraucae in Justin meshes well with the larger impression of elite competition during this era.[308] Beyond a documented marriage alliance struck between the Da Yuezhi (Kushan) and Kangju kings in 84 CE, we can probably assume that interactions with these southern rulers in the latter half of the first century CE were equally as dynamic as elsewhere and simply did not enter into the purview of the Han. To round out this picture of interaction and competition still a little more, Naymark has suggested that the brief incorporation around the mid-first century CE of a *tamga* onto the reverse of Bukharan imitation Euthydemos *tetradrachms* indicates a temporary capture of this region by nomadic rulers with ties to the Alans.[309] This possibility also seems unsurprising given the picture I have laid out here.

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foundation along China's frontiers in Gansu called Liqian. See the brief discussion in Mairs and Fischer-Bovert 2021, 49–52.

305 *Hanshu* 70.3009.

306 See *Hanshu* 70.2182–2183, 96B.3908–3910; discussion in Yu 2004, 44–46, 48–50.

307 See the cases discussed above as well as a later collaboration with a Han protector-general in 78 CE in pursuing a king of Kashgar deposed by the Han – only to contribute toward his reinstatement less than ten years later, *Hou Hanshu* 47.1575, 1579.

308 See above, III.1.

309 Naymark forthcoming c.

Ultimately, we still know almost nothing concrete about the precise obligations of Kangju's subsidiary rulers and dependencies to the king during this period in delivering manpower (whether in the form of labor or military support) and tribute (whether in the form of staple or wealth goods). Nonetheless, I will argue further below (ch. 4.B, II.2) that the broader landscape of political organization in this phase of the Kangju confederacy – entailing the elaboration of elite hierarchies, as well as patterns of both cooperation and fierce competition – very much shaped contemporary prestige economies and attendant dynamics of long-distance exchange.

IV.3 Phase Three (ca. Second to Fourth Centuries CE): Heterarchy and Disintegration

From around the second century CE, the historical clarity of our sources dwindles. This is certainly shaped by the instability that grew in China from the late second century CE, which resulted in the collapse of the Eastern Han (220 CE), the division of China between the Three Kingdoms, and then later reunification under the Western Jin (266–316 CE). As diplomatic contact seems to have been rather more intermittent for much of this period, information from the Chinese side is accordingly patchier. Nonetheless, the material we do have suggests overall that the Kangju confederacy continued in some form until about the mid-fourth century CE, if the central institution of kingship and the ties linking rulers of constituent polities do seem to have broken down. Hence, I understand this final phase as characterized by a return to more heterarchical political organization, followed by ultimate disintegration.

The Kul'tobe inscriptions probably already reflect such processes if, as suggested above, we may interpret them as referring to historical events in the second century CE. Again, text 2 refers to the ownership of a 'city' by a Spadhni of the *nāf* of Chach in an apparent context of military activity, specifically detailed to have been instigated by someone being killed (a person, whether named Epdhipch or from a place called Epdhip).[310] As noted above, the text then refers to the division of (probably) spoils between chosen representatives from (presumably) Chach and the 'nomads,' as well as the lords of the four Sogdian centers of Samarkand, Nakhshab, Kesh, and Nawak-methan (Bukhara) – and perhaps finally the intended redistribution of some of these spoils among the warbands attached to some of these figures.[311] As I have already discussed the institutions of sociopolitical organization suggested by these inscriptions, a few additional historical observations can be offered at this point. First, these events occurred on the very territory associated with the name of the Kangju polity itself,[312] but it is difficult to interpret the apparently generically named

310 Sims-Williams forthcoming.

311 See above, IV.2.

312 See above, III.1.

'nomads' ('tent-dwellers') as referring to the powerful Kangju king, royal elites, and nobles met in the previous phase of the confederacy. These events were instead spearheaded by a leader from Chach and apparently facilitated by cooperative military action among the named parties. Thus we can apparently draw the conclusion that these inscriptions reflect the disintegration of the former institution of central rule among the Kangju confederacy, concomitant with the ascent of a leader in Chach. This seems to reflect a broader reorientation among the confederacy's polities toward a more heterarchical mode of organization. Such a change may further be suggested by the fact that the extant iterations of text 2 list the Sogdian centers in at least two different orders (Samarkand, Kesh, Nakhshab, and Nawak-methan versus Nakhshab, Samarkand, Kesh, and Nawak-methan). Bi Bo has already observed that these orders seem to meaningfully reflect the status of these entities in some way, as Samarkand remains listed before Kesh, and Nawak-methan ('new residence') stays in last place, perhaps considered inferior as a newer foundation.[313] Yet perhaps the creation of versions of text 2 with diverging sequences of the Sogdian centers may have foremost been intended to express that their ruling lords were not organized into one fixed hierarchical relationship with one another.

Similar impressions of the disintegration of central authority and hierarchical vassal relationships are also found in Chinese texts referring to this period. As above, the *Weilüe* indicates that the northern countries of Beiwuyi (or north Wuyi), Liu, Yancai, and Yan were no longer subject to Kangju by 239 CE. Yet in the directly preceding description of a 'new northern route' running through Wusun and Kangju, it is also clearly expressed that both polities still existed and neither had changed in dimensions.[314] Without needing to take this too literally (as this information could have also been compiled from sources of different periods), it seems to have been overall understood that some kind of 'Kangju' still existed in a substantive form during this phase – even if the form this entity took might have little resembled the 'classical' form of the polity reflected in our information from the first century BCE discussed above (IV.2). On a similar note, the passing mention of the Kangju king's seat as a spatial point of reference in the description of the northern country of Dingling 丁令 does not definitely demonstrate that a central king ruled the polity.[315] Indeed, as mentioned above, when the Kangju entered into the horizon of the newly established Western Jin through diplomatic contact, the official court history relating to this dynasty apparently places the Kangju king in Suxie (almost certainly Samarkand) around 260 CE.[316] The precise meaning of this passage is not clear, and it has been considered again in some recent scholarship. Somewhat agnostic remains Bi Bo,[317] and similarly Huber entertains the possibility it might reflect a political change,

313 Bi 2019, 52–53.
314 *Sanguozhi* 30.862.
315 *Sanguozhi* 30.862.
316 See above, III.1, *Jinshu* 97.2544.
317 Bi 2019, 53.

but seems to lean towards the idea that here a subsidiary king was mistaken for the Kangju king himself, if not committing to either idea.[318] Stark, however, argues that by this period, Kangju is simply used here as an archaizing ethnonym to refer to one of its former vassals, and thus from this point onwards, textual references to Kangju indicate Samarkand Soghd.[319] This could well be correct, but unfortunately it is precisely the nature of these sources – that might even explicitly tell us the opposite of what might be true – that make it difficult to be so sure. This text does seem to suggest that a central institution of kingship in the middle Syr Darya no longer existed by the 260s CE, but again, precisely pinpointing the 'fall' of the Kangju remains a difficult enterprise, which is why I continue to treat political organization in these centuries as relevant to the broader 'Kangju' story.

As noted above, one chronological reference point is surely provided by the indication that the polity no longer existed in the *Weishu*, which we might notice alongside wider abandonment phases around the mid-fourth century CE in the settlement archaeology of Otrar-Karatau and Chach.[320] Yet the Chinese transmitted texts clearly use the name Kangju in this period in a fossilized manner that reflects perceived political continuity. Of course, how much that matches up with reality is another question. We can note, for example, how Da Yuezhi is used in reference to the second century BCE through to the third century CE to designate the nomadic elites who initially seized power in Bactria, as well as the (Kushan) empire that a constituent group of them established; in this case, a wider body of textual and numismatic evidence must be utilized to contextualize Chinese information.[321] In short, as these texts continue to refer to the Kangju through the third century CE, I do too, although I agree that they hardly guarantee static continuity in political organization between the rulers of Sogdiana and the middle Syr Darya, which must rather be further illuminated in reference to other bodies of evidence.

Indeed, changes in political organization during the second century CE seem to coincide with significant developments in the settlement patterns of these regions. On the one hand, settlement in southern Sogdiana and the middle Syr Darya seems to become more dense, but on the other, several former power centers as well as rural settlements in the Zerafshan valley appear to have been abandoned around the beginning of this century. These processes are still not documented with satisfactory precision, so proposing to identify the precise catalyst for the Zerafshan 'collapse', beyond a possible combination of local political and environmental factors, would be premature. Nonetheless, I will discuss these processes in more detail below, as well as their cross-cutting implications for the development of long-distance exchange activity (ch. 4.B, II). Numismatic data provides yet another perspective on this phase of the

318 Huber 2020, 74, 92.
319 Stark forthcoming b.
320 See III.1 above.
321 See Morris, vol. 1, chs. 2 and 9.

confederacy. As Naymark has noted, much of the second-century CE coinage production in Sogdiana is characterized by an 'imitation mode': designs introduced in the previous century are largely immobilized, and the weight and quality of metal becomes drastically reduced.[322] Thus Antiochos imitations continue to be minted in Samarkand, as do variations of Euthydemos imitations in Bukhara, and *phseigha charis* issues in Kesh, while imitations of the Hyrkodes coinage are now produced (again, perhaps still in Kharqana).

That said, the numismatic record indicates that political organization in Sogdiana began to change again already from around the end of the second or beginning of the third centuries CE. New types of coinages are introduced in southern Sogdiana, specifically, a new variety of 'archer'-type coins are produced in Nakhshab, including also copper denominations for the first time in the region, which were subsequently replaced by silver and copper 'sword-bearer' types (fig. 4.1–2).[323] In Kesh, the Hercules and Zeus type was introduced (fig. 4.3). The production of these new types seems to represent an attempt to standardize and reform the quality of coinage in the region.[324] Shortly thereafter, a more decisive shift in the political landscape of Sogdiana and the middle Syr Darya is encountered with the apparent Sasanian capture of Bukhara during the second quarter of the third century CE, roughly around the same time that the core region of Bactria was captured from the Kushan dynasty and incorporated into Kushano-Sasanian territory.[325] Admittedly, the long-debated nature of Sasanian activity in Sogdiana and the middle Syr Darya during this period remains contested on many points, hinging especially on the interpretation of the trilingual inscription of Shapur I at Ka'ba-ye Zartosht (Naqsh-e Rustam, Fars), which describes his rule over the Kushanshahr reaching up to the borders of Kash (presumably Kesh rather than Kashgar), Soghd, and Chach by 262 CE.[326] Of all of these regions, for now it is only clear that Bukhara was integrated in some way into Sasanian/Kushano-Sasanian territory, and certainly into the broader Kushano-Sasanian monetary zone, as suggested by coin finds as well as the new pattern of bimetallic coinage production in Bukhara following Sasanian models.[327] Simultaneously, perhaps the manner in which Kesh, Sogd, and Chach are listed in the Ka'ba-ye Zartosht inscription may reflect a confederate organization of these territories (without Bukhara) during this period.[328] The nu-

322 Naymark forthcoming a.

323 Naymark 2016, 60; 2020, 236.

324 Naymark forthcoming a.

325 As foregrounded in Stark forthcoming b. On the Kushan Empire, see Morris, vol. 1, ch. 2, III.1.

326 Edition in Huyse 1999, 23–24. See, most recently, discussions with earlier literature in Schwarz 2022, 66–69; Stark forthcoming b.

327 See discussions in Omel'chenko 2012; Stark forthcoming b; Naymark forthcoming a (*contra* Schwarz 2022, 66–69).

328 Grenet (2010, 269) suggests that Soghd and Chach were perceived here as a confederate political unit beyond the conquered Kushan realms. De la Vaissière (2013, 323) alternatively proposes that this list describes the same confederacy as that of the Kul'tobe inscriptions.

Fig. 4: Sogdian coinages of the second and third centuries CE (all images reproduced at 2.0 scale). 1. Copper unit of 'archer' type produced in Nakhshab, late second to early third century CE. Diameter 14 mm, 1.08 g. Zeno 165238 © hfrans; 2. Silver unit of 'sword-bearer' type produced in Nakhshab, first half of the third century CE. Diameter 13.2 mm, 0.46 g. British Museum 1894,0506.1797. Courtesy of the Trustees of the British Museum; 3. Silver unit of 'Herakles and Zeus' type produced in Kesh, first half of the third century CE. 0.66 g. Courtesy of Bibliothèque nationale de France, département Monnaies, médailles et antiques, Y 20243, https://gallica.bnf.fr/ark:/12148/btv1b8551339w, gallica.bnf.fr / Bibliothèque nationale de France.

mismatic landscape following the Sasanian capture of Bukhara seems to suggest a similar reorientation of political organization within the broader region: all coinage production elsewhere as before was halted, with Nakhshab then producing only copper coinage (imitations of 'reformed archers'), while the model of the 'archer' type (originally from Nakhshab) was transferred to Samarkand for the production of the silver 'archer' coinage (with three denominations) from the mid-third century CE (fig. 5); this would be replicated in the region for some three centuries.[329]

In this period, 'Kangju' begins to attract Chinese attention again. We hear once that, after the emergence of the Former Wei (220–266 CE), Kangju was among the states that continued to present roughly yearly tribute; even if this is true, it is obviously unclear who the text might have been referring to in reality.[330] In any case, as Stark has highlighted, embassies from Kangju (now perhaps just rather Samarkand,

329 Naymark 2020, 215; forthcoming a.
330 *Sanguozhi* 30.847.

Fig. 5: Large silver unit of 'archer' type produced in Samarkand (late and light example of the fourth series), ca. early fourth century CE. Diameter 15.3 mm, 1.22 g. Private collection, courtesy of Alexander Mospanov (image reproduced at 2.0 scale).

as he proposes) seem to increase from the mid 260s;[331] Kangju agents are later described as bringing horses as tribute to the Wei in 265 CE, and in the passage of the *Jinshu* placing the Kangju king in Suxie (Samarkand) discussed above, it is also reported that horses at least were sent once again to the Jin dynasty by a Kangju king Nabi 那鼻 (based in Suxie/Samarkand) between 265 and 274.[332] Alongside the production of silver 'archers' in Samarkand during this period, such testimonies might reflect a new consolidation of power in this center. We learn of the name of another ruler shortly after in 313 CE via *Ancient Letter 2* (i.e., the one addressed to Samarkand), which articulates a date according to his regnal era: year 13 of lord (expressed with the ideogram *MR'Y*, as before) Chirth-swan. While 'Nabi' may constitute a Chinese rendering of a Sogdian name,[333] the name Chirth-swan rather suggests ties to the western steppe, i.e., via Pontic Iranian features.[334] Of course, onomastics hardly express ethnicity directly, but the appearance of a ruler bearing this name is completely unsurprising, given the broader propensity for the names of rulers in early Sogdian written monuments to express ties with Iranian steppe pastoralists.[335]

Ultimately, considering the mid-fourth century CE as a rough terminus for this story, the broader political landscape in Sogdiana and the middle Syr Darya by this point was hardly entirely segregated, but it was certainly profoundly reoriented in organizational terms from centuries past: western Sogdiana now lay in the Sasanian/Kushano-Sasanian sphere, Nakhshab and Samarkand perhaps maintained closer ties, and many settlements would apparently be abandoned in the middle Syr Darya. Additionally, to judge from the production of a distinctive copper coinage in the name of a ruler (*khūv*) of the *nāf* of Chach, power would also eventually be consolidated in this polity perhaps during the fourth century CE.[336] As the fourth century CE also

331 Stark forthcoming b.
332 *Sanguozhi* 30.154; *Jinshu* 97.2544, see trans. Huber 2020, 22.
333 Lurje 2010b, no. 774.
334 Sims-Williams and Grenet 1987, 115; Lurje 2010b, no. 405.
335 See Lurje 2010b, 18, n. 5.
336 See above, IV.2.

marks the beginning of the 'Hunnic' period in southern Central Asia, with the emergence of the Chionite, Kidarite, then Hephthalite 'Hun'-related dynasties ruling from the fourth-sixth centuries CE, my analysis will stop here.[337] Now we may turn to the question of how the picture sketched here relates to contemporary economic activity in Sogdiana and the middle Syr Darya.

337 On this period in Samarkand, see Grenet 2010, and in Bukhara, Stark forthcoming b.

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4.B Economic Organization

I Surplus Wealth and the Movement of Goods

In this section, I move on to examine the interrelation between political organization in Sogdiana and the middle Syr Darya under the Kangju confederacy and the structure and dynamics of economic organization in these territories. Here, I lay special emphasis on how and why valuable goods moved in spheres of transregional and long-distance exchange within and through these regions over time, as this type of activity is most relevant for contextualizing the emergence of Sogdian professional long-distance trade. I do this specifically by considering how dynamics of political organization and sociopolitical institutions of this period drove and shaped the production and exchange of such goods. This, however, first necessitates evaluating broader dynamics of economic organization in this period in terms of the production and distribution of surplus wealth. This is because access to such surplus wealth is an important condition determining economic capacity to acquire and consume valuable goods, especially those imported from long distances.

I.1 Regional Polities and Economies without Cities

To gain a broader perspective on dynamics in the production and distribution of surplus wealth under the Kangju, we can look more closely at settlement patterns in Sogdiana and the middle Syr Darya during this period (see ch. 4.A, maps 2 and 3). As the quality and quantity of the relevant archaeological data make it difficult to precisely delineate these patterns,[1] I wish to focus on broad trends and acknowledge that the manifestations of these trends within constituent regions could well be nonuniform.

First, as outlined above (ch. 4.A, IV), the Kangju period in Sogdiana may be broadly characterized by some long-term administrative continuity, namely the uptake of

1 Generally, much information about settlement patterns is obtained from survey methodologies (i.e., topographic observations, collections of surface material) rather than extensive excavation, and results from excavations are often only partially published. Materials from different regions are also presented with settlements classified in diverse ways (ranging from very complex to minimalist typologies). Many dates are also not certain (i.e., if the ceramics were not well published, or the material should be reviewed in light of new typologies, or the absolute chronology for parts of sequences themselves are not clear). Finally, at many sites with long histories of occupation, excavations are severely limited in practical terms, with antique layers buried under many meters of archaeological strata (as at, e.g., Marakanda-Afrasiab, Bukhara, and Kanka).

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some systems of production and extraction established in the Achaemenid and Seleukid periods, with some institutional emendations over time. The most fundamental manifestation of this was in the continued occupation of preexisting power centers – although even here we see some changes. We may first focus on patterns during the first two phases of the Kangju confederacy as defined here (from ca. third century BCE–first century CE). At this time, Marakanda-Afrasiab (ca. 220 ha, fig. 1.1) continued to be occupied as the traditional center of oasis territory in the eastern Zerafshan, although the formerly significant Koktepa in the northern lowlands had already been abandoned. Samarkand's subsidiary centers Durmentepa and perhaps Kuldortepa (ca. 20 ha) continued to be occupied.[2] To the northwest, another subsidiary fortified center seems to have developed at Kurgantepa (ca. 40 ha), located directly across from the Orlat kurgan cemetery in the Saganak valley, within the southern *adyrs* of the Nuratau range.[3] Again, this region was effectively a borderland of the oasis territory, with strong ties to the northern nomadic cultural sphere.[4] In southern Sogdiana, the traditional center of Nakhshab at Erkurgan (ca. 160 ha, fig. 1.2) was also maintained, but it seems to have been paired with the development of a new center close by at Kala-i Zakhoki Maron (ca. 220 ha, fig. 1.3) around the second to first century BCE.[5] To the north, Kesh's power center had been transferred from Podaiataktepa (ca. 70 ha) already to Kalandartepa-Kitab (ca. 15 ha?) in the Seleukid period, with the former abandoned in the second half of the third century BCE.[6] Elsewhere, it seems that settlement remained dispersed between small sites as before. In western Sogdiana, occupation continued at the (relatively) larger sites of Ramish, Varakhsha, Bukhara, Paikend, and Khodzha-Buston, with Ramitan and Iskijkat eventually also attracting fortifications.[7] Around Kharqana, Burkuttepa and Kuzimontepa (ca. 15 ha) similarly seem to have seen continued occupation, and likewise Dabusiia further to the east.[8]

A few additional changes should also be pointed to that seem to apply to the settlement pattern across Sogdiana. First, a number of small fortresses seem to have evolved into small rural settlements, a phenomenon now explored in some detail at Bashtepa in the west of the Bukhara oasis.[9] Second, the number of kurgan burials increases; these were primarily dispersed across diverse cemeteries located in the

2 The date of Kuldortepa's foundation is not clear, but it seems to have been occupied at least in the first centuries BCE (Shishkina, Suleimanov, and Koshelenko 1985, 274).

3 On Kurgantepa, Pugachenkova 1989, 67–106.

4 Stressed, e.g., by Ilyasov 2003, 299.

5 See also above, ch. 4.A, IV.1.

6 Omeľchenko 2011, 170. On Podaiataktepa, Omeľchenko 2003, 14; Lhuillier and Hasanov 2013. On Kalandartepa, Kabanov 1955, 106–110.

7 On Ramitan and Iskijkat, Rante and Mirzaakhmedov 2019, 157–163.

8 Respectively, Gritsina and Khuzhanazarov 2005; Mirzaakhmedov et al. 2016, 228–230; Takao and Berdimurodov 2013.

9 For the transformation around the second half of second century BCE to the first half of the first century CE, see Stark et al. 2020, 2–39.

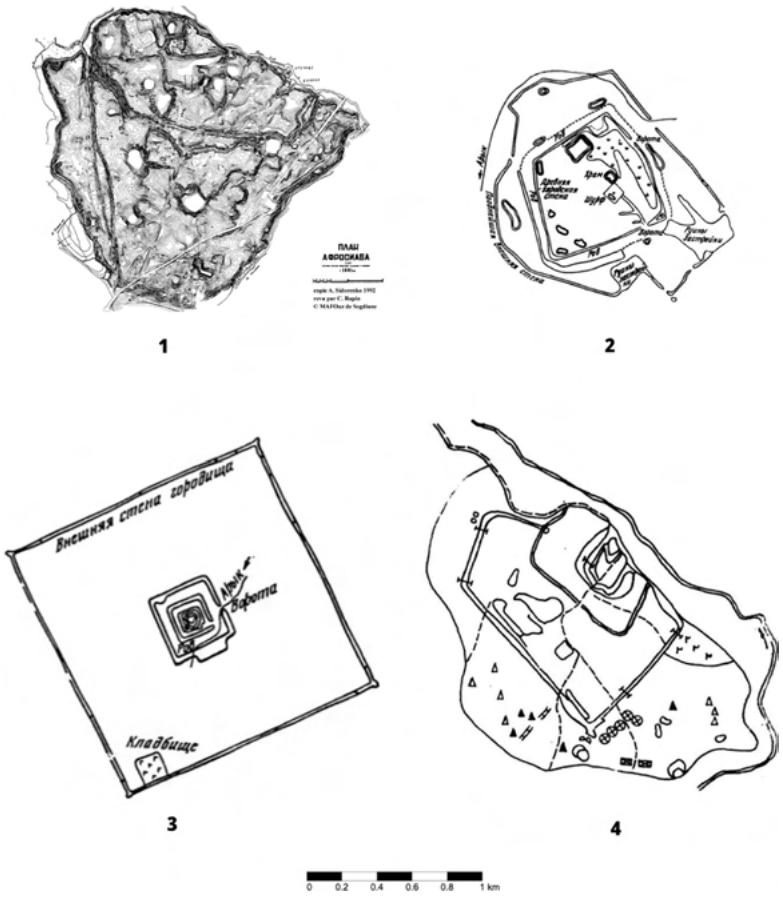

Fig. 1: Plans of selected sites in Sogdiana and Chach: 1. Marakanda-Afrasiab (after Vassiliev and Kuzmin's 1885 topographic plan, courtesy of Claude Rapin); 2. Erkurgan (Shishkina, Suleimanov, and Koshelenko 1985, pl. 124); Kala-i Zakhoki Maron (Shishkina, Suleimanov, and Koshelenko 1985, pl. 124); 4. Kanka (after Buriakov 1975, fig. 16).

desert-steppe and foothills fringing oasis territories, some already used by earlier populations. Some of these burial grounds were furthermore in clear proximity to various kinds of settlements. Around the middle Zerafshan, they are dispersed in the foothills of the Nuratau range to the north (e.g., Yangi-Rabat, Akdzhartepa, and Orlat directly opposite from Kurgantepa, and the isolated example of Sirlibaitepa), and to the south in the Karatiube foothills of the Zerafshan range (i.e., the foothills and steppe around Sazagan and Agalyksai), as well as further to the west in the desert-steppe near Karnab.[10] The case of Koktepa also shows that abandoned mounds from

10 See, e.g., Vallée-Raewsky 2013; Franceschini 2007; Pugachenkova 1989; Ivanitskii and Inevatkina 1988; The Palace Museum and Northwest University 2020; Parzinger and Boroffka 2003.

former settlements could be used as burial sites, although in this case earlier burials were apparently cleared for the interment of an elite woman in the first century CE.[11] Following the Zerafshan downstream, kurgan burial grounds continue to be found on both sides of the oasis territory, although most known material relates to the left bank: perhaps some kurgans in the foothills north of Kharqana date to this period, and certainly examples at Khazara, Shahkhrivairon, Kyzyltepa, Kuiumazar and Liavandak along the oasis's eastern fringes.[12] Some groups of kurgans have also been reported but little explored in Kashka Darya, including in foothills north and east of Kesh (Guldar and Gianda 1 and 2 in Yakkabag district), closer to the oasis's interface with the Karshi steppe (near Chimkurgan reservoir), and east of Guzar (in the foothills along the Kichikura Darya).[13] Although many burials had already been looted long ago, a small number of relatively richer burials among these groups include those at Koktepa, Orlat, and Sazagan – all falling around the end of phase two of the Kangju confederacy as understood here. These burials will be discussed in further detail below (section I.2). More generally, the broader picture indicated by these groups of burials is one of long-term cohabitation between groups oriented toward sedentary agriculture and those oriented toward mobile pastoralism, if many in practice probably fell rather somewhere along the 'agropastoralist' spectrum of mixed strategies.

Importantly, the sites of the primary and secondary centers of central and southern Sogdiana during this period follow a specific configuration, if with some variation: they are large, have a citadel-like inner fortress, and possess one or more enclosing fortification walls that surround an area apparently largely devoid of permanent structures (fig. 1) – this is certainly the case for Marakanda-Afrasiab, Kala-i Zakhoki Maron, Podaiataktepa, and probably also Erkurgan, Kurgantepa, Durmentepa, and Kuldortepa during this period, perhaps also Kalandartepa. As Kidd and Stark have recently observed, although such sites are often referred to as 'cities' in the literature, this label is quite misleading; in Central Asian archaeology, sites are classified as 'urban' in reference to diverse criteria, which usually account for size (e.g., above 15 ha) as well as material indications of significant political-administrative, ceremonial, and economic functions, such as fortifications, administrative and public buildings, craft production areas, and concentrated permanent settlement in dense residential

11 Rapin, Isamiddinov, and Khasanov 2001, 38–42.

12 See, with further literature, Obeľchenko 1992.

13 Kurgan burials in Kashka Darya remain poorly investigated and reported (see brief remarks in Omeľchenko 2003, 152); those east of Kesh are in Yakkabag district (Guldar, Gianda 1 and 2), and those east of Guzar are in Kichikura Darya, reportedly located near to Tashkalak, the remains of a large circle-shaped feature made of stones and surrounded by 'kurgans' that were (upon investigation) devoid of human remains – not in itself an unprecedented phenomenon (see, e.g., cases from just across the Kugitang range in Havlík, Havlíkova, and Stančo 2018). Tashkalak was interpreted by Suleimanov (2000, 255–256) as a pastoralist cult place, while acknowledging that the location still hosts the largest periodic cattle market in the area. Apparently, the Chimkurgan kurgans have been reported in passing only in Kabanov 1977, 116.

quarters. Interestingly, this latter criterion often falls by the wayside in discussions of urbanism. Noting that at least Marakanda-Afrasiab and Kala-i Zakhoki Maron feature large empty spaces within their walls, they observe that Bukharan Sogdiana especially seems to have been devoid of true cities until the fourth to fifth centuries CE.[14] If we consider evidence of dense, permanent population as a critical marker of urbanism, this observation can probably be expanded to all of Sogdiana. Although exploration of antique layers in potentially active power centers of the middle Syr Darya during this period (including Kanka in Chach, fig. 1.4) is limited, the same probably applies to this region until proven otherwise.

Why does this matter? To be sure, these kinds of sites could still have met a variety of important practical and symbolic functions: varyingly, their empty spaces could have hosted mobile or impermanent structures such as tents, and they could have served as political and religious centers, refuges for the population and their livestock during raids, and gathering places for periodic market activity. Hence, Negus Cleary speaks of a broader phenomenon of 'enclosure sites' across Iran, Central Asia, and inner Eurasia from the Late Iron Age to late antiquity as an alternative form of urbanism befitting the political organization of a mobile ruling elite, which simultaneously also reflects their sociopolitical complexity.[15] While one can appreciate the effort to acknowledge this complexity and the diverse ways in which ancient populations organized themselves, an important question remains to be addressed: whether such sites could have served as the loci for the emergence of middle producer-consumer strata. As Smith has highlighted, the emergence of such professional classes is typically bound with the specialist managerial demands of complex institutions that are usually based in urban centers, and it occurs alongside increasing specialization in production implied by a permanent, dense concentration of population in such centers.[16] But the scale of specialist staff required for administering Sogdiana's royal economy in the Achaemenid and Seleukid period – e.g., those involved in calculations, record-keeping, and managing provisions for the ruler's household and garrison – need hardly have been large, and we have no indications thus far that administration became bureaucratically more complex under the Kangju.

That said, we do have some evidence that these sites attracted – or continued to attract – at least to some degree a population engaged in full-time, specialized production. For example, an iron workshop appears to have been active in the southeastern outer part of Erkurgan during the antique period, as well as a large potters' quarter along the interior of the site's eastern fortification wall from the second to first centuries BCE.[17] Marakanda-Afrasiab also seems to have had a ceramicists' quarter within the bounds of its northern 'acropolis,' as well as another small workshop (also produc-

14 Kidd and Stark 2019, 164–166.

15 Negus Cleary 2018.

16 Smith 2018.

17 Bolelov 2006, 118; Suleimanov 2000, 122–129; Isamiddinov and Khasanov 2000.

ing terracotta figurines) located along its northeastern fortifications.[18] The concentrated ceramicists' quarters in particular, as Bolelov notes, might reflect the existence of independent corporations of craftspeople.[19] If they were not provisioning a large number of permanent residents in these centers, perhaps their production was rather oriented toward institutional contexts, being supported by either political or religious institutions in the form of intermittent elite sponsorship through requests for consignments. Alternatively, they could have also served a broader population through a mechanism of periodic markets.[20]

Yet it is important to note that, as in the past, these power centers do not seem to have dominated Sogdiana's regional economies. Just as examples of isolated agricultural and craft production sites are known from the fourth century BCE,[21] a site in the steppe southwest of Samarkand has been identified that seems to have been dedicated to seasonal agricultural processing activities during the second to first centuries BCE (Kurgan Kadirbek).[22] An example of another small settlement apparently dedicated to ceramic and metallurgical production in the antique period has also been identified on the western outskirts of the Bukhara oasis (Tali-Surkh), perhaps also serving as a locus for trade activity.[23] Other sites located at such ecotones or along important historical routes might be identified as loci of trade activity. Periodic market activity could be reflected by the diverse examples of coinage picked up in the vicinity of the modern Chimkurgan reservoir in the southwest of Kesh's oasis territory, where examples of kurgans have also been noted but apparently never explored. Likewise, diverse coin finds from the vicinity of Sazagan could suggest the occurrence of periodic market activity, perhaps taking the form of a fair.[24] The settlement of Pulad, which was active in the last centuries BCE and located in the middle Zerafshan along one of the major historical routes from Samarkand to Bukhara, might have also functioned as a key trading center.[25]

Indeed, it does not seem that Sogdiana's power centers presided over deeply centralized economies; on the contrary, the majority of society seems to have operated

18 The first example was located under the cathedral mosque, with only one kiln excavated (Sharakhimov 1977, 115); the second is discussed in Bolelov 2006, 124.

19 Bolelov 2006, 121 (although the phenomenon is treated as specific to a form of urbanism with cities as craft and trade centers).

20 See comparative discussions in Hirth 2020, 109–123, 240–242, 244–246. Suleimanov (2000, 155–156) entertains the possibility that the layout of Erkurgan's blacksmiths' quarter might reflect spontaneous development and private property ownership, while the more regularly planned ceramicists' quarter perhaps rather indicates state ownership or export to market (such a space for market activity being theoretically located outside of the southeast gate of the inner city wall).

21 See above, ch. 4.A, II.2.

22 Mantellini 2019, 198–199.

23 Stark forthcoming a; see also Mirzaakhmedov et al. 2020, 209–212.

24 An idea suggested by Aleksandr Naymark (personal communication). For some of these coin finds, see below, I.2.

25 Shishkina and Inevatkina 2012, 44.

economically in rather self-sufficient, and largely decentralized, rural networks of production, trade, and consumption. This seems to be precisely the reason why Suleimanov raised the difficulty of applying a traditional central places model to the settlement pattern of Nakhshab – a problem likewise also observed by Buriakov in reference to Chach.[26] A slightly different scenario may be presented by Samarkand during this period; as above, the existence of subsidiary centers in the wider region (Kuldortepa, Durmentepa, and Kurgantepa) may indicate their dependency on the center at Marakanda-Afrasiab (e.g., if parceled out to subsidiary rulers) and hence a trend toward centralization in that regard. But even this is not so clear. Samarkand's hinterland along the left bank of the Zerafshan saw a strong trend of development during the third to first centuries BCE, involving the development of the *sai* irrigation systems and perhaps their connection into the first iteration of the Dargom canal. As this seems to have coincided with more expansive settlement in the oasis zone, while adjacent steppelands were left open for grazing and herding, Mantellini hence speaks of a 'master plan' for the territory's development, if one progressively achieved through consensual participation by the local population.[27] If direct management of irrigation by Samarkand's rulers seems uncertain, they would have nonetheless have been interested in and benefited from these works in the form of extracted surplus produce.[28] Indeed, just as rulers in this period were able in many cases to mobilize labor to create fortification walls, they were also able to have Marakanda-Afrasiab's own water supply canals (previously on a spring-based system) expanded and linked to the new Dargom in order to increase the center's water supply.[29] In a comparable manner, the oasis of Kesh begins a new phase of development in the second half of the second century BCE, reflected by the appearance of new small settlements, and the emergence of new micro-oases in the lower Shurobsai and the middle Aiakchidarya.[30] Perhaps the phenomenon of local growth in the hinterlands of these regions – seemingly taking off when the region changed hands from the Seleukids to nomadic conquerors – can be best explained by a broadly 'laissez-faire' approach by its new rulers, whom I have considered as emerging within a heterarchical phase of the Kangju confederacy. The point remains, nonetheless, that most economic activity in Sogdiana seems to have occurred within largely self-sufficient rural networks, no cities or middle producer-consumer strata seem to have emerged, and any surplus wealth that was being produced remained concentrated within the hands of a small circle of ruling elites.

This situation, however, begins to change profoundly around the end of the first century CE, when I propose that the Kangju confederacy shifted from a more hierarch-

26 Suleimanov 2000, 18–19; Buriakov 1982, 166–189.

27 Mantellini 2017, 339–340; 2019, 196–197.

28 See discussion in Morris, vol. 2, ch. 13, II.3.

29 See Mantellini 2015, 9–10.

30 Andrey Omeľchenko, personal communication. See general remarks in Omeľchenko 2011.

ical phase of political organization to a more heterarchical one. In this final phase, it seems that we begin to see our first hints of the accumulation of surplus wealth – with concomitant consumption capacity for nonstaple goods – among a wider body of society. This phenomenon, however, is regionally nonuniform: it seems largely limited to southern Sogdiana and the middle Syr Darya regions, while the end of the first century CE rather seems to have seen a wide-reaching collapse in the Zerafshan valley that continues well into the third century CE.

To clarify, the archaeological indications of this collapse remain somewhat scantily attested and are impacted by a paucity of published and securely dated material from this period, but it was already being recognized in the 1940s via Terenozhkin's impression of the decline of Samarkand in the first centuries CE.[31] Although apparently long rejected,[32] the idea began to be vindicated through additional data compiled by Naymark in the late 1980s, who pointed to the abandonment of large parts of the territory of Afrasiab (where the occupied area contracted to a third of its former size) and the decay of the fortification walls of nearby Durmentepa, as well as Varakhsha in the Bukhara oasis.[33] Apparently, the other secondary centers in the middle Zerafshan (i.e., Kuldortepa and Kurgantepa) also suffered similar fates; likewise, some small fortresses in the Bukhara oasis were probably abandoned in the first century CE, and Bashtepa was certainly abandoned around the end of the first or in the early second century CE.[34] In short, the hazy impression that seems to be visible is one of the substantial contraction in size of former central sites as well as some abandonment of rural settlements, although the scale of the latter phenomenon (and the chronological precision of this dynamic) needs further clarification.[35] The true revival of Samarkand would occur only in the late fifth or early sixth century CE, and only after a massive development of the countryside through the widespread construction of castles – fortified rural estates, with or without adjacent settlements – in rural areas from the fourth century CE; this process had long been associated with the rise of 'feudalism' in the literature.[36] Equally long noted is a coeval major influx of groups from the middle Syr Darya, particularly carriers of the Kaunchi I and II complexes.

31 Terenozhkin 1950, 160.

32 See e.g. Shishkina, Suleimanov, and Koshelenko 1985, 274.

33 Naymark 1989, 59. The decline of Afrasiab in this period is now accepted: Shishkina 1994, 90; Lyonnet 2018, 421.

34 For discussions and data, Naymark 2001, 58–59, fig. 489; 2010; Stark et al. 2019, 248–249; Stark forthcoming b; Naymark forthcoming c.

35 The results of the Italian-Uzbek survey of the southern middle Zerafshan are in ongoing publication, but a presentation of numbers of sites according to collected surface material (e.g., in Mantellini 2019, 196, fig. 9) suggests a rise in the number of sites occupied during the first century CE followed by a small dip to about 80 % of that number in the second century and a progressive recovery until a substantial increase of sites in the fifth century CE. It may also be noted here that Rante and Tronca (2022, 19–22, 33–34) suppose that a phase of urbanization in Bukhara oasis begins instead in the first century CE, entailing former cities being surrounded by smaller bipartite sites.

36 See discussions in Shishkina 1994, 90–93; Grenet 1996; 2019.

As Stark has observed, the arrival of such new settlers from the late third century in Bukhara oasis may coincide with the consolidation and development of this territory under new Sasanian/Kushano-Sasanian rule; more specifically, perhaps nonelite groups first arrived in the form of small kinship-based work groups (e.g., the Kyzylkyr-Setalak site cluster), with the subsequent emergence of castles in the fourth century CE probably corresponding with the formation of the *dihqān* stratum of landholding gentry visible in the early Middle Ages.[37] Another indication of such development in the Sasanian period is a major rebuilding and expansion of the fortress in the area of Paikend's later citadel during the third to fourth centuries CE, including a barracks.[38]

As pointed to above, the situation in southern Sogdiana seems to have been quite different – if ultimately arriving at the same destination of dense development from the fourth century CE onward. There does not seem to have been major construction activities at Kala-i Zakhoki Maron or Erkurgan the first to second centuries CE. Yet this faint impression of neglect at Erkurgan is followed by the resumption of major building activities in the third to fourth centuries, with several monumental works: a new temple complex on the ruins of the former, a mausoleum, a palace, and a radical reconstruction of the site's outer fortification wall (now 4.5 km long).[39] Simultaneously, small estates begin to appear around former fortresses in Nakhshab (Karshi) and Guzar, with the fortresses in some cases seeming to become small centers, speaking to the further (decentralized) development of rural communities during this period.[40] Erkurgan's new building programs make it clear that its ruling elite were able to mobilize significant resources and surplus labor from this developing landscape. Similar patterns seem to be visible in Kesh, although the situation at the central site of Kalandartepa is unclear: Omeľchenko notes that that previously occupied areas began to be developed again around the turn of the Common Era, alongside new micro-oases from the second to third centuries CE, as well as the construction of long irrigation canals with fortified settlements placed in their upper reaches. This apex of the region's economic and cultural life in antiquity may be attributed to both community initiative and ruling authorities (i.e., with respect to major irrigation and construction works).[41] The spread of castles and dense settlement across Karshi oasis was certainly underway by the fourth century CE, with material culture again suggesting a link to an influx of populations from the middle Syr Darya.[42] A similar pattern seems to also be suggested in Kesh from the third to fourth centuries CE, although the parallels with Kaunchi seem somewhat less pronounced.[43]

37 See Stark forthcoming b with further references to earlier literature.
38 Omeľchenko 2012, 83.
39 For the above, Suleimanov 2000, 26–28, 60, 67–68.
40 Suleimanov 2000, 60.
41 Omeľchenko 2003, 31, 150–151.
42 Suleimanov 2000, 60–61.
43 Omeľchenko 2003, 147–148.

Comparable (if not entirely parallel) patterns of intensified development seem to also take off from the second century CE in the middle Syr Darya, culminating in the abandonment of many sites around the mid-fourth century CE. Conventionally, these abandonment phases and the end of the Kangju would be attributed to invasions of nomads from the northwest (i.e., of the Chionites/Huns),[44] but these processes lie beyond the scope of the present chapter, so I will not evaluate them in more detail here.

In any case, permanent settlement in the middle Syr Darya regions seems to have been relatively sparse before the second century CE. For example, in the Otrar-Karatau area, kurgan burials in the foothills long preceded the development of small settlements in the lowlands during the first centuries BCE. Perhaps these largely took the form of sites occupied seasonally in the winter, with transhumance to the mountains in the summer, where their inhabitants engaged to some extent in agriculture and craft production. The case of Aktobe-Chaian may illustrate the evolution of such a site in the foothills to a more permanent settlement.[45] It seems that the emergence of diverse kinds of settlements in the Arys-Badam lowlands then accelerated from the second century CE.[46] These typically remained small, but some were fortified or even took more complex forms, such as the configuration of a main *tepa* with an attached *rabad* (suburb), seen for example at Kul'tobe on the Arys (associated with the Kul'tobe inscriptions).[47] Some larger centers with complex fortifications also emerged in this valley, such as Karaspantobe (ca. 16.3 ha) and Zhuantobe (ca. 8 ha). Kurgan burial grounds were persistently located in the vicinity of settlements.[48] Indeed, the escalating density of diverse fortified sites in the Arys-Badam floodplains in this period might have culminated in the construction of a long wall around this territory, although the date of its construction is not clear.[49] Parallel to this, we also see an increasing number of small residential settlements represented by the remains of simple *tobes*.[50] Among examples that have been more closely studied, several took the form of cruciform fortresses, with both defensive and residential functions; although often interpreted as cult buildings in earlier literature, most rather appear to have served as residences of kinship groups such as clans.[51] Such fortresses were apparently often located on lower watercourses or exits of mountain *sai*s, giving the impression that they were situated so as to control resources and demarcate territory. For example, they are found from the second to third centuries (abandoned around

44 E.g., Yatsenko 2020a, 17.

45 Podushkin 2000, 25–26.

46 Coinciding in part with what Podushkin (e.g., 2000) refers to as the 'Karatobe phase' (first century BCE–fourth century CE) of the 'Arys Culture.'

47 See above, especially ch. 4.A, IV.

48 See Podushkin 2000; 2013.

49 See remarks in Podushkin 2000, 121, 171–172; 2013, 798.

50 See discussion of various forms in Otrar in Avizova 2020b, 129–135.

51 Torgoev, Kulish, and Torezhanova 2020.

the mid-fourth century CE) along the fringes of the Taraz region on the lower Talas at the interface with the desert-steppe to the east (for example, at Bakatobe), but also along the middle Syr Darya river itself (Aktobe 2).[52] Some of these fortresses also appear to have developed into small villages and towns in the second to third centuries, a point I will return to shortly below. Of course, this form of building was also subsequently introduced to Sogdiana with the influx of northern groups in the late third and fourth centuries CE.[53] Overall, the increasing density of settlement during this period might not simply reflect an increasing sedentism of local populations, but rather the result of population growth tied to an increasing demand for cultivable land – and with a strong militaristic flavor at ecotones. Indeed, such a context of development may well be reflected in the events described in the Kul'tobe inscriptions.[54]

More broadly, the wider sense of development in the Otrar-Karatau area is also reflected in an increasing number of burials from the second century CE onward in kurgan cemeteries utilized during this time in the Arys-Badam valley, seen for example in the earlier graves at Borizhar, near Kul'tobe, Kylyshzhar, and Karatobe.[55] Even if the precise scope of early settlement in Otrar is not yet clear, a comparable increasing density of settlement that drops off in the fourth century CE is suggested by recent work.[56] This is paired with a concentration of burials at the cemeteries neighboring Kyrkesken (second to fourth centuries CE), and Konyrtobe and Kok-Mardan (third to fifth centuries CE).[57] A unique example of a looted elite kurgan burial of the second to third centuries CE is known from Kosagash in the foothills southeast of Shymkent.[58] In the nearby valleys of the Tien Shan, rich graves of the Kenkol Culture, especially in the upper Talas, also begin to appear in the third century CE.[59]

Comparable trends of development are also indicated in Chach from the second century CE via a large number of diverse sites associated with the Kaunchi II phase progressively expanding the settled territory from the lower Chirchik and Akhangaran rivers toward the *adyrs*.[60] In addition to this, the establishment of some settlements suggests a more concerted orientation toward the extraction and processing of

52 Torgoev, Kulish, and Torezhanova 2020, 84–85.

53 See, e.g., with earlier literature, Grenet 2010; Torgoev, Kulish, and Torezhanova 2020, 81–82; Stark forthcoming b.

54 See above, ch. 4.A, IV.3.

55 On the dating of relevant burials, i.e., T-shaped catacombs, see Malashev and Torgoev 2018; Torgoev and Erzhigitova 2020, 144–148.

56 Avizova 2020b.

57 Avizova 2020a, 160.

58 See Podushkin 2000, 84–85.

59 Following the dating in Malashev and Torgoev 2018, 46.

60 The absolute dating of the Kaunchi phases apparently needs to be systematically reviewed, so I assume that Kaunchi I refers to ca. mid-first to mid-second centuries CE, and Kaunchi II until mid-fourth century CE, as in Torgoev, Kulish, and Torezhanova 2020, 74, n. 29.

the region's mineral resources (gold, silver, iron, and precious stones like turquoise), such as Kul'ata (ca. 45 ha) in Akhangaran – yet another fortified site with few traces of intramural permanent structures – which apparently operated as a specialized metallurgical center.[61]

The final pattern I would like to point to is one that seems to be shared by Otrar-Karatau and Chach during this period: the evolution of some small 'clan' fortresses into small fortified villages or towns, as the built environment was expanded around them. This process is illustrated by one of the few relevant settlements that has been thoroughly examined: Kul'tobe-Turkistan. Here, a small, seasonally occupied (i.e., in winter) cruciform fortress was built in the late first or early second century CE and then transformed through various building phases into a fortified village around the second half of the third century CE; remarkably, this form of the settlement also included adjacent walled areas evidently intended to host round tents, as demonstrated by successive layers of wide rings of small postholes within their bounds (fig. 2). Kul'tobe-Turkistan was finally abandoned following a large fire in the mid-fourth century CE.[62] A comparable evolution of such fortresses into fortified settlements seems to also be distinguishable at Minguriuk and Shashtepa in Chach.[63] As I will discuss shortly below, certain finds from Kul'tobe-Turkistan and Shashtepa demonstrate that their inhabitants had access to some locally produced and imported prestige objects, reflecting elite patronage of craft production as well as access to wider-reaching networks of exchange (II.2). Seen alongside the escalating number of contemporary rich burials around the middle Syr Darya zone, the evolution of these fortresses seem to reflect a similar process: the expansion of an elite stratum with an attendant capacity to accumulate surplus wealth and prestige goods.

Having laid out this broader picture of development, I wish to again highlight the key implications raised here for the production and distribution of surplus wealth – and hence consumption capacity for wealth goods – in Sogdiana and the middle Syr Darya under the Kangju confederacy. On the one hand, we have a trend of continuity: several power centers were active in various forms during this time, but we have little indication thus far that they dominated centralized regional economies or served as sites for the emergence of socioeconomic middle consumer-producer strata. Instead, much of the economy seems rather to have been organized through largely self-sufficient rural networks, and any surplus wealth being produced must have essentially remained concentrated within the hands of a small circle of ruling elites. Indeed, such observations seem to be mirrored by the long remarked-upon

61 Buriakov 1982, 36, 76, 115.

62 Torgoev and Kulish 2020; Torgoev, Kulish, and Erzhigitova 2020.

63 See the discussion relating to the interpretation of these initial buildings in Torgoev, Kulish, and Torezhanova 2020, 82. On the material, Filanovich 2010, 98–146. Note that Filanovich considers the relevant initial building at Minguriuk as a cult complex and likewise the relevant phases of Shash III and Shash IV (dated there to the third/second centuries BCE–fourth century CE?) as representing a funeral temple for fire worshippers.

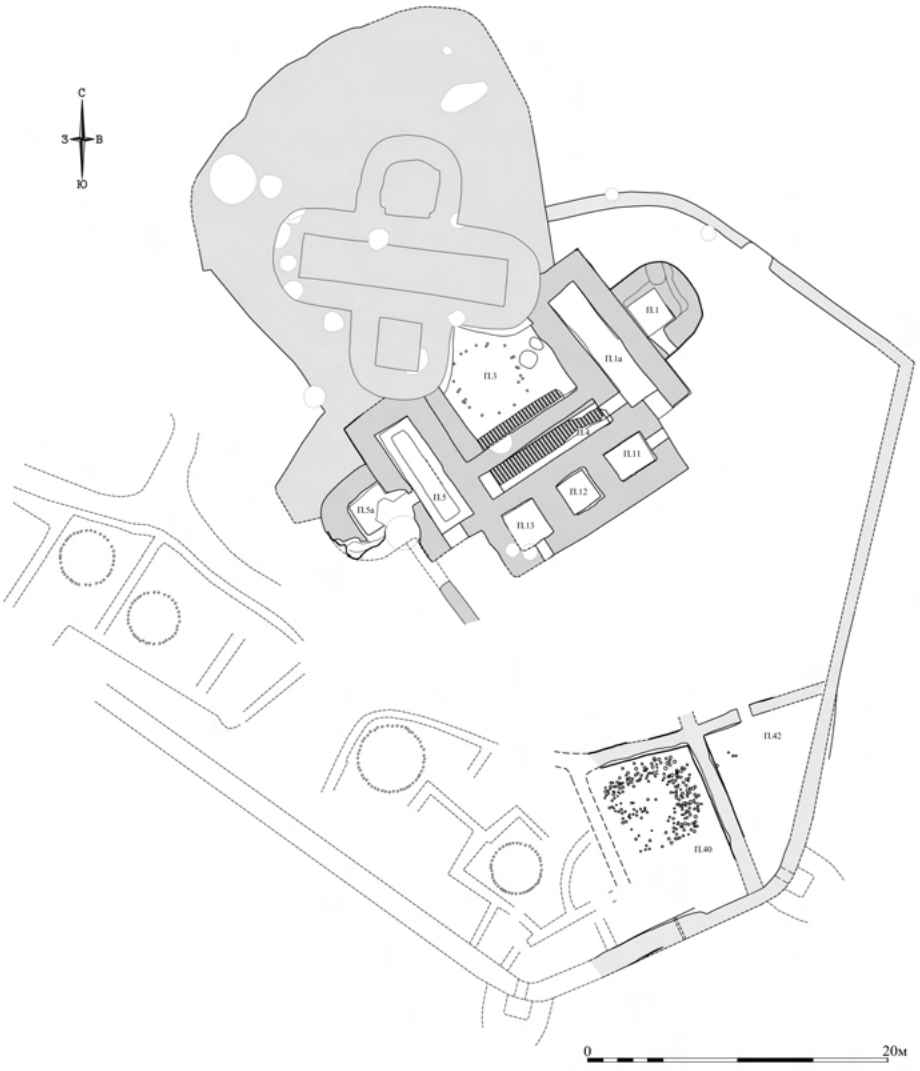

Fig. 2: Drawing of the fifth building period of constructions at Kul'tobe-Turkistan.
Courtesy of Tien Shan Expedition of the State Hermitage, St. Petersburg, Aleksei Kulish.

modest quality of craft products in Sogdiana during this period.[64] On the other hand, this picture begins to change somewhat around the turn of the second century CE, if in a nonuniform manner. Thus, there seems to have been a far-reaching decline in the Zerafshan valley continuing well into the third century CE, while southern Sogdiana and the middle Syr Darya seem to see the first hints of surplus wealth being

64 See, e.g., Naymark 2001, 58–59.

accumulated and distributed across an expanded elite stratum alongside more intensive settlement and development in these territories.

Here, I may tentatively hypothesize that these patterns in development mirror dynamics in the upper political organization of the Kangju confederacy. Specifically, the two phases marked by more heterarchical modes of elite organization (i.e., third to second centuries BCE and second to fourth centuries CE) seem to coincide with trends of more intense land use and settlement, and – especially in the latter phase – the potential accumulation and distribution of surplus wealth among a wider stratum of elites, even if this does not apply to the Zerafshan valley. Conversely, the phase marked by a hierarchical mode of political organization (i.e., the first century BCE to the first century CE) seems to conclude with a decline in the Zerafshan valley. This might also be faintly distinguishable in part of southern Sogdiana, although the latter region recovers more quickly. If these observations are correct, one may wonder if the scale of elite competition in the hierarchical phase of the confederacy led to an unsustainable concentration of wealth in the hands of the few ruling elites, ultimately contributing to negative local development. Much more precise empirical data would be required to bear out this hypothesis; in any case, surplus wealth remained, more or less, concentrated in the hands of a relatively small elite stratum throughout this entire period, a point which has important implications for dynamics in the production and exchange of valuable goods.

I.2 Institutions, Production, and Transregional Exchange

With a broader perspective on dynamics in the accumulation and distribution of surplus wealth in Sogdiana and the middle Syr Darya under the Kangju confederacy, we may more specifically consider how this picture parallels patterns in the contemporary production and exchange of valuable goods, especially articles moved within spheres of transregional and long-distance exchange. As I hope to show, the patterns highlighted here were driven and shaped by dynamics of political organization and sociopolitical institutions of this period; thus, the prestige economy is of central concern. Rather than aiming to comprehensively describe these patterns (something hardly possible, given our material), what I offer here is rather a series of small case studies – better still, vignettes – of significant phenomena.

The first case of objects produced and moving through Sogdiana during this period that I would like to focus on is coined money. Considering that coinage typically functions as a medium of exchange, this may not seem like an obvious starting point, but I wish to underline here its use as a form of wealth that is portable and easily transferred, as well as its capacity to reflect broad strands of connectivity. Coinage circulating in Sogdiana during this period was primarily that produced by diverse local mints: three mints were active in the third century BCE, expanding to nine around the mid-first century CE (although only five can be considered prominent),

and five continued into the third century. These coinages were almost exclusively struck in various denominations of silver until the second quarter of the third century CE, a period of broader reforms and changes in the monetary landscape.[65] Exceptions are a brief issue of copper coinage in Bukhara in the second half of the first century CE, and the intermittent production of copper coinage in Nakhshab in the second half of the second century CE.[66] Generally, these coinages are attested from few surviving examples, which might reflect relatively small original production sizes.[67] Although they were developed on Hellenistic models, entailing also the Attic weight standard, the weights and quality of metal utilized in these coinages was not consistent over time, and they moreover largely (if not exclusively) seem to have circulated within Sogdiana itself; only the Bukharan Euthydemos-imitation *tetradrachms* might have been oriented specifically toward use in transregional contexts.[68]

Partly for context at this point, it may be noted that finds of three other categories of externally produced coinages have so far been documented in a significant number in Sogdiana during this period: first, Graeco-Bactrian coinage (ca. 250–130 BCE), entailing at least 24 known examples (exclusively silver issues after a few Diodotid coppers, ca. 250–230 BCE), in addition to two silver hoards of uncertain size, respectively found at Tokhmachtepa in Bukhara oasis with at least 58 examples (*tetradrachms* only), and at Kitab in Kesh (including at least *tetradrachms*, *drachms*, and *obols*).[69] Second, 46 examples of Kushan coinage are now known, of which surviving examples are almost exclusively coppers, being the dominant metal of this coinage that was also utilized to some degree in regions outside of the Kushan Empire, including Chorasmia and Gangetic India.[70] As observed by Atakhodjaev and Naymark, the number of known Kushan coins in Sogdiana drops off after issues of Kanishka (ca. 127–151 CE), and many finds also have pierced holes for suspension, betraying their nonmonetary function in this space.[71] Finally, many examples of coinage circulating in Sasanian and Kushano-Sasanian monetary zones – including some 160 coppers – are known from the Bukhara oasis, presumably reflecting the conquest of this territory from the second quarter of the third century CE.[72]

I have already indicated that, unlike in the preceding Seleukid period, it is implausible that Sogdian coinage production during this era was driven primarily by a need to pay soldiers – at least, not in the form of regular wages. This is foremost because the structure and character of the military (really, any armed forces) in this

65 See above, especially ch. 4.A, IV.3.

66 See Naymark 2016, 56; 2020, 233–236; forthcoming b.

67 Of course, quantitative die studies based on sufficient sample sizes would be necessary to prove this supposition.

68 See above, ch. 4.A, IV.2.

69 See Atakhodjaev 2021, 35, fig. 2. On the hoards, Naymark 2014.

70 See Morris, vol. 2, ch. 9, II.3.

71 Atakhodjaev and Naymark 2021.

72 See Naymark forthcoming a and discussion above, ch. 4.A, IV.3.

period seem fundamentally different to that of the Hellenistic era. We have little indication as to the existence of a standing army, and alongside a broader impression of former fortresses evolving into small settlements in the post-Hellenistic period (see above, I.1), we have little physical evidence attesting clearly to the presence of formal garrisons at settlements, with one notable exception being the barracks at the citadel at Paikend built during major reconstructions in the Sasanian period in the second half of the third century CE.[73] This picture may well change, and one should hardly rule out the existence of garrisons manned by paid soldiers, but the overall impression is change after the Hellenistic period. Furthermore, considering that the warband was probably a prevalent institution during this time, it also would not be typical, from a comparative perspective, to encounter nomadic rulers sustained by salaried retainers or an army.[74] Instead, we could probably expect that preferred mechanisms for the distribution of wealth to these retainers, in exchange for their support, involved the redistribution of extracted resources, gifts, or booty, and perhaps a leeway to conduct raids. Of course, it remains possible that some of these coinages were partly minted as a tool of intermittent largesse and redistributed to retainers in this form, but this does not seem to have been their primary function. Instead, as noted above, the design features of these coinages were persistently oriented toward local (i.e. regional) acceptability,[75] and they circulated within an economy that long remained only partly monetized with silver coinage; thus, it seems evident that they would have been exchanged within transactions involving valuables alone. As suggested above, the small numbers of attested examples of many Sogdian coinages during this period might suggest that they were also produced in relatively small number – a point also implied by the broader impression of their diverse designs and denominations, which often do not seem to have been strictly standardized. I would therefore rather propose that the production of these coinages was first driven to facilitate the intermittent provisioning of certain resources and wealth goods for ruling elites and the circles surrounding them.

Of course, precisely which resources and goods they might have been oriented toward is more of a matter of speculation, particularly as we typically lack epistemological access to the mechanisms responsible for the exchange of prestige goods found in the archaeological record. I will consider some of these prestige goods shortly below and return to the question of the intersection of mercantile activity with the prestige economy thereafter (II.1). For now, by way of example, southern Sogdian coin finds seem thus far to be especially concentrated in borderland areas, although we are typically dealing with small numbers; for example, issues of both Nakhshab and Kesh have been picked up around Chimkurgan reservoir (a borderland between these zones) and in the Sazagan steppe west of Samarkand, while some Kesh issues have

73 Omeľchenko 2012, 81–83.

74 See Paul 2003, 37–38.

75 As above, first in ch. 4.A, III.1.

been documented in the surrounding northeastern highlands, as well as at sites in neighboring northern Bactria.[76] It is worth noting that this latter area overlaps to some degree with one of the limited number of high-quality summer pasture zones in Sogdiana's direct vicinity. The other such zone is located further to the northeast, along the northern side of the Turkestan range.[77] This calls to mind the brief description of Sogdiana in the *Hou Hanshu*, which cites famous horses, as well as cattle, sheep, grapes, grape wine, and fruit as among its produce,[78] as well as the later references to the delivery of horses as tribute to the Wei and Jin by (probably) the king of Samarkand in the second half of the third century CE.[79] Of course, various Chinese rulers had long been interested in procuring such famed horses from Central Asia, most emblematically illustrated in the military campaigns to Dayuan in the late second century BCE.[80] I do not wish to categorically claim that high-quality horses were typically procured by Sogdian elites by purchase via the medium of coined silver to the exclusion of any other mechanism, but raise this only as one possible point where the prestige economy and coinage might have intersected. Indeed, we may see here a comparable mechanism for the institutional procuring of horses and other valuable craft products in the late Achaemenid period, which I have proposed is reflected in some of the Bactrian Aramaic documents.[81] Considering the long-term adaptation of Achaemenid- and Seleukid-era institutions of the political economy seen throughout this period, perhaps such a scenario would not be so surprising.

To return again to warbands, this institution probably also shaped some trans-regional transfers of coinage and other goods, particularly during the first phase of the Kangju confederacy as understood here. Their general capacity for undertaking raids and other reward-oriented opportunistic engagements in the conflicts of their neighbors appears to have followed a longer-term pattern in the region,[82] if probably also assuming some new dynamics. Namely, one known contract from the Graeco-Bactrian kingdom dated to ca. 176 BCE represents an agreement with a figure from a group of 40 'Scythians' for a sum of 100 *drachms* of coined silver, which implies that warbands could have been attracted to mercenary work.[83] In a related manner, the

76 Naymark forthcoming a.

77 As above (ch. 4.A, II.1), Stark 2020, 78. Incidentally, in the fifteenth century CE, the Spanish diplomat Ruy Gonzalez de Clavijo remarked upon the great fame of spirited horses in the district to the northwest of Kesh; his party was gifted one on the Baysun side of the mountains before passing through to Kesh (see de Clavijo 1928, 205–206, trans. Le Strange).

78 *Hou Hanshu* 88.2922, see also Huber 2020, 19–20.

79 See above, ch. 4.A, IV.3.

80 With further references, Stark 2020, 88–89. See also above, ch. 4.A, IV.1, for Kangju's role in this conflict.

81 See above, ch. 4.A, II.2.

82 Again, see above, ch. 4.A, II.2.

83 See especially the discussion in Stark 2016, 143–144. The document is the Amphipolis parchment (Clarysse and Thompson 2007). For its date, Rapin 2010.

lump sum of Graeco-Bactrian *tetradrachms* represented by the Tokhmachtepa hoard could reflect a tribute or indemnity payment sent west in a context of conflict, although this is just one possible explanation (see further below).[84] As Stark has already highlighted, the capture of booty by warbands might be one of the best explanatory mechanisms for the transfer of a small amount of goods from Bactria in the nomadic milieu of Bukhara oasis during the second century BCE; these included a Heliokles *tetradrachm*, a ring, and perhaps a bone/ivory furniture element deposited in kurgan burials, as well as sherds representing fine ceramic tableware at Bashtepa, including several fragments of perhaps imported specimens of Megarian bowls.[85]

This example of a transfer of tableware leads to another important phenomenon in the contemporary production of goods and their transregional movement, within Sogdiana's ceramic repertoire itself. This case also represents something of an exception to the general impression of the region's modest quality of craft products during antiquity. The two relevant ceramic complexes – named after their respective periods of manifestation at Marakanda-Afrasiab – may be characterized in the following way:[86] first, around the mid-second century BCE, the production of high-quality slipped wares with strong typological and technological parallels to contemporary Bactria suddenly emerges (Afrasiab IIB). Then, from around the beginning of the first century BCE, this pattern of production largely continues, but low-bottomed drinking vessels (known from Afrasiab IIA and IIB) are joined by the introduction of high-stemmed goblets (Afrasiab III) (fig. 3). In Sogdiana, these types of drinking vessels seem to remain current until around the beginning of the second century CE and are found widely in settlements, as well as among the grave goods of kurgan burials of the southern side of the Zerafshan valley in particular.

Admittedly, some points about these phenomena remain unclear – foremost the mechanism of transfer that instigated the production of Afrasiab IIB in the first place. The strength of parallels between this complex and those of Bactria speaks at least to the movement of some craftspeople to Sogdiana,[87] but it moreover indicates a rather sudden convergence of commensality cultures between the neighboring regions. This convergence would persist at least through to the mid-first century CE, indicated by the appearance of various iterations of goblets broadly comparable to those of Afrasiab III in contemporary burials of kurgan cemeteries in Bactria, and especially that at Babashov closer nearby on the middle Amu Darya.[88] Of course, this aligns with Bactria's 'Saka-Yuezhi' period (ca. 145 BCE–50 CE) between the fall of the Graeco-Bactrian Kingdom and the rise of the Kushan Empire.

84 See Stark 2016, 143; Naymark 2014.

85 Stark 2016, 139–144; Mirzaakhmedov et al. 2020, 207, fig. 10.

86 Here drawing on the in-depth discussions in Lyonnet 2018; 2020a.

87 Lyonnet (2018, 434) considers the complex to represent the result of Greek elites fleeing a Yuezhi invasion of Bactria; Stark (2020, 92, n. 22) alternatively suggests it is the result of deported craftsmen.

88 See discussion Lyonnet 2020a, 12.

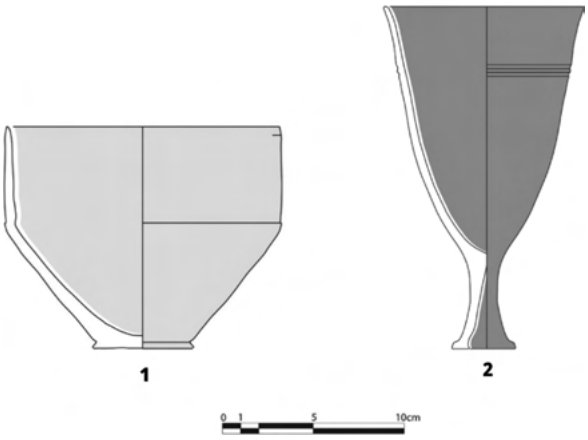

Fig. 3: Examples of types of ceramic goblets from Marakanda-Afrasiab, excavations of the MAFOuz de Sogdiana (directed by Frantz Grenet): 1. Afrasiab IIA red-slipped, polished goblet on a thin disc-base. 90–2-050; 2. Afrasiab III goblet with brown-black slip inside and outside. 91–2-185 (after Lyonnet 2018, figs. 1.5, 2.5). Courtesy of MAFOuz de Sogdiane, Bertille Lyonnet.

The implications for production and interaction here are multifaceted: refracted through burial rites, the shared forms of drinking vessels attest to the development of interregional social institutions of commensality – especially wine drinking – between individuals in these regions. Moreover, many of these individuals were buried in a manner that expressed at least some affiliation with a 'nomadic' identity. The emergence of these practices furthermore falls within what I understand as a heterarchical phase of the Kangju confederacy, which may also have seen additional alliances drawn with leaders such as the Tokharoi/Yuezhi.[89] On an intraregional level, these kinds of vessels were also produced and used among sedentary populations, reiterating that the articulation of these practices of commensality – as well as the production of pottery to facilitate it – occurred within a broader context of local interaction between agents practicing diverse subsistence strategies. Simultaneously, the adaptation of Hellenistic tableware forms into these institutions of commensality speaks to a broader trend in post-Hellenistic southern Central Asia: the selected integration of Hellenistic cultural components into diverse vocabularies of power, reflecting a long-held social memory of the prestige associated with Greek rulers.[90] Similar ideas were concurrently articulated through the design features of Sogdiana's coinage throughout this period.[91] Of course, the precise 'origin' of the Afrasiab III style high-stemmed goblet remains unclear, and comparable drinking vessels also emerged in ceramic complexes of Chorasmia to Gandhāra around these same centuries, speaking also to

89 See above, ch. 4.A, IV.1.

90 Discussed in Stark 2020, 90–91; Morris 2020.

91 As above, ch. 4.A, IV.1–2.

a broader cultural phenomenon that I cannot devote more time to here.[92] In any case, such vessels were not in use in the middle Syr Darya, so this was far from a 'pan-Kangju' phenomenon – despite also the fact we have seen that feasting was a coded political institution among the high Kangju elite in the first century BCE.[93]

This brings us to another important domain in the contemporary production of goods and their transregional movement: the prestige good economy among such high elites. Significantly, the hierarchical phase of elite organization among the Kangju confederacy appears to contextualize the emergence, from around the second half of the first century CE, of the few examples of strikingly elite kurgan burials known thus far within the orbit of Sogdiana. The apparent absence of such early comparable graves thus far from the middle Syr Darya implies only a discovery bias in the archaeological record. Indeed, the following remarks must be predicated by the caveat that an 'elite' status of interred individuals can be only ascribed in general and relative terms, not only because of a bias of data (i.e., from incomplete publication as well as ancient looting of burials), but also because we lack insight into the specific values that were ascribed to materials and goods and how these intersected with expressions of status (i.e., political, social, and even religious).[94] Nonetheless – and with a view to understanding the movements of goods – one can assume a relative elite status in these burials according to, for example, the presence of ornaments or items made of precious metal, traces of prestigious textiles, goods reflecting significant and/or highly specialized labor in their production, and items from distant territories (especially unusual items that only circulated in restricted spheres).

Thus, the following examples of relatively elite burials may be highlighted: the woman interred at the abandoned site of Koktepa (fig. 4), two successive burials in a kurgan northwest of Sazagan, Agalyksai kurgan 8 nearby, and the two buried in Orlat kurgan 2 (ch. 4.A, map 2). Notably, all are related variations of catacomb burials, moreover with particular parallels to rites and inventories of burials in the Arys basin, encountered in large numbers from the second century CE. Afrasiab IIB- and III-style goblets are not found here. But rather than insisting upon the 'origins' or ethnicity of these individuals, these patterns indicate the articulation of prestige on specific axes.

92 See discussions in Kabanov 1964; Lyonnet 2018; 2020a.

93 Discussed above, ch. 4.A, IV.2.

94 The same applies to status associated with certain body modifications. Specifically, the question of whether artificial cranial deformation (in this context, most commonly the frontal-occipital and annular forms) signifies ethnic or social information (i.e., ethnic group affiliation or membership in a noble or otherwise elevated group) has been subject to significant debate, and the precise semantics of this practice do not have to be static over time or space. A limited number of individuals in the graves discussed in this chapter had their skulls modified in this way, such as the woman at Koktepa, suggesting that in her case it may have served to mark a distinct status (i.e., generally, membership in nobility); however, the practice was much more common among individuals buried in the slightly later Kenkol-affiliated graves, suggesting alternative semantics; see the discussion in Kitov, Tur, and Ivanov 2020, 178–185.

Special items included in the burial of the woman at Koktepa include two silver bowls, a bronze *siru*-type Han mirror, a 'Scythian' bronze cauldron, a 'Sarmatian' bone comb, and Syro-Phoenician glass beads, as well as a diadem with golden ornamentation and hundreds of gold bracteates that had been sewn to her clothing (fig. 4).[95] The apparently disturbed successive burials at Sazagan contained the remains of gold decorative elements from articles of adornment (including bracteates and jewelry),[96] as did likewise kurgan 8 at Agalyksai.[97] Somewhat different are the goods deposited in kurgan 2 in the Orlat: the male, evidently styled as a warrior, was associated with a belt ornamented with a set of incised decorative bone plaques (ch. 4.A, fig. 3) which, as discussed above, prominently featured depictions of male nomadic elites engaged in both hunting and battle (ch. 4.A, IV.2 above). Otherwise, the grave included a Han nephrite scabbard slide as well as decayed fragments of a textile that had been interwoven with gold thread.[98]

Several observations can be made here. First, the sets of gold ornaments of the burials at Koktepa and Sazagan speak clearly to a specific context of production: direct elite sponsorship or patronage of specialist artisans. The Orlat belt plaques also imply a similar context of production, if with more modest materials, and exist in a sphere of comparable incised objects in Sogdiana, Bactria, and the Syr Darya.[99] It probably goes without saying that much of the weaponry deposited in graves of this period must have been manufactured in workshops in a direct relationship to their consumers (e.g., via sponsorship). Second, the kinds of imported prestige goods in these graves variously invite comparisons with burial complexes of diverse spheres across the Eurasian steppe, especially the Sarmatian sphere (i.e., of the western Eurasian steppe), but also that associated with the Xiongnu, and even earlier Sakas, as indicated by the cauldron in the Koktepa grave.[100] However, this object was evidently very old by the time of its deposition (with parallel examples elsewhere dating from the tenth to fifth centuries BCE) and had been subject to a major repair.[101]

The relatively small number of documented examples of comparatively distinctive imported goods from other burials in Sogdiana and the middle Syr Darya indicate

95 Rapin, Isamiddinov, and Khasanov 2001.

96 The Palace Museum and Northwest University 2020, 32–47; Renaguli, Xi, and Liang 2018; Liang, Xing, and Han 2020.

97 Obel'chenko 1972, 61–63, 72, figs. 7–8. Although the ornaments appear somewhat stylistically archaic, the burial architecture indicates that the grave is roughly the same date as the other examples discussed here.

98 Pugachenkova 1989, 127–129. See especially the discussion of the inventory in Ilyasov and Rusanov 1997. Note also that a few scant gold ornaments and fragments of another textile with gold thread were found in Orlat k. 1 (Pugachenkova 1989, 124–127).

99 See above, ch. 4.A, IV.2.

100 See, e.g., Ilyasov and Rusanov 1997, 131–133; Rapin, Isamiddinov, and Khasanov 2001, 72–73.

101 Rapin, Isamiddinov, and Khasanov 2001, 48, 54–55.

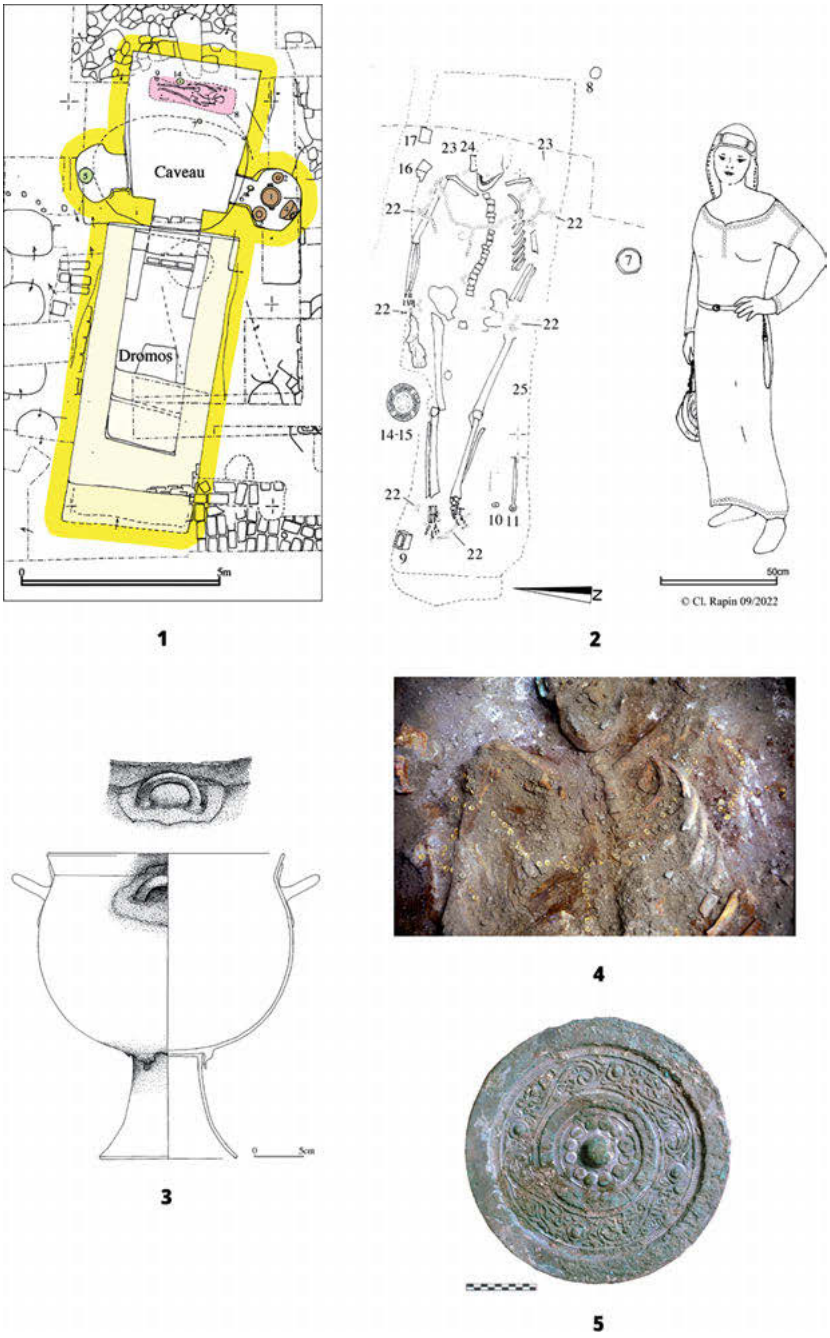

Fig. 4: The burial of an elite woman at Koktepa. 1. Plan of construction of catacomb grave; 2. Burial and reconstruction of burial clothing and diadem; 3. 'Scythian' type bronze cauldron. 4. Examples of gold bracteates *in situ*. 5. Bronze *siru* type Han mirror. Courtesy of MAFOuz de Sogdiane, Claude Rapin, Mukhammadjon Isamiddinov, and Mutalib Khasanov.

similar patterns.[102] On the earlier side of this phase, certain types of bronze openwork belt buckles depicting battling animals from male graves in Liavandak and Shahkhrivairon point to affiliations with the western steppe.[103] Rectangular stone belt plaques with parallels across the steppe have been documented in a male warrior's grave at Kyzyltepa, and in a burial at Zhaman Togai in Chach; the latter example had furthermore been amended with incised depictions of animals.[104] A spectrum of types of Han mirrors (some fragmented) have also been found deposited in graves in Chach and[105] in the Arys basin,[106] and another at Kenkol.[107] A cauldron found just north of Sogdiana at a contemporary grave in Sirlibaitepa is comparable to that of Koktepa.[108] Imported goods in the majority of graves of this period are otherwise limited, with the exception of glass beads and Egyptianizing faience beads and 'amuletic' pendants of diverse forms; such objects are widely distributed in burials of broader Central Asia during the mid-first century BCE to the first half of the second century CE[109] and parallel their popularity in Sarmatian burials, where, however, ornaments of differing types are documented; thus, Treister proposes that these 'Egyptian' objects from the Sarmatian sphere were rather largely produced in northern Pontic workshops, while those in contemporaneous Central Asia may rather originate from Egyptian production centers.[110] In any case, these accessible and portable objects certainly express connectivity and converging preferences between these different cultural spheres.

A similar perspective is presented by material relating to one of the few temples documented thus far to have been active in antique Sogdiana, namely that in the fortified area of Paikend's later citadel. The most extensively exposed form of this building relates to the third to fourth centuries CE and thus to renovations in the Sasanian era,[111] but ongoing explorations suggest that an earlier structure had been active already in the first half of the third century BCE.[112] A series of intentional

102 Note that several of the burials discussed here are not precisely dated, and several items mentioned in the following seem to have been deposited in somewhat later burials (i.e., from the second century CE), to follow the discussion in Malashev and Torgoev 2018.

103 Liavandak k.16 and Shakhrivairon k. 2 (Obeľchenko 1992, 35–36, 179–186), see analysis in Brosseder 2011, 384–388.

104 Kyzyltepa k. 2 (Obeľchenko 1992, 42–43); Zhaman-Togai k. 21 (Maksimova et al. 1968, 185–186). See discussion in a broader context in Brosseder 2011, 349–424.

105 I.e., an inscription mirror at Vrevskaia, and a *riguang* mirror at Pskent k. B-1 (Litvinskii 1978, 101). On these finds within a broader context and the relevant types of mirrors, Brosseder 2015, 236–249.

106 A *qingbai* mirror at Kul'tobe-Arys cemetery k. 12 (Podushkin 2011, 365), and a TLV mirror at Kylyshzhar k. 12 (Podushkin and Donets 2021, 345).

107 A cloud-and-nebula-design mirror in k. 18, Kenkol (Kozhomberdiev 1963, 40).

108 Grave 2 in the kurgan Sirlibaitepa, Ivanitskii, and Inevatkina 1988, fig. 3.

109 See, with further references, Treister 2018, 18–19.

110 Treister 2018.

111 Omeľchenko 2012, 81–82.

112 Omeľchenko 2019, 222. See ceramics beneath the earliest platform and adjacent to it in Mirzaakhmedov and Omeľchenko 2013, 13–17; 2018, 20–21. I thank Andrey Omeľchenko for this information.

depositions of fragmented objects dating largely to the period from the first century BCE to the first century CE have also recently been documented nearby, evidently representing material extracted from the former temple's inventory and redeposited, as noted by Omeľchenko.[113] These deposits included, among other objects, examples of weapons (e.g., daggers, arrowheads, bow covers), elements of armor (including a large number of amor plates, one ornamented with gold foil), parts of belt sets, some detached ornamental gold elements, remains of turquoise inlays, rare glass vessel fragments, cowrie shells, and a copper knob from a sword grip incised with an image of a figure resembling Hyrkodes.[114] In his study, Omeľchenko links finds in these deposits to the nomadic dynasties of Sogdiana and highlights especially strong parallels with contemporary burials in western Sogdiana as well as wider connections much along the lines of the burials already described here. Obviously, we have little indication thus far as to the role of such temples in the economy, besides that they were obvious sites attracting patronage and gifts from the region's elites.

The imported materials discussed here raise the question of the mechanisms of exchange that were mobilized to procure them. Although it might be tempting, for example, to attempt to draw a clear line between the few documented Chinese goods and historically attested diplomatic interaction with Han agents, such objects could have been redistributed through a variety of different mechanisms. Thus, perhaps it may only generally be stated that such highly prestigious items constitute the expression of a prestige economy that most probably involved the distribution of specific kinds of goods among interconnected elites, for example through gift exchange or redistribution from leaders to their retainers.[115] Of course, the possibility that trade activity was responsible for the movement of some of these items should hardly be ruled out, a point I will return to further below (II.1). Although I do think that the patterns laid out here largely reflect a phase of elite competition and hierarchical organization within the Kangju confederacy, they should of course also be placed into a wider context of coeval heightened interaction within Eurasian steppe networks that is analyzed by Brosseder and Miller.[116] What remains less clear, perhaps, is how much the goods discussed here truly reflect intentionally 'global' articulations of prestige drawn from a widely shared vocabulary; with limited epistemological access into the precise regimes of value structuring the desire for these goods, the scale of this vocabulary at least appears global to us.

In any case, other valuable goods that we do not see in these burials must have moved through the mechanism of tribute extraction during this same period, a point indicated by the small animal pelts (probably sables) indicated in the *Hou Hanshu* as

113 Omeľchenko 2020. Besides the comparisons Omeľchenko cites, an additional parallel for such a practice might also be found at Begram (in the Kushan Empire), for which see Morris 2021, 406–417.
114 Omeľchenko 2020, fig. 6.1.
115 See the models discussed in Brosseder 2015.
116 Brosseder and Miller, ch. 5, this volume.

having been sent from Yan (around the southern Urals) to Kangju (see below, II.1).[117] Indeed, this also reiterates a point that should not be forgotten: the substantial invisibility in the archaeological record of significant kinds of valuables that must have circulated within the middle Syr Darya and Sogdiana, especially as mixed ecological zones constituting a broad frontier with the steppe: prestigious animals, leather goods, and other kinds of skins and furs (e.g., from the Karakul sheep grazed in the desert-steppe of the Kyzylkum), as well as items such as textiles and valuable organic materials.

Finally, the last phase of the Kangju confederacy sees further shifts in the scale and orientation of the prestige economy in the middle Syr Darya and Sogdiana. This is visible again in the domain of burials, as the number of graves in cemeteries of the Arys basin seem to increase in the second century CE alongside a broader access to similar kinds of imported goods, if with a notable orientation toward the Sarmatian sphere to the west.[118] Other graves evoke interest in still-wider kinds of prestige goods, including an unfortunately looted burial of a cataphract warrior from a kurgan near Kosagash, within which the body of the interred had apparently been wrapped in silk.[119] In the neighboring highlands, the concentration of Kenkol-affiliated burials from the third century CE onward reflects similar phenomena, including fragments of silk clothing, and even late antique glass vessels presumably imported from the west.[120]

Beyond burials, we also find contemporary indications for increasing the accumulation of wealth and access to prestige goods among a wider spectrum of elites, for example, at Kul'tobe-Turkistan from the mid-second century to the end of the third century CE.[121] Here, an array of items (some broken and partly worked) deposited in a pit demonstrates the presence of a skilled artisan (or artisans) active in the production of jasper sword locks of the variety deposited in contemporary graves in the region and of plaster ritual figurines, as well as the working of rock crystal, carnelian, and glass scrap presumably toward jewelry production. Furthermore, a later hoard primarily composed of gold jewelry from the same site included examples of earrings, pendants, plaques, and large number of beads, reflecting the output of a skilled artisan active elsewhere in the region; comparable earrings are known from late Sarmatian burials in the southern Urals in the second half of the third century CE.[122] These finds attest to the activity of elite contexts of production – again presumably via direct sponsorship – as well as spheres of exchange. Equally evocative is the fragment

117 See above, ch. 4.A, IV.3, and below, II.1.

118 E.g., Podushkin 2000; 2015, noting, however, the dating for T-shaped catacombs discussed in Malashev and Torgoev 2018, 44–46.

119 See Podushkin 2000, 84–85; Yatsenko 2020c, 46–47.

120 Here following the dating for the Kenkol burials in Malashev and Torgoev 2018, 46. See, e.g., Kozhomberdiev 1963; 1977. For the silk in the Kenkol burials, Bernshtam 1940, 22–24.

121 For the following, see Torgoev, Kulish, and Erzhigitova 2020.

122 Torgoev, Kulish, and Erzhigitova 2020, 117.

of, apparently, an imported ivory rhyton (second to third century CE?) reportedly found by chance at Shashtepa in Chach. This depicts a male elite in a manner strongly recalling Parthian-Sasanian parallels excavated at the temple of Mele Hairam in Margiana as well as from Olbia on the northern Black Sea.[123] Although this object's precise place of production as well as the exchange mechanism bringing it to Chach remain unclear, it suggests again expanding access to a broader scope of prestige goods within the middle Syr Darya during this phase.

Comparable patterns of access to prestige goods do not yet seem to be expressed in the Zerafshan valley during the period of decline in the second century CE, although as discussed above, nonuniform development probably escalated again from the mid-third century CE in both Bukhara and Samarkand.[124] Indeed, in a manner evidently reflecting Paikend's integration into the Sasanian/Kushano-Sasanian political and economic sphere, several examples of imitation Kushan copper coins relating to the mid-third through fourth centuries CE were found in the lower levels of the barracks, in addition to rare fragments of glass vessels; one with applied trailed decoration is apparently a late antique Roman product.[125]

As noted above, development in southern Sogdiana seems to escalate earlier and is ultimately best reflected in the capacity of Nakhshab's ruling elites to mobilize considerable surplus resources and labor toward new building programs at Erkurgan. Among these constructions, the center's deteriorating former temple was levelled and renewed around the third century CE, speaking also to the influence of religious institutions during this period. This phase of the temple, which was dedicated to an uncertain goddess (who, however, does not seem to belong organically to the Zoroastrian pantheon) constitutes one of our few insights into religious institutions in antique Sogdiana, although it is still being fully published.[126] The monumental construction itself, ornamented with clay sculptures and wall paintings, demonstrates at least access to specialist builders and artisans, although whether this was facilitated through elite patronage or the temple's ownership of productive resources like land is a matter of speculation. Elite patronage of the temple during this period, however, is suggested by the richness of offerings made to the sanctuary over time, including agate figurines, the remains of a bone or ivory throne, and gold ornaments.[127]

123 For the fragment, Filanovich 1986; 2010, 113. For the comparanda from Mele Hairam, Kaim 2010.
124 See above, I.1.
125 Omel'chenko 2012, 83–84, fig. 14, no. 15.
126 See Suleimanov 2000, 88–112.
127 Suleimanov 2000, 102–104.

II Mercantile Activity and the Emergence of the Sogdian Network

Having laid out broader patterns in access to surplus wealth under the Kangju confederacy, and how political organization and institutions in this period shaped the production and exchange of valuable goods, we can now return to the question of how a Sogdian network of professional traders came to be active on the circuit between the Kroraina kingdom and Chinese capitals by the early fourth century CE. I first consider the role that Sogdian merchants may have played in the picture sketched here thus far, and then more closely examine the *Ancient Letters* for indications as to how the network was first developed and organized, as well as its intersection with economic activity in Sogdiana.

II.1 The Role of Merchants

To recapitulate some of my key points thus far, in Sogdiana and the middle Syr Darya under the Kangju confederacy, it seems clear that any long-distance exchange activity was occurring primarily in a small orbit of elites, while a middle producer-consumer stratum did not emerge in these territories during antiquity, concomitant with a lack of true urbanism. However, the intensity and orientation of long-distance exchange was also dynamic over time. It seems to have increased in the hierarchical phase of the confederacy marked by elite competition and access to prestige objects (first century BCE–first century CE), and there are indications that a wider body of elites in the middle Syr Darya and southern Sogdiana came to have increasing access to surplus wealth and imported goods from the second century CE onward, a heterarchical phase of the confederacy's political organization.

I have also stressed that much of this exchange activity was entangled with dynamics of political organization and active institutions during this period, fluctuating in scope and dimensions alongside the orientation of elite political organization toward more heterarchical and hierarchical modes of operation over time. The mechanisms for procuring these goods hardly insist upon the existence of professional traders, meaning individuals who depend on profits from exchange for their livelihoods – the kinds of figures depicted in the *Ancient Letters* – although it also does not exclude them. Of course, individuals undertaking mercantile activity can in principle combine this with other subsistence strategies, and it is also possible that figures acting as merchants could have been coopted by institutions to assist with the provision and conversion of goods and resources, a practice perhaps already attested in Achaemenid Central Asia.[128] It is also worth noting that, as Khazanov observes, there is a broader

128 See above, ch. 4.A, II.2.

lack of evidence for the development of professional traders within nomadic societies; professional merchants from sedentary areas were often instead engaged by authorities of nomadic polities both to obtain goods and to convert tribute into other forms of wealth.[129] That said, in principle, mobile pastoralist groups have the capacity to integrate additional production and distribution activities along a primary pursuit of pastoralism, for example in undertaking seasonal transhumance.[130] Such a model might provide a good explanation for the extraction of turquoise from the low mountains of the inner Kyzylkum during antiquity, as well as its transfer to first points of redistribution, such as at periodic border markets, coinciding with movement to winter pastures.[131] This generally serves as a reminder that broader exchange activity must have fluctuated seasonally, and alongside ebbs and flows in demand, labor availability, and production with respect to the dynamics of agricultural production; heightened demand might be expected around the main harvest season, followed by quieter autumn and winter months within which households could divert more labor to craft production activities.[132]

In respect to the picture assembled here, it seems that the only conclusion to draw is that the phenomenon of professional Sogdian merchants engaged in long-distance trade must be first traced back to the engagement of Sogdians in mercantile activity toward elite provisioning. Theoretically, such activity could have especially been stimulated in the political and economic conditions of the second phase of the Kangju confederacy (first century BCE to first century CE). As I have suggested above that coinage minted throughout the Kangju era in Sogdiana was probably produced as a tool of such provisioning,[133] the implication is that this coinage could then have been provided as capital by ruling elites to such figures, via whom it would then emanate into the wider economy. Ultimately, the relatively restricted stratum of elites in the Kangju confederacy not only constituted the most prominent locus of wealth accumulation in the region (and hence a source of capital), but also its main locus for the consumption of valuable imported goods. Any trading activity involving the long-distance transfer of valuable goods, especially via overland methods of transport, was inherently risky and expensive. It is impossible to conceive of merchants engaging in the high-risk transfer of valuable goods in this context without access to considerable capital and a clear conception of where and how such goods can be obtained – knowledge that could certainly have been partially accrued from information gathered by (genuine) embassies sent from Kangju rulers to the Han, for example. Equally necessary was a clear conception of elite demand for such goods, i.e., their 'market.' Such

129 Khazanov 2019, 88.

130 See the comparative case of the Banjaras from the fourteenth century CE in India in Hirth 2020, 205–206.

131 On resources of Kyzylkum, Sverchkov 2009, 154–156; these resources will be dealt with in more detail in a forthcoming dissertation by Mariana Castro.

132 See a broader perspective in Hirth 2020, 245–247.

133 See above, ch. 4.A, V.2.

observations also apply even further to the south, at Begram (ancient Kapisi), a wealthy city within Kushan territory. As I have shown elsewhere, the curious selection of imported prestige goods brought to elites at this site – sometimes even in the form of veritable 'cargoes' – was evidently strongly determined by local and specific consumption preferences that had effectively been communicated over long distances.[134]

Such an explanation as to the origin of Sogdian trade still seems rather hypothetical, and such a phenomenon is admittedly not described in the later *Ancient Letters*. However – to jump slightly forward in time again – Yoshida has also recently pointed to diverse evidence for Sogdian merchants engaging with nomadic rulers in the sixth century CE, suggesting that they acted as something like the predecessors of the *ortoq* merchants employed by the later Mongols in terms of asset management; namely, he refers to two instances of the sarcophagi of Sogdian *sabao*s 薩保 (see below, II.2) found in China with reliefs respectively depicting the deceased with his sons leading a caravan to a Hephthalite lord in Bactria, and the deceased visiting a Türk lord with his caravan, alongside other textual indications of Sogdian merchants being sent to Türk leaders.[135] Such *ortoq* merchants employed by Mongol princes and officials were usually Muslims from Central Asia who were provided with capital in the form of extracted tribute and would arrange its conversion via trade to commodities and forms of wealth needed by their patrons, taking payment through profit accrued.[136] Elsewhere, we might find other cases implying the conversion of tribute to other forms of wealth; see, for example, the enormous amounts of silk – clearly exceeding any needs for domestic consumption or redistribution – that were extracted from China by the Xiongnu (10,000 rolls annually) and Türk rulers in the sixth century CE (100,000 rolls annually).[137]

Such possible intersections between tributary and commercial economies call to mind the single piece of evidence we have pointing to tribute extraction under the Kangju: the dispatch of 'small animal pelts' (presumably sables) from Yan mentioned in the *Hou Hanshu*.[138] Of course, we have no clue of the size of this apparent tribute, only that it came to the attention of Chinese informants. Neither do we know how it might have been processed into garments or worn in the middle Syr Darya or Sogdiana: in principle, such furs could have be used for the lining of warm coats or the trims of other articles like hats, or might have been incorporated into accessories such as ornamental horse tassels (as depicted, for example, on the horn bow overlay from Kylyshzhar), but our evidence is categorically vague.[139] It is possible, if a point

134 Morris 2021, 438–439.

135 Yoshida 2021, 12–13.

136 See Yoshida 2021, 12–13.

137 Khazanov 2019, 89.

138 See above, ch. 4.A, IV.2.

139 Rather further to the north, the well-preserved clothing from Altai burials of the fifth to third centuries BCE show sable and other furs being used for the lining of coats, where it could also be cut

of pure speculation, that this tribute was commanded by the Kangju king ruling in the middle Syr Darya (when this central institution of rule was active) and redistributed for consumption among his upper elites – whether directly to them, or to artisans under elite patronage for processing into garments and accessories. Such a system is seen, if admittedly far later, among the Qing dynasty in China, who extracted sable as tribute from northern tribes and used it as a highly differentiated symbol of hierarchy in court.[140] Valuable furs could theoretically have also been redistributed beyond Kangju territory through diplomatic mechanisms; one may note the case of a seventh-century ruler of the eventual eastern Türkic Khaganate reportedly sending 38,000 (!) sable pelts, among other gifts, to the Chinese emperor as part of a marriage alliance.[141]

Indeed, there are many indications that other, diverse groups were also in contact with these northern territories, presumably driven in part by access to furs. A little later, by 239 CE, Chinese informants had a much more detailed conception of the diverse kinds of famous pelts and sables produced by various peoples of the northern steppe zone – including also Yancai and Liu, again glossed as former dependencies of Kangju – and moreover that merchants were frequently in northern territories.[142] Others have thus already proposed, pointing to diverse bodies of evidence, that a fur trade with these northern countries became active at least in the first centuries of the Common Era.[143] Especially evocative testimonies of contemporary connectivity between these regions and southern Central Asia are constituted by a few examples of early Kushan copper coins and a Bukharan Euthydemos-imitation *tetradrachm* noted by Naymark in the upper Kama river basin, west of the Urals.[144] Indeed, two other examples of Kushan copper coins are known from the territory lying between Sogdiana and this northern zone, i.e., the middle Syr Darya: a worn Soter Megas issue of Wima Takto at the settlement of Kul'tobe-Arys (in association with a redeposited frag-

into different shapes and dyed (See Hensellek 2020, 45–47, figs. 1.7–9). Without preserved examples of clothing, one may note a band on a male's pointed cap on a terracotta figurine from Tali-Barzu near Samarkand that may intend to depict a fur trim (Kidd 2004, 186, 190, HD01.05.02). The nomadic elite male depicted hunting on horseback on the bow overlays from Kylyshzhar might be wearing something like a fur cape, and the horse's ornamental tassel might also have a fur component (Podushkin 2022, 192–193, fig. 8). On horse tassels, Ilyasov 2003.

140 Ning 2018.

141 *Zizhi tongjian* 196.6177.

142 See the *Weilüe* quoted in *Sanguozhi* 30.862–863, the other countries being Hude 呼得, Jiankun 堅昆, and Dingling 丁令.

143 See, e.g., Treister 2022, pointing to the concentration of Chinese goods during the late Sarmatian period on one side of the Urals and Roman imports on the other, suggesting the attraction of merchants of north Pontic and of Kangju to the same goods. Stark (forthcoming b) suggests commercial incentives drove the northward orientation of Sogdian exchange and military activity already in the second century CE.

144 Aleksandr Naymark, personal communication.

ment of one of the Kul'tobe inscriptions),[145] and a worn copper of Huvishka at Kul'tobe-Turkistan.[146]

Furthermore, as Brosseder and Miller show, elite burials of the Sargat pastoralists of this forest-steppe zone (ca. fifth century BCE to second century CE) included a wide repertoire of prestige objects with parallels across the Eurasian steppes, but these notably also included silver *phalerae* perhaps produced in Hellenistic Bactria (Sidorovka kurgan 1), and three silver bowls with Chorasmian and Parthian inscriptions deposited around the second century BCE but produced somewhat earlier (burial 6 of mound 3 at Isakovka 1).[147] The longer Chorasmian inscriptions on two of the bowls express their ownership and transfer as rewards among named kings, rulers, and elites, presumably well prior to their deposition.[148] It is worth stressing that there are only a few known examples from the antique period of precious metalwork with inscriptions indicating such a Central Asian connection, with numbers escalating notably from the fourth century CE onward. I only highlight here an example of a Sasanian gilded-silver plate with a Sogdian inscription from around the fourth century CE that was found in a village in Perm', just west of the Urals. The inscription expresses a similar concept to the Chorasmian examples: the ownership of "Prince Shāw, [the leader] of the *nāf* of Chach."[149] These silver vessels are material expressions of the intersections of prestige economies in Central Asia with these northern regions.

At this point, one may wonder if Sogdian mercantile activity could have been specifically integrated into the fur component of Kangju's tribute economy – whether figures acting as merchants might have been engaged to procure furs, or to convert them to other forms of wealth through trade. Again, this is essentially speculation, but one might think of another historical case within which a fur-tribute economy deeply intersected with a commercial one: the *iasak* (tribute) extraction of sables from Siberians in tsarist Russia from the sixteenth century. In this system, extracted furs were systematically traded onward via authorities for enormous profits, which however quickly attracted small groups of independent Russian traders to the hunting and trading business.[150] If merchants may have been coopted by Kangju rulers to convert furs via trade into other forms of wealth, however, presumably this trade cannot have been oriented toward Sogdiana alone, in light of the wider picture of the economy and access to surplus wealth that I have presented here.

Indeed, it is also possible that some Sogdians also engaged in networks of mercantile activity in order to provision elites of neighboring regions during antiquity; one may think here of the two large hoards of Graeco-Bactrian silver found respectively

145 See above, ch. 4.A, IV.1.

146 Torgoev, Kulish, and Erzhigitova 2020, 106, 118, fig. 4.3.18.

147 Brosseder and Miller, ch. 5, II.2, this volume with further references.

148 Inscriptions nos. 1 and 2 in Livshits 2003, 148–150, 161–162.

149 Livshits 2007, 174–175.

150 See, e.g., Richards 2014, 55–84.

in Bukhara oasis and Kesh (which could, of course, be explained via other mechanisms), as well as the curious later flow of Kushan copper coins in the region, which demonstrate at least the movement of agents alongside coinage between the regions (rather than Sogdiana's actual integration into a Kushan monetary zone) until the mid-second century CE.[151] Furthermore, as highlighted by Naymark and Atakhodjaev, this corpus of coins includes three copper issues of Kujula Kadphises produced in a Gandhāran mint (i.e., at Taxila), virtually no examples of which circulated in Bactria, thus implying a more direct link between agents in Sogdiana and this region.[152] Could Sogdian agents have developed ties to Gandhāra as part of elite provisioning networks?

This question recalls de la Vaissière's impression of the emigration of Sogdian merchants to the great Kushan cities of Bactra and Taxila, where they are considered to have evolved as the students of Bactrian and Indian merchants.[153] As already noted at the beginning of this chapter,[154] there are indeed some hints of a Sogdian presence in Gandhāra from the latter part of the third century CE: there is the well-known example among the biographies of eminent Buddhist monks compiled by the mid-fifth century CE of a Kang Senghui 康僧會 (d. 280 CE), who was probably if not certainly a Sogdian; furthermore, before his career in Buddhism, his "family was originally from Kangju but lived in Tianzhu 天竺 [northwest India] for several generations. His father moved to Jiaozhi 交趾 [i.e. northern Vietnam] for business."[155] De la Vaissière also points to the appearance of simple Sogdian inscriptions in the corpus of rock carvings in the passes of the upper Indus from around the third century CE, indicating passage between Gandhāra and the Tarim Basin.[156] As I have stated above, I certainly agree that the movement of agents from Gandhāra between the oasis polities around the southern Tarim Basin significantly foregrounds Sogdian movement along this same area, although these were driven by specific forces: Buddhist missionary activity moving east out of Gandhāra, and the fact that Gandhāra was a highly urbanized region (unlike Sogdiana) with many inhabitants who had access to surplus wealth.[157] But ultimately, I think these pieces of information as well as a few fleeting references to potential 'Sogdians' active in China and Gansu in the second and third centuries CE cannot ultimately help much to pinpoint a beginning of Sogdian trade activity and settlement in these regions; they are too ambiguous.[158] Rather than a search for ori-

151 See above, I.2.

152 Atakhodjaev and Naymark 2021, 56–58, nos. 1–3.

153 De la Vaissière 2005, 90–91.

154 See above, ch. 4.A, I.

155 *Taisho Tripitaka* T50, no. 2059.0325a13, trans. T. Yang 2022, 18 (who however translates Kangju as Sogdiana). The use of Kang as a surname here and a stated origin in Kangju could well refer to Kang Senghui's Sogdian origin, but this is hardly certain. See also discussion in de la Vaissière 2005, 71–74.

156 De la Vaissière 2005, 79–83.

157 See Morris, vol. 2, ch. 13, III.3.

158 See, e.g., the biography of the monk Shi Tandi 釋曇諦, originally from Kangju, whose ancestors migrated to China ca. 156–189 CE, in *Taisho Tripitaka* T50, no. 2059.0370c24; the reference to Kangju

gins in that direction, I think a more interesting question to consider is why and how a family like Kang Senghui's might have moved to northwest India in the first place – a point I will consider now as we finally turn to the Sogdian *Ancient Letters*.

II.2 Economic Organization through the *Ancient Letters*

Moving again slightly forward in time to around 313 CE, we can address the question of the emergence of the Sogdian network of traders and settlers active between Kroraina and China, depicted by the *Ancient Letters*. That said, as indicated at the beginning of this chapter, these documents primarily provide a fragmented perspective on activities within this regional circuit. Only AL2 shows explicitly how these agents intersected with those at home in Samarkand – and not through an example of trade proper, but through the remittance of musk as a form of capital (see below). I am thus less concerned here with the kinds of commodities traded in this regional circuit, or the precise tools that facilitated this activity; rather, I would like to focus on what the *Ancient Letters* indicate about social and economic organization among these agents, and what this can then tell us about how and why they moved east.

It is first necessary to stress that, although all of the individuals mentioned in these letters were impacted by broader conditions of political and economic instability, it is clear that many diverge a great deal in terms of the resources and networks they were able to command. At the upper end of this spectrum were figures such as Nanai-vandak, who reported to his presumed relatives and business partners back in Samarkand in AL2, and who was in command of a network of agents active in the Hexi corridor and in China proper. Likewise prominent is the 'chief merchant' (*sārtpāw*) Aspandhat, who had provided his agent Fri-khwataw with capital (AL5). Also of relatively high standing was the figure who provided the author of AL6 with capital and ordered him to buy silk in Kroraina, as well as a New-avyart, who seems to have provided capital (namely gold) to a Nyazken to exchange for copper coins as well as to buy bezoar (AL4). Comparatively, at the lower end of the spectrum in terms of agency and access to resources and networks are the agents of these figures – who evidently operated in difficult conditions – as well as Miwnay and her daughter Shayn, who had been abandoned by Miwnay's husband Nanai-dhat and left with his debts in Dunhuang. As a result, they were forced to enter the servitude of the Chinese, presumably the creditors of Nanai-dhat's associate Farnkhund, as observed by Grenet (AL1 and AL3).[159]

It would seem that economic opportunities, broadly construed, constituted an important pull factor attracting these diverse people to the east. But which opportuni-

and Yuezhi noblemen in allied military activity against the Former Wei (*Sanguozhi* 33.895), who Stark (forthcoming b) convincingly suggests were rather acting as 'condottieri.'

159 Sims-Williams forthcoming.

ties specifically? Certainly, these letters suggest an already-substantial Sogdian population active and living among communities in Dunhuang, Guzang, Jincheng, and Luoyang, including many figures who were evidently active as professional traders. But as Sogdian settlers in the Tarim Basin and Hexi corridor are found participating in agriculture and craft production centuries later,[160] the possibility that the *Ancient Letters* might also refer to Sogdians engaged in agriculture has occasionally been mooted, with reference to the enigmatic 'Blacks' (plausibly a reference to peasants) mentioned in AL5 to have pressured a Fri-khwataw into a disadvantageous exchange of four loads of an uncertain commodity for four silver *staters* from the capital of his lord, the 'chief merchant' (*sārtpāw*) Aspandhat. But the plausibility of this interpretation hinges in part on whether these 'Blacks' are the same as the "many Sogdians" who "were ready to leave,"[161] and in part on the question of how far one wishes to backdate independent Sogdian colonial activity. Such activity is most clearly discerned elsewhere in the form of agricultural settlements, but only the sixth century CE – for example, in Semirechye – with foundations initiated by landowning nobles.[162] I think there is little reason to believe that the possibility of land ownership was the major pull factor that first drew Sogdian settlers to the east, although I will consider below how this may have eventually attracted emigrants regardless. That said, there is at least some indication that, in a context of profound economic hardship, the individuals in the *Ancient Letters* could diversify their economic strategies when needed; hence Miwnay's daughter Shayn assumes responsibility for a flock of animals when they are stranded in Dunhuang (AL3).[163]

That this Sogdian migrant community's presence between Kroraina and China was not an entirely new phenomenon by 313 CE is reflected not only in the representation of people of diverse means in the *Ancient Letters*, but also through indications as to the organization and size of their communities. The fleeting reference to a "hundred freemen [etymologically 'noble sons']"[164] from Samarkand" and "forty men" in uncertain localities found in the report segment of AL2 have been variously interpreted as referring to family heads (and hence suggesting a much larger expatriate community, with perhaps the "hundred freemen" specifically in Dunhuang) or isolated commercial operatives.[165]

Whatever the true size of these communities, some indications in the case of Miwnay (AL1 and AL3) suggest that the migrant community had recourse to distinct

160 See Skaff 2003; Huber 2020, 181, 195–196, 281–282.

161 AL2.R13–14. On this interpretation, see, e.g., Grenet, Sims-Williams, and de la Vaissière 1998, 100, n. 6; de la Vaissière 2005, 57. This interpretation is also discussed recently by Grenet (in Sims-Williams forthcoming), who also entertains a hypothesis forwaded in conversation by Thomas Jügel that the 'Blacks' might rather be a hired armed escort, and the "many Sogdians" rather merchants.

162 De la Vaissière 2005, 114–115, 164.

163 AL3.R30.

164 AL2.R19–20, see de la Vaissière 2005, 164.

165 See discussions in de la Vaissière 2005, 56, n. 35; Sims-Williams forthcoming.

social and religious institutions at least in Dunhuang, even if ties of kinship still served as the dominant force binding people together. In Dunhuang, there were leaders of the community (some evidently with more formalized roles, like Sagharak in AL1) who could be petitioned for financial support, even if they ultimately deferred to family responsibility in this specific case. Miwnay was likewise able to petition a priest (thus suggesting the existence of a Zoroastrian temple) for help, with some limited success; as Grenet has observed, such charity is within the realms of duties for the Zoroastrian priesthood.[166] In addition to this, there is the much discussed title of 'chief merchant' (*sārtpāw*), who is first attested in AL5 in the figure of Asphandat, to whom his subordinate Fri-khwataw reports. As Sims-Williams has highlighted, the term's original meaning suggests 'caravan protector,' combining Sanskrit and Old Iranian elements with another Iranian (perhaps Bactrian) intermediary, and has attracted much interest because of its relation to later *sabao* – a title attested especially in sixth-century Chinese epitaphs onward to refer to leaders of foreign communities.[167] As Grenet now suggests, the potential reference to emigration of Sogdian peasants to Kroraina (see 'the Blacks' above) in a letter addressed to the *sārtpāw* Asphandat (AL5) might already suggest the emergence of such a community-leadership function.[168]

Putting aside here the debate about the relation of the term *sārtpāw* to *sabao*,[169] I would rather go still further to propose that such a community-leadership function – especially exercised by a powerful individual attached to a merchant organization – was actually central to establishing the region's Sogdian migrant communities in the first place. To clarify what I mean, we can consider the case of Nanai-vandak's network and business relationships as expressed in AL2; here, nobody is qualified as a *sārtpāw*, but the axes upon which the network and business relationships are organized are of critical interest. First, Nanai-vandak's network seems to have been largely organized on kinship terms. This is hardly a new observation: de la Vaissière already noted that the content of the letter seems to argue in favor of familial connections between Nanai-vandak and his addressees in Samarkand, "the noble lord Varzakk (son of) Nanai-thvar (of the family) Kanakk,"[170] and that the shared onomastic components between the locally active agents Armat-sach, Arsach, and Ghotam-sach likewise may suggest familial relations between them.[171] Thus, considering the persistent role of kinship relations throughout these letters, he observed that the "the basic unit of commercial society therefore seems to have been the extended family."[172] As Grenet and Sims-Williams observe, the content of the letter relating to Nanai-vandak's testa-

166 Sims-Williams forthcoming.
167 See Sims-Williams forthcoming.
168 Grenet in Sims-Williams forthcoming.
169 This topic is dealt with extensively in Huber forthcoming.
170 AL2.R1, trans. Sims-Williams forthcoming.
171 De la Vaissière 2005, 48.
172 De la Vaissière 2005, 55–56. The expressions that de la Vaissière proposes to interpret as a reference to a 'family council' in AL1 and AL3 are interpreted differently in Sims-Williams forthcoming.

mentary dispositions for his (related) ward Takhsich-vandak indicates that Nanaithvar and Takut (probably Nanai-vandak's father) are also close relatives, even if the relation of the named Pesakk and Dhruwasp-vandak (his father) remains unclear.[173] Thus, he even treats the network described here as a family business owned by members of the Kanakk clan, with the term "Kanakk" (K'n'kk) indeed seeming to function as a name.[174] Significantly, this same term is also found attested as inscribed on a ceramic storage jar excavated at Marakanda;[175] it appears to have been used in later centuries as a title in an address "to my lord eskātač Kānak Tarqan" in a Sogdian letter in the Otani collection from the Tarim Basin and also turns up in the Upper Indus inscriptions. It may also be related to the (personal?) name K'n' appearing in the legend of certain Bukharkhuda coins ("Bukharan King Kana") of the seventh and eight centuries CE.[176] Whatever the precise meaning of the term across all of these cases, it is clear that the family behind AL2 was not an ordinary one.[177]

The amount of capital being discussed in this letter reiterates the same point. Again, 32, the value of the musk that Nanai-vandak intended to have sent to his associates in Samarkand (the presumed unit being vesicles), probably corresponded to about 30 kg of silver.[178] Briefly, for context, musk is a substance produced by the glands in 'pods' (vesicles) grown on the lower bellies of the males of various species of *Mochus* (the musk deer). The habitats of musk deer are essentially limited to the forested and semi-forested highland areas of Eastern Eurasia, with a particularly important habitat (of *M. chrysogaster Hodgson*) located in the Himalayas.[179] As King has recently shown in a wide-ranging study, the discovery of musk and its various uses in medicinal, ritual, and perfumery contexts is hazy, and clear textual references to its use and exploitation may only be distinguished in perhaps as early as the third or second centuries BCE in Han texts, and certainly by the later Han.[180] The rarity of this substance typically meant nonetheless that it was highly expensive and could furthermore be diluted to very small amounts in the production of aromatic substances, reiterating that the amount indicated to be transferred in AL2 was very large and valuable. Grenet and Sims-Williams now observe that the musk being transferred in

173 Sims-Williams forthcoming.

174 Grenet in Sims-Williams forthcoming.

175 See Lurje 2010b, no. 516.

176 See discussions in de la Vaissière 2005, 155, n. 19; Lurje 2010b, nos. 515 and 516; Naymark 2012, 9–10.

177 It is incidentally worth noting here that the figures in this network bear names with diverse roots, from distinctly traditional Sogdian theophoric names, to those of Pontic Steppe and Iranian origin (see relevant entries in Lurje 2010b). Of course, names can only inform us as to the identity of their bearers to a limited extent, but these onomastic patterns at least broadly reflect dynamics of interaction of the period under examination.

178 De la Vaissière 2005, 52–53.

179 See A. H. King 2017, 11–19.

180 A. H. King 2017, 85–86.

the case of AL2 is functioning as a form of high-value and easily transportable capital, with the shares to be allocated to Pesakk and Nanai-thvar perhaps intended to represent fees for their services in managing Nanai-vandak's capital.[181] Moreover, the letter makes reference to several sums of money from Nanai-vandak's personal capital in Samarkand: as noted earlier, an amount now interpreted to indicate 10,004 *staters* (here *styrch*, usually otherwise *styr*)[182] needs to be checked and managed for productive investment toward Takhsich-vandak's inheritance, and that 1,000 or 2,000 of the same unit can be withdrawn by Nanai-thvar if needed. De la Vaissière already observed that the use of *styrch* here seems to express a small monetary unit of silver (akin to "piécettes" versus "pièces") precisely like the one that was circulating in Samarkand at the time, namely the Samarkand 'archers' (ch. 4.A, fig. 5).[183] However, he also stressed the weak unitary value of the archer coins and suggested that these transactions concerned relatively low amounts of capital (e.g., 1,000 *styrch* equivalent to 0.6 kg of silver).[184] The proposed reading for 10,004 units as constituting Nanai-vandak's capital now rather suggests that this was not a small amount of money – probably about fourteen kilograms of silver.[185]

Altogether, the impression is that the network Nanai-vandak operated in was a powerful and well-connected one that was organized on specific kinship lines – even if we encounter it during a difficult period of its operation. We may even consider it as a mercantile organization, if perhaps not an association proper, which would imply institutions like formal membership, internal rules, and communally held property.[186] Of course, the original source of the family's wealth and connections is a matter of speculation, but, as I have expressed above, the only conclusion can be that the organization they built must have emerged in the orbit of elites, allowing them to eventually accumulate wealth and engage in the organization and management of inherently

181 Suggested in Sims-Williams forthcoming.

182 AL2.R42. The mark used here is discussed in Sims-Williams forthcoming, where it is deduced that it may refer to an otherwise unattested numeral sign.

183 De la Vaissière 2005, 54–55. This was suggested as preferable to the Bukharan Euthydemos-imitation *tetradrachms*, although these issues are now understood to no longer have been produced by this period (see above, ch. 4.A, IV.3).

184 De la Vaissière 2005, 54–55.

185 According to a new classification for the Samarkand 'archers' currently being developed by Naymark, the main denomination of this coinage produced at the time of the *Ancient Letters* (i.e., the fourth stage of the new classification) usually weighed between 1.4–1.5 g (Aleksandr Naymark, personal communication). Compare Grenet in Sims-Williams forthcoming, who considers this figure of 10,004 *staters* in reference to the later-documented Sogdian weight standard (still following the Attic model) at ca. 18 g or the Sasanian standard at 16 g, coming to a much higher figure. I would still rather assume that interpreting the units of silver described here as referring to contemporary Samarkand 'archers' is most logical.

186 On associations in the Graeco-Roman world, see Gabrielsen and Thomsen 2015. The roles of diverse mercantile organizations – taking the forms of networks, diasporas, and associations – in Indian Ocean trade are examined in Evers 2017.

risky, entrepreneurial long-distance trade activity. I would assume that a particularly important time for the formation and rise of such organizations would be the first century BCE to the first century CE, given the picture sketched here of amplified access to surplus wealth and imported prestige goods amongst the ruling elite during this phase of the Kangju confederacy.

Such organizations and (presumably) related figures such as *sārtpāw*s most probably served as the key actors establishing the broader communities of Sogdians of diverse means active between Kroraina and the Chinese capitals that are reflected in the *Ancient Letters*. To clarify, although the model of the trade diaspora as expressed by Curtin has limited historical explanatory power, it raises the useful idea that such sites tend to first emerge as institutional arrangements to facilitate cross-cultural trade, with merchants acting as brokers between the host society and their own.[187] Skaff has already drawn on such ideas to note that members of the Sogdian emigrant communities in these regions during the seventh and eight centuries CE played such a mediating role,[188] and Huber furthermore suggests that the establishment of the *sabao* in this context represents the institutionalization and governmental legitimization of such brokers as intermediaries between the government and such foreign communities.[189] Yet, as already iterated above, the fact that the agents in the *Ancient Letters* are largely *not* engaged in trade with Sogdiana suggests that we are looking at communities existing at a step beyond the initial pathbreaking phase of the formation of trade diasporas. I see no problem in assuming that emerging mercantile organizations and their well-connected figureheads then came to serve as brokers for managing the emigration of other Sogdians to the east – including individuals and families with limited resources searching for new opportunities – as well as taking prominent roles within the new communities they helped create. Indeed, it is difficult to imagine how this kind of emigration could have been managed without brokerage: in the modern, globalized world, it seems easier than ever to conceive of migrants operating as self-reliant agents, but brokerage in fact remains a critical and nearly universal mechanism for provisioning the infrastructure and resources (such as opportunities, transport, and information) that facilitate migration. Brokers may act in many forms: in formal or informal capacities, in varying relationships to states (e.g. as authorized agents, or in contravention to law), and in complex networks of agents driven by both altruistic and profit-seeking motivations.[190] Broader historical parallels may also be drawn for the brokerage of migration by mercantile agents and commercial firms specifically.[191]

187 See von Reden, ch. 1, VII.1, this volume.

188 Skaff 2003, 513.

189 Huber 2020, 303–304.

190 See discussions in Lindquist, Xiang, and Yeoh 2012; Faist 2014; Deshingkar 2019.

191 One example from a relatively well-documented period can be drawn from the organization of European trade and settlement in New Zealand (Aotearoa) between 1769 (its first circumnavigation by Europeans) and 1840 (the accession of the country and creation of the British Crown colony)

In putting forward these comments, I thus hypothesize the following model: any early Sogdian long-distance trade activity was most probably driven by the demands of elite provisioning and was largely intermittent for much of the antique period, and organizations such as the Kanakk family's network – well connected, and with access to serious capital – could have only emerged from the orbit of elites. They would have first established something like trade diasporas connected to the Kroraina–China circuit and then eventually came to broker emigration for actors of lesser means seeking new opportunities, certainly in commerce, but perhaps also in other activities like agriculture. What helped to drive this? Perhaps the decline in the Zerafshan valley through much of the final phase of the Kangju confederacy may have constituted an additional push factor within this process. However, the simultaneous impression of an expanding stratum of elites concomitant with broader development in southern Sogdiana and the middle Syr Darya might suggest that these emigrant communities were built in a broader context of increasing socioeconomic mobility.

Ultimately, the resources and networks of Sogdian mercantile organizations allowed them more flexibility and plasticity to engage in entrepreneurial activity at great distances and absorb risk far better than any individual acting alone. And indeed, in this environment, conditions also could rapidly change, and despite emergent social and religious institutions in place that could assist the emigrant community, some individuals and families certainly remained economically better positioned to absorb systemic shocks than others – as seen negatively in the case of Miwnay and Shayn.

Finally, although the *Ancient Letters* are not concerned with trade with Sogdiana proper, they indicate two additional important points about how trade activity on the

through to 1852. This example also usefully illustrates how the interests of diverse organizations (commercial, religious, and political) could intersect in such processes. Essentially, and here drawing on the accounts in Belich (1996) and Phillips and Hearn (2008, 21–34), the first intermittent European trade activity to source seal skins, whale oil, flax, and timber around New Zealand and its waters was driven especially by various industrial, elite, and military demands emanating from the core of the British Empire. Sealers began to set up intermittent settlements in the 1790s, settlement on a small scale began to be organized by the Church with the creation of mission stations from 1814, and Sydney firms established stations for whaling from the 1820s. These were followed by entrepreneurs with experience in trade and shipping (such as Thomas McDonnell, James Clendon, and Gilbert Mair), who established their own organizations and permanent trading stations, becoming prominent community leaders and recruiting further settlers. From 1840, the British government endorsed a commercial firm, the New Zealand Company, to manage emigration to the country, which then exploded in volume. Some 27,500 European emigrants settled in New Zealand between 1840 and 1852, over half assisted by the Company and its successor firms. The Company sold land dubiously acquired from the Maori and also acted as brokers for the emigration of individuals especially from impoverished rural populations in the United Kingdom to act as agricultural laborers, even offering free passage. Church organizations also managed emigration from England and Scotland during this period, and land grants were also offered to soldiers in exchange for military service from the 1840s. Of course, this all happened in a context of extreme colonial violence, and the Company itself was underpinned by repulsive beliefs about civilization.

Kroraina–China circuit intersected with economic activity at home. First, the musk that Nanai-vandak intended to have forwarded to Samarkand is certainly functioning as a form of high-value and easily transportable capital, but it more specifically represents an example of migrant remittance. Just as diverse studies have illuminated how migrant workers' remittances in the modern world contribute to economic growth in origin countries,[192] musk in this case shows how wealth could be transferred back to Sogdiana as the result of trade activity elsewhere. But the specific choice to use musk for this function is especially significant. Certainly, several media of exchange are indicated in the *Ancient Letters* to have been used within the Kroraina–China circuit, including gold, coppers, i.e., Chinese coins circulating at the time (AL4), silk (AL6), and *staters* (*styr*) of silver, presumably here indicating a unit of weight rather than a denomination (AL5). As these territories did not share a common monetary unit with Samarkand, any transfer of wealth would have entailed a transfer in media of exchange (with attendant transaction costs) regardless.

The mobilization of musk in this case thus implies that this product would have been easily transferable into other forms of wealth by recipient agents in Samarkand, with Takhsich-vandak receiving three parts, and Pesakk and Nanai-thvar one each. Specifically, this means that these men would have been able to arrange for its sale to manufacturers, retailers, or wholesalers via their own networks emanating from Samarkand, reflecting their access to a market (broadly stated) for this costly product and its derivatives. Considering the image laid out here of development in the Zeravshan valley through the second and third centuries CE, one might rather assume that more potential consumers would be known to these agents in the middle Syr Darya and southern Sogdiana, or even beyond Sogdiana itself, via Bukhara as a gateway to the territories of the Sasanian Empire. Indeed, Daryaee has recently highlighted diverse hints as to the importance of perfumery and aromatics in the Iranian tradition, with musk beginning to be mentioned explicitly in texts of the Sasanian period; in this context, it was used not only as a fragrance amongst the aristocratic class, but also within Zoroastrian ritual practice.[193] Sogdiana would eventually become synonymous with certain kinds of musk by the Islamic period – although Sogdiana hardly had a monopoly on its trade – as seen, for example, in a ninth-century statement attributed to Yaʿqūbī: "[The musk called] Sogdian is what is purchased by the merchants of Khurāsān from Tibet. They transport it loaded on animals to Khurāsān, then it is transported from Khurāsān to all points."[194]

192 See, for example, Page and Plaza 2006; Azam 2015.

193 Daryaee 2022, 68–71.

194 Trans. Gordon et al. 2018, 210. See also the discussion in de la Vaissière 2005, 303–304.

III Conclusions

The goal of this chapter has been to reexamine the conditions that gave rise to the emergence of a network of Sogdian professional traders active on a circuit between Kroraina and China by the early fourth century CE, whom we encounter so vividly in the Sogdian *Ancient Letters* (ch. 4.A, I). Understanding Sogdiana and the middle Syr Darya region as frontier zones as well as key territories ruled by nomadic elites linked to the Kangju confederacy (ca. third century BCE to the fourth century CE), I have argued that the dynamics of political organization within this confederacy are critical for understanding regional patterns of economic organization that contextualize the emergence of this Sogdian network.

I began by laying out the ecological and institutional foundations of this picture, first by framing Sogdiana and the middle Syr Darya regions as mixed ecological zones that provided the affordances for a diversity of sedentary agriculture and mobile pastoral subsistence strategies (ch. 4.A, II.1). Such affordances also lent to long-term patterns of interaction between practitioners of these strategies, whether on a local scale at ecotones such as oasis fringes, or at a regional scale through transhumant mobile pastoralism, linking these regions to the northern lands of the Eurasian steppe. Such dynamics of connectivity were in play already by Central Asia's Middle Iron Age, when we also find indications of the concentration of political and religious power in Sogdiana. In the last phase of the Iron Age, around the mid-sixth century BCE, Sogdiana came to constitute part of the northeastern frontier of the Achaemenid Empire, and following the invasions of Alexander the Great, it was subsequently likewise incorporated into the Seleukid Empire, from around the late fourth to the mid-third century BCE. Sogdiana was thus partly transformed on the fringes of these empires, with the imperial agents of both introducing institutions of resource extraction and provisioning that would be later adapted to varying degrees by the region's subsequent nomadic rulers. Changing configurations of interaction with northern 'Scythian' and 'Saka' groups also persisted throughout this period.

As discussed at length, concrete information about Sogdiana's subsequent nomadic rulers as well as the broader Kangju polity is difficult to pin down, meaning that they are easily elided in the history of Sogdian trade. Reviewing the scope of evidence available to us as well as its limitations (ch. 4.A, III.1), I have stressed that the history of the Kangju polity is most productively navigated in reference to comparative literature on the political organization of historical nomadic polities (ch. 4.A, III.2). Reviewing the relevant literature, I propose that the true 'rise and fall' of this polity is inaccessible to us, but considering that the ruling elites of Kangju's constituent territories seem to have been organized in a persistently confederate manner, I have understood the Kangju polity as a confederacy that fluctuated in modes of political organization over time (ch. 4.A, IV).

I have furthermore proposed that political organization within this confederacy can be divided into three rough phases, involving also the adaptation and transforma-

tion of various sociopolitical institutions relevant to the extraction and mobilization of resources and wealth goods. The first phase of the confederacy (third to second centuries BCE, ch. 4.A, IV.1), including the polity's emergence, followed a relatively heterarchical form of organization. This also entailed the capture of Sogdiana probably via collective action, and the installation of new ruling elites – plausibly alongside their warbands – who began to adapt various institutions formerly utilized in the region by Achaemenid and Seleukid imperial agents. The second phase of the confederacy (first century BCE to first century CE, ch. 4.A, IV.2), was marked by the development of a more hierarchical form of organization, including the development of a central institution of kingship in the territory of the middle Syr Darya, the elaboration of hierarchies among subsidiary ruling elites and external vassal relationships, and patterns of both cooperation and competition among the confederacy's elites, who remained able to exercise considerable autonomy. Here, we might also see further hints of the currency of sociopolitical institutions deriving from the orbit of northern, nomadic steppe societies in relation to elites of the middle Syr Darya territories, including that of the *nāf* and the warband. The final and third phase of the confederacy (second to fourth centuries CE, ch. 4.A, IV.3) saw the dissolution of central kingship and hierarchical relationships between subsidiary rulers, producing a more heterarchical form of political organization. This ended with the disintegration of the confederacy in any recognizable form, involving also the apparent incorporation of western Sogdiana into Sasanian/Kushano-Sasanian territory in the second quarter of the third century CE.

These dynamics and institutions of political organization, I have argued, overlapped with patterns of contemporary economic organization in Sogdiana and the middle Syr Darya. Foregrounding the production and movement of valuable goods within and through these spaces, especially within the spheres of transregional and long-distance exchange, I first looked at settlement patterns in these regions to outline key patterns in the production and distribution of surplus wealth, being important factors determining capacities for the consumption of wealth goods (I.1). Here, I highlighted trends of both continuity and change. In terms of continuity, several past power centers in Sogdiana continued to be occupied to varying extents, and we have little indication that these centers came to dominate centralized regional economies or became true cities that could serve as sites for the emergence of socioeconomic middle consumer-producer strata. On the contrary, most economic activity probably rather took place in largely self-sufficient rural networks, with any surplus wealth remaining in the hands of a small circle of ruling elites. In terms of change, regionally nonuniform development seems to escalate in the second century CE, with indications of the accumulation and distribution of surplus wealth across an expanding elite stratum in southern Sogdiana and the middle Syr Darya. Simultaneously, there seems to have been a far-reaching decline in the Zerafshan valley beginning around the turn of the second century CE and continuing into the third century CE. I have tentatively proposed that these dynamics mirror phases in the political organization of the

Kangju confederacy, with heterarchical phases of organization aligning with trends of local development, and the hierarchical phase coinciding with a more unequal distribution of surplus wealth among a small, competitive body of elites.

I then drew parallels between these phenomena and coeval patterns in the production and movement of valuable goods within and through Sogdiana and the middle Syr Darya (I.2). Through a set of case studies, I argued that these patterns were driven and shaped by the dynamics of political organization and sociopolitical institutions under the Kangju confederacy. Thus I first examined the coinages minted in Sogdiana during this period as a portable and easily transferred form of wealth and argued that they were most plausibly first minted to facilitate elite provisioning of certain resources and goods. The warband was then considered as an institution shaping the transregional movement of certain goods, particularly during the first phase of the confederacy. Subsequently, I considered broad changes in Sogdiana's pottery assemblages between the mid second century BCE through the first century CE as particular evidence for the transregional convergence of commensality cultures and hence institutions of feasting. Finally, I considered dynamics of the prestige good economy, highlighting especially the emergence of distinctly elite burials in Sogdiana during the second phase of the confederacy. Goods in the inventories of these burials point to direct elite sponsorship or patronage of specialist artisans, as well as the mobilization of exchange networks for specific kinds of prestige goods from diverse spheres of the Eurasian steppe (particularly the 'Sarmatian' and the Xiongnu) as well as Han China, suggesting an overall political economy of interaction and competition. Potential mechanisms for the distribution of such goods were – if perhaps not exclusively – gift exchange and redistribution. The final phase of the confederacy seems to coincide with shifts in the scale and orientation of this prestige economy, culminating in a broader stratum of elites in the middle Syr Darya and southern Sogdiana with access to more diverse kinds of valuable goods through sponsorship of production as well as exchange.

Turning back to the question of the emergence of the Sogdian network, I first considered the potential role played by merchants within the dynamics of economic organization sketched thus far (II.1). I accordingly have contended that Sogdian long-distance mercantile activity in antiquity can only have emerged in the orbit of a restricted stratum of elites under the Kangju confederacy, specifically to facilitate elite provisioning. This is because this circle of elites evidently constituted the prime locus for accumulated surplus wealth as well as the consumption of valuables, and it is impossible to conceive of merchants in this context engaging in the high-risk overland transfer of valuables without access to considerable capital and knowledge of both sources and markets for such goods. Although we might see figures acting as merchants coopted toward elite provisioning by officials already in Central Asia's Achaemenid period, perhaps the mobilization of such an institution was especially stimulated in the specific political and economic conditions of the second phase of the Kangju confederacy. I have furthermore entertained the possibility that figures acting as mer-

chants could have been coopted by Kangju's ruling elites toward the conversion of tribute into other forms of wealth, considering such a possible intersection of the tribute and commercial economy through the case of the extraction of furs from regions in the forest steppe zone. Likewise, emergent professional merchants could have come to engage in provisioning for elites in neighboring regions and could have been attracted to move to northwest India as a result of this.

Finally, I have more closely examined the *Ancient Letters* for indications as to the social and economic organization of Sogdian traders and emigrants active between Kroraina and China by 313 CE, with the aim to clarify why and how they moved east. Considering the diversity of people represented in these letters, the probable size of their communities, and the specific social and religious institutions to which they had recourse, it is clear that these letters reflect a situation that is not entirely new. I have thus proposed that prominent actors commanding significant resources and networks like the much-discussed *sārtpāw* as well as the Kanakk family network within which Nanai-vandak of AL2 acted – more properly, a mercantile organization structured along kinship lines – were critically responsible for developing these emigrant communities in the first place. More specifically, I have proposed the following picture: in the orbit of elite provisioning, Sogdian mercantile organizations were first built along kinship lines as they accumulated resources. Then, with the capacity to engage in entrepreneurship and absorb risks, they established trade diasporas to facilitate exchange and eventually acted as brokers for the emigration of other Sogdians of more limited means seeking new opportunities in the east (whether via commerce or even perhaps agriculture), establishing communities of such emigrants within which they assumed prominent roles. Perhaps, as I have suggested, the development of these communities can be contextualized among broader developments in Sogdiana and the middle Syr Darya during the final phase of the Kangju confederacy – specifically the 'push' factor of a decline in the Zerafshan valley, as well as the impression of increasing socioeconomic mobility in southern Sogdiana and the middle Syr Darya through the second and third centuries CE. Finally, I have noted that the case of the transfer of musk back to Samarkand in AL2 functions as an example of migrant remittance, showing how wealth deriving from trade in distant networks could be transferred back home. Furthermore, the same case demonstrates that Nanai-vandak's associates at home also had access to markets (broadly construed) for this valuable product, whether within the broader region of southern Sogdiana or the middle Syr Darya, or perhaps beyond into Sasanian territory via Bukhara.

To draw this chapter to a close, I would not insist upon a precise date or historical moment for the 'origin' of the Sogdian network. In light of the broader picture I have assembled here, it would appear that dynamics of political and economic organization during the final two phases of the Kangju confederacy as I define them provided important context for the emergence of Sogdian mercantile organizations and the subsequent organization of emigration to the east. However, these developments were probably not steady, but rather shaped by more precise ebbs and flows in activity

into which our material precludes more detailed insight. That said, it is manifestly clear that these developments are not sufficiently explained by (even implicit) recourse to some kind of inherent and ahistorical Sogdian mercantile spirit.

This raises a final question: is the eminence of Sogdian merchants in most of this antique period (i.e., until the fourth century CE) of 'Silk Road' trade largely a mirage? Even de la Vaissière notes that other groups were active during this time (such as the Indians mentioned to have died of starvation in Luoyang in AL2),[195] and that "the unique feature of the Sogdian network was that it survived over the long term."[196] And yet one cannot avoid the impression that the reputation of Sogdian intermediaries in trade of the Sui and Tang periods has nonetheless been retrojected into the historiography of this ancient past as scholars have sought to pinpoint earlier moments in the history of Sogdian trade. Then, bolstered by the weight of the discovery of the *Ancient Letters*, and a Han protector-general's blurry accusation of Kangju's diplomatic misconduct, we come to find Kangju's diplomatic envoys being interpreted literally as merchants, Kangju being glossed directly as Sogdiana in many translations of Chinese texts, and this slippery nomadic polity largely disappearing from the broader story.

Indeed, the circumstances that brought Sogdian emigrant traders and settlers to the Tarim Basin, Hexi corridor, and China and allowed them to eventually flourish there – as well as at home in Sogdiana – are probably best framed as a 'perfect' collision of specific historical conditions over time. In the framework I have laid out here, Sogdian long-distance mercantile activity was probably first really stimulated in the orbit of Kangju's ruling elites, and plausibly expanded in scope as political organization between the region's rulers shifted around the second century CE from a centralized hierarchy tied to the middle Syr Darya to a more decentralized and heterarchical form of organization. This, I argued, was paralleled by expanding local development in these regions – of course, with the significant exception of the Zerafshan valley – alongside a growing volume in consumption capacity among a wider body of elites with access to surplus wealth. I would contend that, both in respect to local development as well as the eminence of Sogdian traders, these phenomena preface the geopolitical changes of the third century CE and the rural revival leading into the fourth century CE that Stark has recently pointed to.[197] Undoubtedly, the latter changes were pivotal in producing the image of Sogdiana that is familiar to us from the early Middle Ages, but I would perhaps frame the longer chain of causation leading to this point a little differently. Stark does point to a consolidation and probable development of oasis territory in Bukhara under the Sasanians/Kushano-Sasanians, but proposes that it was a new volume of trade from latter third century CE which caused wealth to flow into Sogdiana, and that this was what attracted expansive new

195 AL2.R37, a point also stressed in de la Vaissière 2005, 63–64.

196 De la Vaissière 2005, 63.

197 Stark forthcoming b.

rural development (especially via new settlers from the north), leading eventually to the development of the region's first true cities.[198] Instead, I would rather foreground the importance of earlier tendencies towards local development in Kashka Darya and the middle Syr Darya from the second century CE, and the expanding production of surplus wealth and hence consumption capacity among a wider body of elites that these tendencies entailed. Such expanding consumption capacities also provided an important basis for the expansion of long-distance trade, although wealth could also certainly flow back into Sogdiana specifically through the mechanism of migrant remittance, as seen in the *Ancient Letters*. Likewise, we can consider the dramatic rural revival from the fourth century CE by foregrounding again the issue of access to surplus wealth: this revival must have facilitated the emergence of a wider class of people with consumption capacities of a scale well surpassing anything seen during the period of the Kangju confederacy, which should have been an important driving force for long-distance trade – perhaps more than trade itself stimulating this local development. Obviously, these phenomena now lie well beyond the scope of the present chapter, but I simply offer these remarks to reiterate that the very existence of Sogdian professional merchants engaging in long-distance trade is not self-evident, and this phenomenon is productively interrogated in its longer term political and economic context.

Ultimately, the broad, explanatory framework forwarded here for the eventual rise of the Sogdian network remains hypothetical in many domains. Nonetheless, I contend that it productively navigates and helps to explain curious and difficult points emerging from preexisting scholarship: the lack of clarity about the origins of Sogdian mercantile activity, the primacy of Kangju rather than Sogdiana in Han standard histories, the question of the intersection between tributary and commercial economies, the long-noted but often hazy appreciation that Sogdiana was ruled by nomads during this period, and the diverse and complex landscape of textual, numismatic, and archaeological data at our disposal. Future research and new data will doubtlessly provide opportunities to test and refine the picture proposed here.

References

Abdullaev, K. 2007. "Nomad migration in Central Asia." In J. Cribb and G. Herrmann (eds.), *After Alexander: Central Asia before Islam*, 73–98. Oxford: Oxford University Press.

Alemany, A. 2000. *Sources on the Alans: A critical compilation*. Leiden: Brill.

Allsen, T. T. 1997. *Commodity and exchange in the Mongol Empire. A cultural history of Islamic textiles*. Cambridge: Cambridge University Press.

Atakhodjaev [Atakhodzhaev], A. K. 2013. "Données numismatiques pour l'histoire politique de la Sogdiane (IVe–IIe siècles avant notre ère)." *Revue Numismatique* 170, 213–246.

198 Stark forthcoming b.

–. 2021. “Données numismatiques pour l’histoire politique de la Sogdiane (IVe–IIe siècles av. n. è.) (Addenda et corrigenda).” *Revue Numismatique* 178, 25–55.

Atakhodjaev [Atakhodzhaev], A. K. and A. I. Naymark [Naimark]. 2021. “Неопубликованные находки кушанских монет в Согде” [Unpublished finds of Kushan coins in Soghd]. *O’zbekiston arxeologiyasi* 24.1, 42–60.

Atwood, C. P. 2015. “Imperial itinerance and mobile pastoralism: The state and mobility in medieval Inner Asia.” *Inner Asia* 17.2, 293–349.

Avizova, A. K. 2020a. “Некрополи Отрарского оазиса” [Necropolises of Otrar oasis]. In Yatsenko et al. (2020), 153–160.

–. 2020b. “Поселения и города Отрарского оазиса” [Settlements and cities of Otrar oasis]. In Yatsenko et al. (2020), 125–135.

Azam, M. 2015. “The role of migrant workers remittances in fostering economic growth: The four Asian developing countries’ experiences.” *International Journal of Social Economics* 42.8, 690–705.

Bailey, H. W. 1985. *Indo-Scythian studies: Being Khotanese texts.* Vol. 7. Cambridge: Cambridge University Press.

Baipakov, K. M., E. A. Smagulov, and A. A. Erzhigitova. 2005. Раннесредневековые некрополи Южного Казахстана [*Early medieval necropolises of Southern Kazakhstan*]. Алматы: Баур.

Baratin, C. 2009. “Les provinces orientales de l’empire parthe.” PhD diss., University of Lyon II.

Baratin, C. and L. Martinez-Sève. 2013. “Le grenier grec de Samarkand.” In J. Bendezu-Sarmiento (ed.), *L’archéologie française en Asie centrale. Nouvelle recherches et enjeux socioculturels*. Special issue, *Cahiers d’Asie centrale* 21/22, 373–388.

Barfield, T. J. 1981. “The Hsiung-nu imperial confederacy: Organization and foreign policy.” *The Journal of Asian Studies* 41.1, 45–61.

–. 1991. “Tribe and state relations: The Inner Asian perspective.” In P. Khoury and J. Kostiner (eds.), *Tribes and state formation in the Middle East*, 153–185. Berkeley, CA: University of California Press.

–. 2001. “The shadow empires: Imperial state formation along the Chinese-nomad frontier.” In S. E. Alcock, T. N. D’Altroy, K. D. Morrison, and C. M. Sinopoli (eds.), *Empires: Perspectives from archaeology and history*, 10–41. Cambridge: Cambridge University Press.

Beckwith, C. I. 2009. *Empires of the Silk Road: A history of central Eurasia from the Bronze Age to the present*. Princeton, NJ: Princeton University Press.

Belich, J. 1996. *Making peoples: A history of the New Zealanders: From Polynesian settlement to the end of the nineteenth century.* North Shore: Penguin Books.

Bendezu-Sarmiento, J. and J. Lhuillier. 2013. “*Sine Sepulchro* cultural complex of Transoxiana (between 1500 and the middle of the 1st Millennium BCE). Funerary practices of the Iron Age in southern Central Asia: Recent work, old data, and new hypotheses.” *Archäologische Mitteilungen aus Iran und Turan* 45, 281–315.

Bendezu-Sarmiento, J., J. Lhuillier, and E. Luneau. 2013. “Les différentes formes de richesse dans les sociétés d’Asie centrale aux âges du Bronze et du Fer (IIIe–Ier millénaires av. J.-C.).” In C. Baroin and C. Michel (eds.), *Richesse et sociétés*, 253–263. Paris: De Boccard.

Bernshtam, A. N. 1940. “Кенкольский могильник” [Kenkol cemetery]. In Археологические экспедиции Государственного Эрмитажа. Vol. 2, 1–34. Ленинград: Издательство Государственного Эрмитажа.

Bi, B. 2019. “Recent archaeological discoveries regarding Kangju and Sogdiana.” In J. A. Lerner and A. L. Juliano (eds.), *New research on Central Asian, Buddhist and Far Eastern art and archaeology*, 49–62. Turnhout: Brepols.

Birch, J. 2022. “Premodern confederacies: Balancing strategic collective action and local autonomy.” *Frontiers in Political Science* 4. https://doi.org/10.3389/fpos.2022.807239

Bolelov, S. B. 2006. “Гончарные производства Средней Азии во второй половине I тыс. до н.э. – первой половине I тыс. н.э. (структура и система размещения)” [Ceramic production of Central Asia from the second half of the first millennium BCE–first half of the first millennium CE (structure and system of distribution)]. Российская археология, no. 3, 116–127.

Bonora, G. L. 2019. “Inner Syr Darya delta archaeological sites during the second half of the 1st millennium BCE: An analysis of the settlement pattern.” In C. Baumer and M. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids. Learnings and conclusions from new archaeological investigations and discoveries. Proceedings of the First International Congress on Central Asian Archaeology held at the University of Bern, 4–6 February 2016*, 387–402. Wiesbaden: Harrassowitz.

Bordeaux, O. 2021. “Sôphytos et Andragoras. Deux cas de monnayages autonomistes entre Bactriane et Parthie séleucides.” *Monuments et mémoires de la Fondation Eugène Piot* 99, 77–154.

Briant, P. 2002. *From Cyrus to Alexander: A history of the Persian Empire*. Winona Lake, IN: Eisenbrauns.

–. 2020. “Bactria in the Achaemenid Empire: The Achaemenid central state in Bactria (again).” In R. E. Payne and R. King (eds.), *The limits of empire in ancient Afghanistan: Rule and resistance in the Hindu Kush, circa 600 BCE–600 CE*, 21–44. Wiesbaden: Harrassowitz.

Brosseder, U. 2011. “Belt plaques as an indicator of East-West relations in the Eurasian steppe at the turn of the millennia.” In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 349–424. Bonn: Vor- und Fruhgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität Bonn.

–. 2015. “A study on the complexity and dynamics of interaction and exchange in Late Iron Age Eurasia.” In J. Bemmann and M. Schmauder (eds.), *Complexity of interaction along the Eurasian steppe zone in the first millennium CE*, 199–332. Bonn: Vor- und frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität Bonn.

Buriakov, Iu. F. 1975. Историческая топография древних городов Ташкентского оазиса (историко-археологический очерк Чача и Илака) [*Historical topography of the ancient cities of Tashkent oasis (historical-archaeological sketch of Chach and Ilak)*]. Ташкент: Издательство ‘Фан’ Узбекской ССР.

–. 1982. Генезис и этапы развития городской культуры Ташкентского оазиса [*Genesis and stages of development of the urban culture of Tashkent oasis*]. Ташкент: Издательство ‘Фан’ Узбекской ССР.

–. 2010. “Взаимодействие оседлых и кочевых народов средней Сырдарьи (в древности и средневековье)” [Interaction of sedentary and nomadic peoples of the middle Syr Darya (in antiquity and the Middle Ages)]. In Цивилизации и культуры Центральной Азии в единстве и многообразии. Материалы международной конференции, Самарканд, 7–8 сентября 2009 г., 14–23. Самарканд-Ташкент: МИНАИ, SMI-ASIA.

–. 2011. Канка и Шахрухия. Древние города Чача и Илака на Великом Шелковом пути [*Kanka and Shakhrukhiia. Ancient cities of Chach and Ilak on the great silk road*]. Ташкент: Yangi nashr.

Capdetrey, L. 2007. *Le pouvoir séleucide: Territoire, administration, finances d’un royaume hellénistique (312–129 avant J.-C.)*. Rennes: Presses Universitaires de Rennes.

Claessen, H. J. M. and P. Skalnik, eds. 1978. *The early state*. The Hague: Mouton.

Clarysse, W. and D. J. Thompson. 2007. “Two Greek texts on skin from Hellenistic Bactria.” *Zeitschrift für Papyrologie und Epigraphik* 159, 273–279.

Clavijo, R. G. de. 1928. *Clavijo: Embassy to Tamerlane, 1403–1406*. G. Le Strange (trans.). London: George Routledge & Sons, Ltd.

Coloru, O. 2009. *Da Alessandro a Menandro: Il regno greco di Battriana*. Pisa: Fabrizio Serra.

Cribb, J. 2018. “Kujula Kadphises and his title Kushan Yavuga.” *Sino-Platonic Papers* 280, 1–20.

Czeglédy, K. 1983. “From East to West: The age of nomadic migrations in Eurasia.” *Archivum Eurasiae Medii Aevi* 3, 25–150.

Dan, A. 2017. “The Sarmatians: Some thoughts on the historiographical invention of a west Iranian migration.” In F. Wiedemann, K. P. Hofmann, and H.-J. Gehrke (eds.), *Vom Wandern der Völker. Migrationserzählungen in den Altertumswissenschaften*, 97–134. Berlin: Edition Topoi.

Daryaee, T. 2022. “The scent of musk and jasmine: Trade in aromatics between Iran and China.” In M. Labbaf-Khaniki (ed.), *Ḵorāsān-Nāmak. Essays on the archaeology, history, and architecture of Khorasan in honour of Rajabali Labbaf-Khaniki*, 67–74. Tehran.

Deshingkar, P. 2019. “The making and unmaking of precarious, ideal subjects – migration brokerage in the Global South.” *Journal of Ethnic and Migration Studies* 45.14, 2638–2654.

Di Cosmo, N. 1994. “Ancient Inner Asian nomads: Their economic basis and its significance in Chinese history.” *Journal of Asian Studies* 53, 1092–1126.

–. 2011. “Ethnogenesis, coevolution and political morphology of the earliest steppe empire: The Xiongnu question revisited.” In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 35–48. Bonn: Vor- und Fruhgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität Bonn.

–. 2013. “Aristocratic elites in the Xiongnu Empire as seen from historical and archaeological evidence.” In J. Paul (ed.), *Nomad aristocrats in a world of empires*, 23–53. Wiesbaden: Reichert.

Diakonoff, I. M. and V. A. Livshits. 1977. *Corpus inscriptionum iranicarum.* Part 2. Vol. 2.1, *Parthian economic documents from Nisa*. London: School of Oriental and African Studies.

Drompp, M. 1990. “Supernumerary sovereigns: Superfluity and mutability in the elite power structure of the early Turks (Tu-jue).” In G. Seaman and D. Marks (eds.) *Rulers from the steppe: State formation on the Eurasian periphery*, 92–115. Los Angeles: Ethnographics Press.

Dubs, H. H. 1940. “A military contact between Chinese and Romans in 36 BC” *T’oung Pao* 36.1, 64–80.

–. 1957. “A Roman city in ancient China.” *Greece & Rome* 4.2, 139–148.

Duke, Kh. Туябугузские поселения Бургулюкской культуры [Tuiabuguz settlements of the Burguliuk culture]. Ташкент: Издательство “Фан” Узбекской ССР

Dvurechenskaya, N. D. 2019. “The Hellenistic fortress of Uzundara.” In C. Baumer and M. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids. Learnings and conclusions from new archaeological investigations and discoveries. Proceedings of the First International Congress on Central Asian Archaeology held at the University of Bern, 4–6 February 2016*, 153–162. Wiesbaden: Harrassowitz.

Evers, K. G. 2017. *Worlds apart trading together: The organisation of long-distance trade between Rome and India in antiquity*. Oxford: Archaeopress.

Faist, T. 2014. “Brokerage in cross-border mobility: Social mechanisms and the (re)production of social inequalities.” *Social Inclusion* 2.4, 38–52.

Falk, H., ed. 2015. *Kushan histories: Literary sources and selected papers from a symposium at Berlin, December 5 to 7, 2013.* Bremen: Hempen.

Filanovich, M. I. 1986. “Две находки на Шаштепа в Ташкенте” [Two finds on Shashtepa in Tashkent]. История материальной культуры Узбекистана 20, 45–50.

–. 2010. Древняя и средневековая история Ташкента в археологических источниках [*Ancient and medieval history of Tashkent in archaeological sources*]. Ташкент: Фан.

Fletcher, J. 1979–1980. “Turko-Mongolian monarchic tradition in the Ottoman Empire.” *Harvard Ukrainian Studies* 3/4.1, 236–251.

Frachetti, M. D. 2012. “Multiregional emergence of mobile pastoralism and nonuniform institutional complexity across Eurasia.” *Current Anthropology* 53.1, 2–38.

Franceschini, F. 2007. “I nomadi della Media Valle dello Zeravshan: territorio e identità culturale attraverso i tumuli funerari.” PhD diss., Università di Bologna.

Francfort, H.-P. 2013. “Les nomades installés dans la Bactriane (IIe s. av. J.-C.–Ier s. ap. J.-C.): nouvelles découvertes.” *Comptes rendus de l’Académie des inscriptions et Belles-Lettres* 157.4, 1543–1576.

Gabrielsen, V. and C. A. Thomsen, eds. 2015. *Private associations and the public sphere: Proceedings of a symposium held at the Royal Danish Academy of Sciences and Letters, 9–11 September, 2010*. Copenhagen: The Royal Danish Academy of Sciences and Letters.

Gibson, D. B. 1995. “Chiefdoms, confederacies, and statehood in early Ireland.” In B. Arnold and D. B. Gibson (eds.), *Celtic chiefdom, Celtic state*, 116–128. Cambridge: Cambridge University Press.

–. 2011. “Chiefdom confederacies and state origins.” *Social Evolution & History* 10.1, 215–233.

Gommans, J. 2018. “The warband in the making of Eurasian empires.” In M. van Berel and J. Duindam (eds.), *Prince, pen, and sword: Eurasian perspectives*, 297–383. Leiden: Brill.

Gordon, M. S., C. F. Robinson, E. K. Rowson, and M. Fishbein, eds. 2018. *The works of Ibn Wāḍiḥ Al Yaʿqūbī. An English translation.* Vol. 1. Leiden: Brill.

Goriachev, A. A., S. A. Yatsenko [Iatsenko], and T. A. Ergorova. 2016. “Костяная пластина с гравированной композицией из поселения раннего железного века Кызылбулак-IV в верховьях ущелья турген” [Bone plate with engraved composition from the early Iron Age settlement Kyzylbulak-IV in the upper reaches of Turgen gorge]. In Актуальные проблемы археологии Евразии. Сборник материалов международной научно-практической конференции, посвященной 25-летию независимости Республики Казахстан и 25-летию Института археологии им. А. Х. Маргулана, 623–648. Алматы: Институт археологии им. А. Х. Маргулана.

Gorin, A. N. 2014. “Подражания оболам Евкратида из Южного Узбекистана” [Imitations of obols of Eukratides from Southern Uzbekistan]. In A. A. Sinitsyna and M. M. Kholoda (eds.), *KOINON ΔΩPON:* Исследования и эссе в честь 60-летнего юбилея Валерия Павловича Никонорова от друзей и коллег, 80–89. Санкт-Петербург: Филологический факультет Санкт-Петербургского государственного университета.

–. 2015. “A new Seleukid mint: Samarkand-Marakanda.” *Anabasis: Studia Classica et Orientalia* 6, 94–106.

Grenet, F. 2006. “La plus ancienne inscription sogdienne.” In M. Compareti, P. Raffetta, and G. Scarcia (eds.), *Erân ud Anêrân. Studies presented to Boris Ilich Marshak on the occasion of his 70th birthday*, 223–230. Venice: Libreria Editrice Cafoscarina.

–. 1996. “Crise et sortie de crise en Bactriane-Sogdiane aux IVe–Ve siècles: de l’héritage antique à l’adoption de modèles sassanides.” In *La Persia e l’Asie centrale da Alessandro al X secolo. Atti dei convegni Lincei 127*, 367–390. Rome: Accademia Nazionale dei Lincei.

–. 2010. “A view from Samarkand: The Chionite and Kidarite periods in the archaeology of Sogdiana (fourth to fifth centuries AD).” In M. Alram, D. E. Klimburg-Salter, M. Inaba, and M. Pfisterer (eds.), *Coins, art and chronology II: The First Millennium CE in the Indo-Iranian borderlands*, 267–281. Vienna: Verlag der Österreichischen Akademie der Wissenschaften.

–. 2012. “The nomadic element in the Kushan Empire.” *Journal of Central Eurasian Studies* 3, 1–22.

–. 2019. “Histoire et cultures de l’Asie centrale préislamique.” *L’annuaire du Collège de France. Cours et travaux* 117, 295–323.

–. 2020. “The wooden panels from Kafir-kala: A group portrait of the Samarkand *nāf* (civic body).” *Acta Asiatica* 119.2, 21–42.

Grenet, F., N. Sims-Williams, and A. Podushkin. 2007. “Les plus anciens monuments de la langue sogdienne : les inscriptions de Kultobe au Kazakhstan.” *Comptes rendus des séances de l’Académie des Inscriptions et Belles-Lettres* 151.2, 1005–1034.

Grenet, F., N. Sims-Williams, and É. de la Vaissière. 1998 [2001]. “The Sogdian Ancient Letter V.” *Bulletin of the Asia Institute* 12, 91–104.

Gritsina, A. A. and M. Khuzhanazarov. 2005. “Изучение нижних слоев городища Буркуттепе (древней Карманы)” [Study of the lower layers of the settlement Burkuttepe (ancient Karmana)]. In Материалы по античной культуре Узбекистана к 70-летию Геннардия Андреевича Кошеленко, 42–49. Самарканд: Институт археологии академии наук республики Узбекистан.

Hao Shusheng 郝樹聲 and Zhang Defang 張德芳. 2009. *Xuanquan Han jian yanjiu* 懸泉漢簡研究 [*Studies on the Han documents from Xuanquan*]. Lanzhou: Gansu wenhua chubanshe.

Havlík, J., H. Havlíkova, and L. Stančo. 2018. “Kurgans of the eastern Kugitang piedmonts: Preliminary report for season 2018.” *Studia Hercynia* 22.2, 147–172.

Henkelman, W. F. M. 2018. “Bactrians in Persepolis – Persians in Bactria.” In J. Lhuillier and N. Boroffka (eds.), *A millennium of history: The Iron Age in southern central Asia (2nd and 1st millennia BC)*, 223–255. Berlin: Dietrich Reimer.

Henkelman, W. F. M. and M. L. Folmer. 2015. “Your tally is full! On wooden credit records in and after the Achaemenid Empire.” In K. Kleber and R. Pirngruber (eds.), *Silver, money and credit: A Tribute to Robartus J. van der Spek on the Occasion of his 66th Birthday on 18th September 2014*, 113–239. Leiden: Nederlands Institutt voor het Nabije Oosten.

Henkelman, W. F. M. and M. W. Stolper. 2009. “Ethnic identity and ethnic labelling at Persepolis: The case of the Skudrians.” In P. Briant and M. Chauveau (eds.), *Organisation des pouvoirs et contacts culturels dans les pays de l’empire achéménide*, 271–328. Paris: De Boccard.

Hensellek, B. L. 2020. “The age of the polychrome kaftan: Sartorial systems of Central Eurasia (400–900 CE).” PhD diss., Cornell University.

Hill, J. E. 2015. *Through the Jade Gate – China to Rome: A study of the silk routes 1st to 2nd centuries CE*. Vol. 1, *Text translation and notes*. Self-published, CreateSpace.

Hirth, K. 2020. *The organization of ancient economies: A global perspective*. Cambridge: Cambridge University Press.

Holt, F. L. 1988. *Alexander the Great and Bactria: The formation of a Greek frontier in Central Asia*. Leiden: Brill.

Honeychurch, W. 2014. “Alternative complexities: The archaeology of pastoral nomadic States.” *Journal of Archaeological Research* 22.4, 277–326.

–. 2015. *Inner Asia and the spatial politics of empire*. New York, NY: Springer.

Huber, M. 2020. *Lives of Sogdians in medieval China*. Wiesbaden: Harrassowitz.

–. Forthcoming. “The *Sabao*: Foreign officials of the Tang Dynasty at the intersection between politics and religion.” In M. Lehnert and S. Döll (eds.), *Religion and politics in the formation of authority: Politico-religious intersections in Japanese and Chinese societies*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften.

Hulsewé, A. F. P. and M. A. N. Loewe. 1979. *China in Central Asia: The early stage: 125 BC – AD 23: An annotated translation of chapters 61 and 69 of the History of the Former Han Dynasty*. Leiden: Brill.

Huyse, P. 1999. *Corpus inscriptionum iranicarum*. Part 3. Vol. 2.1, *Die dreisprachige Inschrift Šābuhrs I. an der Ka’ba-i Zardušt (ŠKZ).* London: School of Oriental and African Studies.

Iliakis, M. 2013. “Greek mercenary revolts in Bactria: A re-appraisal.” *Historia – Zeitschrift für Alte Geschichte* 62, 182–195.

–. 2021. “Flipping the coin: Alexander the Great’s Bactrian-Sogdian expedition from a local perspective.” *Studia Hercynia* 25.1, 34–47.

Ilyasov, J. Ya. 2003. “Covered tail and ‘flying’ tassels.” *Iranica Antiqua* 38, 259–325.

Ilyasov, J. Ya. and D. V. Rusanov. 1997. “A study on the bone plates from Orlat.” *Silk Road Art and Archaeology* 5, 107–159.

Isamiddinov, M. Kh. 2002. Истоки городской культуры самаркандского Согда [*The origins of urban culture in Samarkand Soghd*]. Ташкент: Издательство народного наследия им. Абдуллы Кадыри.

Isamiddinov, M. Kh. and M. Kh. Khasanov. 2000. История древнего и средневекового керамического производства Нахшеба [*The history of ancient and medieval ceramic production of Nakhsheb*]. Ташкент.

Ivanitskii, I. D. 1992. “Саратепе-2 – поселение керамиков середины I тысячелетия до н. э. под Самаркандом” [Saratepe-2 – ceramics settlement of the mid first millennium BCE near Samarkand]. История материальной культуры Узбекистана 26, 22–41.

Ivanitskii, I. D. and O. N. Inevatkina. 1988. “Раскопки кургана Сирлибайтепе” [Excavations of the kurgan Sirlibaitepe]. История материальной культуры Узбекистана 22, 44–58.

Jacobs, B. 1994. *Die Satrapienverwaltung im Perserreich zur Zeit Darius’ III*. Wiesbaden: Reichert.

Kabanov, S. K. 1955. “Археологические разведки в верхней части долины Кашка-дарьи” [Archaeological explorations in the upper part of the Kashka-darya valley]. Труды института истории и археологии. Материалы по археологии Узбекистана 7, 77–114.

–. 1964. “Ареал и эволюция двух древних керамических форм” [Area and evolution of two ancient ceramic forms]. Советская археология, no. 3, 79–87.

–. 1977. Нахшеб на рубеже древности и средневековья (III–VII вв.) [Nakhsheb at the turn of antiquity and the Middle Ages (third-fifth centuries CE)]. Ташкент: Издательство “Фан” Узбекской ССР.

Kaim, B. 2010. “Bone reliefs from the fire temple at Mele Hairam, South-West Turkmenistan.” *Iranica Antiqua* 45, 321–335.

Khazanov, A. M. 1994. *Nomads and the outside world*. 2nd ed. J. Crookenden (trans.). Madison, WI: The University of Wisconsin Press.

–. 2019. “Steppe nomads in the Eurasian trade.” *Chungara Revista de Antropología Chilena* 51.1, 85–93.

Kidd, F. 2004. “The Samarkand region of Sogdiana: Figurines, costume and identity. 2nd–1st century BCE–8th century CE.” PhD diss., University of Sydney.

Kidd, F. and S. Stark. 2019. “Urbanism in antique Sogdiana? A view from the Bukhara oasis.” In C. Baumer and M. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids. Learnings and conclusions from new archaeological investigations and discoveries. Proceedings of the First International Congress on Central Asian Archaeology held at the University of Bern, 4–6 February 2016*, 163–183. Wiesbaden: Harrassowitz.

King, A. H. 2017. *Scent from the garden of paradise. Musk and the medieval Islamic world*. Leiden: Brill.

King, R. R. 2021. “The house of the satrap and the making of the Achaemenid Persian Empire, 522–330 BCE.” PhD diss., University of Chicago.

Kitov, E. P., S. S. Tur, and S. S. Ivanov. 2020. “Исторические процессы на Средней и Нижней Сырдарье по данным палеоантропологии рубежа н. э. – III–IV вв. н. э.” [Historical processes in the Middle and Lower Syr Darya according to palaeoanthropological data from turn of the Common Era to the third–fourth centuries CE]. In Yatsenko et al. (2020), 176–185.

Kobishchanow, Y. M. 1987. “The phenomenon of *gafol* and its transformation.” In H. J. M. Claessen and P. van de Velde (eds.) Early state dynamics, 108–128. Leiden: Brill.

Kozhomberdiev, I. 1963. “Катакомбные памятники таласской долины” [Catacomb monuments of the Talas valley]. In Археологические памятники Таласской долины, 33–78. Фрунзе: Издательство Академии Наук Киргизской ССР.

–. 1977. “Основные этапы истории культуры Кетмень-Тюбе” [Main stages of the cultural history of Ketmen’-Tiube]. In V. M. Ploskikh and D. F. Vinnika (eds.), Кетмень-Тюбе, 9–24. Фрунзе: Издательство “Илим.”

Kradin, N. N. 1992. Кочевые общества [Nomadic societies]. Владивосток: Дальнаука.

–. 2011a. “Heterarchy and hierarchy among the ancient Mongolian nomads.” *Social Evolution & History* 10.1, 187–214.

–. 2011b. “Stateless empire: The structure of the Xiongnu nomadic super-complex chiefdom.” In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 77–96. Bonn: Vor- und Fruhgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität Bonn.

–. 2018. “Ancient steppe nomad societies.” *Oxford Research Encyclopedia of Asian History*, online edition. https://doi.org/10.1093/acrefore/9780190277727.013.3.

Leriche, P. 2007. “Bactria, land of a thousand cities.” In J. Cribb and G. Herrmann (eds.), *After Alexander: Central Asia before Islam*. Oxford: Oxford University Press.

Lerner, J. 1991. “Some so-called Achaemenid objects from Pazyryk.” *Notes in the History of Art* 10.4, 8–15.

Levina, L. M. 1996. Этнокультурная история восточного Приаралья. I тысячелетие до н. э.–I тысячелетие н. э. [Ethnocultural history of the eastern Pri-Aral. First millennium BCE–first millenium CE]. Москва: Восточная Литература.

Lhuillier, J. and M. Hasanov. 2013. “Nouvelles recherches à Padayatak tépé au Kashka-daria (Ouzbékistan).” In J. Bendezu-Sarmiento (ed.), *L’archéologie française en Asie centrale. Nouvelle recherches et enjeux socioculturels*. Special issue, *Cahiers d’Asie centrale* 21/22, 389–398.

Lhuillier, J. and M. Mashkour. 2017. “Animal exploitation in the oases: An archaeozoological review of Iron Age sites in southern Central Asia.” *Antiquity* 91.357, 655–673.

Lhuillier, J. and C. Rapin. 2013. “Handmade painted ware in Koktepe: Some elements for the chronology of the early Iron Age in northern Sogdiana.” In M. Wagner (ed.), *Pottery and chronology of the Early Iron Age in Central Asia*, 29–48. Warsaw: Institute of Archaeology, University of Warsaw.

Liang Yun 梁云, Xing Donglin 邢咚琳, and Han Shao 韩烁. 2020. “Wuzibiekesitan Sama’erhan shi Sazhagan yizhi M11–2 fajue jianbao” 乌兹别克斯坦撒马尔罕市撒扎干遗址 M11–2发掘简报 [Excavation report M11–2, Sazagan site, Samarkand, Uzbekistan]. *Kaogu yu wenwu* 3, 27–36.

Lin Meicun 林梅村. 2017. “Zhong ya xi’er he beian de Kangju wangting” 中亚锡尔河北岸的康居王庭 [On the royal courts of Kangju on the northern bank of Syr Darya]. *Xiyu Yanjiu* 3, 71–81.

Lindquist, J., B. Xiang, and B. S. A. Yeoh. 2012. “Opening the black box of migration: Brokers, the organization of transnational mobility and the changing political economy in Asia.” *Pacific Affairs* 85.1, 7–19.

Litvinskii, B. A. 1967. “Джунский могильник и некоторые аспекты кангюйской проблемы” [Dzhun cemetery and some aspects of the Kangju problem]. Советская археология, no. 2, 29–37.

–. 1978. Орудия труда и утварь из могильников Западной Ферганы [*Tools and utensils from the cemeteries of Western Ferghana*]. Мосвка: Издательство Наука.

Livshits, V. A. 2003. “Three silver bowls from the Isakovka burial-ground No. 1 with Khwarezmian and Parthian inscriptions.” *Ancient Civilizations from Scythia to Siberia* 9.1–2, 147–172.

–. 2007. “The leader of the people of Chach in the Sogdian inscriptions and coin-legends.” In M. Macuch, M. Maggi, and W. Sundermann (eds.), *Iranian languages and texts from Iran and Turan. Ronald E. Emmerick Memorial volume*, 173–182. Wiesbaden: Harrassowitz.

Lurje, P. B. 2010a. “Kangdez.” *Encyclopaedia Iranica*, online edition. https://iranicaonline.org/articles/kangdez-fortress-of-kang.

–. 2010b. *Personal names in Sogdian texts. Iranisches personnamenbuch.* Vol. 2, *Mitteliranisches Personennamen*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften.

Lyonnet, B. 2018. “Antique Samarkand or Afrasiab II and III: Differentiation, chronology and interpretation.” *Ancient Civilizations from Scythia to Siberia* 24, 420–439.

–. 2020a. “New insights into Sogdiana during the classical period (from the end of the 4th c. BCE to the 3rd c. CE).” *Iran* 60.1, 46–64.

–. 2020b. “Sogdiana.” In R. Mairs (ed.), *The Graeco-Bactrian and Indo-Greek world*, 313–334. London: Routledge.

Mairs, R. and C. Fischer-Bovert. 2021. “Reassessing Hellenistic settlement policies: The Seleucid Far East and Ptolemaic Red Sea basin, Egypt and Nubia.” In S. von Reden and C. Fischer-Bovert (eds.), *Comparing the Ptolemaic and Seleucid Empires: Integration, communication, and resistance*, 48–85. Cambridge: Cambridge University Press.

Maksimova, A. G., M. S. Mershchiev, B. I. Vainberg, and L. I. Levina. 1968. Древности Чардары. Археологические исследования в зоне Чардаринского водохранилища [*Antiquities of Chardara. Archaeological researches in the zone of the Chardara reservoir*]. Алма-ата: Наука.

Malashev, V. Yu. and A. I. Torgoev. 2018. “T-образные катакомбы сарматского времени Северного Кавказа и Средней Азии” [T-shaped catacombs of the Sarmatian period of the Northern Caucasus and Central Asia]. Российская археология, no. 4, 36–52.

Mantellini, S. 2015. “Irrigation systems in Samarkand.” In H. Selin (ed.), *Encyclopaedia of the history of science, technology, and medicine in non-Western cultures*, 1–14. Dordrecht: Springer.

–. 2017. “A city and its landscape across time: Samarkand in the ancient Sogdiana (Uzbekistan).” *Archeologia e Calcolatori* 28.2, 333–342.

–. 2019. “Urbanscape vs. landscape, or urbanscape as landscape? A case from ancient Samarkand (Sogdiana).” In C. Baumer and M. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids. Learnings and conclusions from new archaeological investigations and discoveries. Proceedings of the First International Congress on Central Asian Archaeology held at the University of Bern, 4–6 February 2016*, 186–202. Wiesbaden: Harrassowitz.

Martinez-Sève, L. 2015. “Ai Khanoum and Greek domination in Central Asia.” *Electrum* 22, 17–46.

Mendoza, M. 2017. “Stasanor of Soloi and the government of Bactria during the wars of the Diadochi.” *Anabasis: Studia Classica et Orientalia* 8, 44–70.

Miller, B. K. 2014. “Xiongnu ‘kings’ and the political order of the steppe empire.” *Journal of the Economic and Social History of the Orient* 57.1, 1–43.

Minardi, M. 2015. *Ancient Chorasmia: A polity between the semi-nomadic and sedentary cultural areas of Central Asia: Cultural interactions and local developments from the sixth century BC to the first century AD*. Leuven: Peeters.

Mirzaakhmedov, Dzh. and A. V. Omeľchenko, eds. 2013. Материалы Бухарской археологической экспедиции. Vol. 12, Очёт о раскопках в Пайкенде в 2011–2012 гг. [*Proceedings of the Bukhara archaeological expedition.* Vol. 12, *Report on excavtions in Paikend in 2011–2012*]. Санкт-Петербург: Государственный Эрмитаж.

–. 2018. Материалы Бухарской археологической экспедиции. Vol. 14, Очёт о раскопках в Пайкенде в 2015–2016 гг. [*Proceedings of the Bukhara archaeological expedition.* Vol. 14, *Report on excavations in Paikend in 2015–2016*]. Санкт-Петербург: Государственный Эрмитаж.

Mirzaakhmedov, Dzh. K., S. Stark, B. M. Abdullaev, M. Königsdorfer, S. Mirzaakhmedov, and A. Iskanderova. 2016. "Исследования памятников восточной окраины Кампир-дувала в Бухарском Согде в 2013–2014 гг." [Investigations of monuments on the eastern outskirts of Kampir-duval in Bukharan Soghd in 2013–2014]. Археологические исследования в Узбекистане 10, 217–232.

Mirzaakhmedov, D. K., S. Stark, F. Kidd, S. Pozzi, S. Mirzaakhmedov, Z. Silvia, H. Rakhmonov, and M. Sligar. 2020. "Археологические исследования на Баштепинской группе памятников Бухарского оазиса в 2018 году" [Archaeological investigations at the Bashtepa group of monuments of Bukhara oasis in 2018]. Археологические исследования в Узбекистане 12, 199–212.

Morris, L. 2020. "Roman objects in the Begram hoard and the memory of Greek rule in Kushan Central Asia." In R. Mairs (ed.), *The Graeco-Bactrian and Indo-Greek world*, 580–592. London: Routledge.

–. 2021. "The Begram hoard and its context." PhD diss., Ludwig-Maximilians-Universität München.

Naveh, J. and S. Shaked. 2012. *Aramaic documents from ancient Bactria (fourth century B.C.E) from the Khalili Collections*. London: The Khalili Family Trust.

Naymark [Naimark], A. I. 1989. "Территориальное развитие городов Зарафшанской долины в I–VII вв. н. э." [Territorial development of the cities of the Zerafshan valley in the first to seventh centures CE]. In A. A. Askarov, Iu. F. Buriakov, V. I. Gulaev, and E. V. Saiko (eds.), Зоны и этапы урбанизации (теоретические аспекты проблемы «город и процесс урбанизации в Средней Азии»). Тезисы докладов региональной конференции, Намаган 1989 г., 58–60. Ташкент: Фан.

–. 2001. "Sogdiana, its Christians and Byzantium: A study of artistic and cultural connections in Late Antiquity and Early Middle Ages." PhD diss., University of Indiana.

–. 2008. "О причинах появления подражаний эллинистическим монетам в Согдиане" [On the reasons for the appearance of imitations of Hellenistic coins in Sogdiana]. Вестник древней истории, no. 1, 55–70.

–. 2010. "Les villes sogdiennes après les Grecs." *Dossiers d'Archéologie* 341, 44–46.

–. 2012. "Drachms of Bukhār Khudā Khunak." *Journal of Inner Asian Art and Archaeology* 5, 7–32.

–. 2014. "Seleucid coinage of Samarqand?" *Journal of the Oriental Numismatic Society* 220, 15–20.

–. 2016. "The coinage of Nakhshab during the first–fourth centuries CE: Toward a new systemization of Sogdian coinages and the political history of Sogd during antiquity." *Journal of Inner Asian Art and Archaeology* 7, 55–77.

–. 2020. "Монеты нахшабского князя Аштата" [Coinage of the Nakhshab prince Ashtat]. Историа и археология Турана 5, 204–248.

–. 2022. "Immobilized types in Sogdian coinage: The case of mules between Antiochus imitations and Hyrcodes." *Journal of the Oriental Numismatic Society* 250, 46–53.

–. Forthcoming a. "Coins of Kesh with the legend ΦΣΕΙΓΑ ΧΑΡΙΣ (South Soghd, second half of the 1st to the end of the 2nd centuries AD)."

–. Forthcoming b. "Медная монета с 'арамейской надписью,' воспроизводящая тип халков Евтидема: медный чекан Бухары в I веке н. э.?" [Copper coin with an 'Aramaic inscription,' reproducing the type of chalkoi of Euthydemos: Copper coinage of Bukhara in the first century CE?] In Двадцать первая Всероссийская нумизматическая конференция. Тверь, 24–49 мая 2021.

–. Forthcoming c. "Подражания тетрадрахмам Евтидема с тамгой: Аланы в Бухаре в I веке н. э.?" [Imitations of tetradrachms of Euthydemos with tamga: Alans in Bukhara in the first century CE?].

Negus Cleary, M. 2018. "Social complexity and political capitals in ancient Eurasia." In *Oxford Handbooks of Topics in Archaeology*, online edition, https://doi.org/10.1093/oxfordhb/9780199935413.013.19.

Neumann, I. B. and O. J. Sending. 2016. “Roving elites and sedentary subjects: The hybridized origins of the state.” In S. L. Hurt and R. D. Lipschutz (eds.), *Hybrid rule and state formation: Public-private power in the 21st century*, 39–58. London: Routledge.

Ning, C. 2018. “The Solon sable tribute, hunters of Inner Asia and dynastic elites at the imperial centre.” *Inner Asia* 20.1, 26–63.

Obeľchenko, O. V. 1972. “Агалыксайские курганы” [Agalyksai kurgans]. История материальной культуры Узбекистана 9, 56–72.

–. 1992. Культура античного Согда по археологическим данным VII в. до н. э.—VII в. н. э. [Culture of ancient Soghd according to archaeological data, seventh century BCE to seventh century CE]. Москва: Наука.

Omeľchenko, A. V. 2003. “Культура восточных районов южного Согда эпохи античности (конец IV в. до. н. э.–IV в. н. э)” [Culture of eastern region of southern Soghd in the antique period (end of the fourth century BCE to the fourth century CE)]. PhD diss., Академия наук республики Узбекистан.

–. 2011. “Из истории Китабо-Шахрисабзского оазиса (древнего Кеша)” [From the history of Kitab-Shakhrisabz oasis (ancient Kesh)]. Вестник древней истории 249.4, 166–180.

–. 2012. “On the question of Sasanian presence in Sogdiana: Recent results of excavations at Paykand.” *Journal of Inner Asian Art and Archaeology* 7, 79–107.

–. 2019. “New excavations in the Paikend city-site: The Sogdian pottery assemblage of the Hellenistic period.” In C. Baumer and M. Novák (eds.), *Urban cultures of Central Asia from the Bronze Age to the Karakhanids. Learnings and conclusions from new archaeological investigations and discoveries. Proceedings of the First International Congress on Central Asian Archaeology held at the University of Bern, 4–6 February 2016*, 203–225. Wiesbaden: Harrassowitz.

–. 2020. “Ботросы и фависса Пайкенда (Предварительное сообщение)” [*Bothroi* and *favissae* of Paikend (preliminary report)]. Историа и археология Турана 5, 378–387.

Osinsky, P. I. 2021. “Charisma, the order of succession, and legitimacy of authority in the nomadic empires of Eurasia.” Вісник Житомирського державного університету імені Івана Франка. Філософські науки 90, 75–86.

Page, J. and S. Plaza. 2006. “Migration remittances and development: A review of global evidence.” *Journal of African Economies* 15.S2, 245–336.

Parzinger, H. and N. Boroffka. 2003. *Das Zinn der Bronzezeit in Mittelasien*. Vol. 1, *Die siedlungsarchäologischen Forschungen im Umfeld der Zinnlagerstätten*. Mainz: Philipp von Zabern.

Paul, J. 2003. “The state and the military – a nomadic perspective.” In I. Schneider (ed.), *Militär und Staatlichkeit: Beiträge des Kolloquiums am 29. und 30. 04. 2002*, 25–68. Halle: Orientwissenschaftliches Zentrum der Martin-Luther-Universität Halle-Wittenberg.

–. 2013. “Nomads in history.” In J. Paul (ed.), *Nomad aristocrats in a world of empires*, 17–22. Wiesbaden: Reichert.

Phillips, J. and T. Hearn. 2008. *Settlers: New Zealand immigrants from England, Ireland and Scotland 1800–1945*. Auckland: Auckland University Press.

P’iankov, I. V. 2013. Средняя Азия и Евразийская степь в древности [*Central Asia and the Eurasian Steppe in antiquity*]. Санкт-Петербург: Петербургское лингвистическое общество.

Podushkin [Poduškin], A. N. 2000. Арысская культура Южного Казахстана (IV в. до н. э.–IV в. н. э.) [Arys culture of southern Kazakhstan (fourth century BCE to the fourth century CE]. Туркестан: Издательский центр Международный Казахско-Турецкий Университет им. Х. А. Ясави.

–. 2011. “Ханьское зеркало из катакомбы 12 могильника Култобе” [Han mirror from catacomb 12 of Kultobe cemetery]. Вопросы Археологии Казахстана 3, 363–373.

–. 2013. “Der Staat der Kangju aus Sicht der Archäologie.” In T. Stöllner and Z. Samašev (eds.), *Unbekanntes Kasachstan. Archäologie im Herzen Asiens.* Vol. 2, 793–810. Bochum: Deutsches Bergbau-Museum Bochum.

–. 2015. “Сарматская атрибутика в археологических комплексах катакомбных погребений Арысской культуры Южного Казахстана (I. в. до н. э.–III в. н. э)” [Sarmatian attributes in the

archaeological complexes of catacomb burials of the Arys culture of southern Kazakhstan (first century BCE to third century CE)]. Вестник Волгоградского государственного университета. Серия 4. История. Регионоведение. Международные отношения 5.35, 67–78.

–. 2018. “Археологические работы на городище Культобе Арысском, могильниках Культобе и Кылышжар в 2016–2017 гг.” [Archaeological works at the settlement of Kul’tobe-Arys, cemeteries of Kul’tobe and Kylyshzhar in 2016–2017]. Археологиа Казахстана, no. 1–2, 245–258.

–. 2020. “Нумизматические находки периода государства Кангюй из Южного Казахстана” [Numismatic finds of the period of the Kangju state from southern Kazakhstan]. Үлкен Алтай әлемі – Мир Большого Алтая – *World of Great Altay* 6.2, 903–913.

–. 2022. “Знатный кангюец на охоте” [A noble Kangju on the hunt]. *Stratum plus.* Археология и культурная антропология, no. 4, 183–208.

Podushkin [Poduškin], A. N. and A. G. Donets. 2021. “Раскопки городища Культобе Арысского и могильника Кылышжар в Южном Казахстане” [Excavations of the settlement Kul’tobe-Arys and Kylyshzhar cemetery in southern Kazakhstan]. *Stratum plus.* Археология и культурная антропология, no. 4, 333–347.

Pugachenkova, G. A. 1989. Древности Мианкаля. Из работ Узбекистанской искусствоведческой экспедиции [*Antiquities of Miankal’. From the work of the Uzbekistan Art History expedition*]. Ташкент: Издательство “Фан” Узбекской ССР.

Pulleyblank, E. G. 1962. “The consonantal system of Old Chinese.” *Asia Major* 9.1, 58–144.

Rante, R. and Dj. Mirzaakhmedov. 2019. *The oasis of Bukhara.* Vol. 1, *Population, depopulation and settlement evolution*. Leiden: Brill.

Rante, R. and L. Tronca. 2022. “Archaeological pluridisciplinary activities.” In R. Rante, F. Schwarz, and L. Tronca, *The Oasis of Bukhara.* Vol. 2, *An Archaeological, Sociological and Historical Study*, 6–59. Leiden: Brill.

Rapin, C. 2007. “Nomads and the shaping of Central Asia.” In J. Cribb and G. Herrmann (eds.), *After Alexander: Central Asia before Islam*, 29–72. Oxford: Oxford University Press.

–. 2010. “L’ère yavana d’après les parchemins Gréco-Bactriens d’Asangorna et d’Amphipolis.” In K. Abdullaev (ed.), *The traditions of East and West in the antique cultures of Central Asia. Papers in honour of Paul Bernard*. Tashkent: “Noshirlik yog’dusi” Press.

–. 2018. “On the way to Roxane 2: Satraps and hyparchs between Bactra and Zariaspa-Maracanda.” In J. Lhuillier and N. Boroffka (eds.), *A millennium of history. The Iron Age in southern Central Age (2nd and 1st millennia BC)*, 257–298. Berlin: Dietrich Reimer.

–. 2021. “Les frontières en Asie centrale dans l’Antiquité: géographie historique de la Sogdiane d’Alexandre le Grand à Claude Ptolémée.” *Dialogues d’histoire ancienne* 47.1, 324–365.

Rapin, C., M. Isamiddinov, and M. Khasanov. 2001. “La tombe d’une princesse nomade à Koktepe près de Samarkand.” *Comptes rendus des séances de l’Académie des Inscriptions et Belles-Lettres* 145.1, 33–92.

Rapin, C. and M. Khasanov. 2016. “Les traditions architecturales de l’époque achéménide à l’époque hellénistique. Récentes découvertes en Sogdiane.” In M. Espagne, S. Gorshenina, F. Grenet, S. Mustafayev, and C. Rapin (eds.), *Asie Centrale. Transferts culturels le long de la Route de la soie*, 61–87. Paris: Vendémiaire.

Renaguli, Y. 热娜古丽, Xi Tongyuan 习通源, and Liang Yun 梁云. 2018. “Wuzibiekesitan Sama’erhan shi Sazhagan yizhi M11 fajue jianbao” 乌兹别克斯坦撒马尔罕市撒扎干遗址 M11发掘简报 [Excavation Report M11, Sazagan Site, Samarkand, Uzbekistan]. *Wenwu* 3, 31–41.

Richards, J. F. 2014. *The world hunt: An environmental history of the commodification of animals*. Berkeley, CA: University of California Press.

Rogers, J. D. 2012. “Inner Asian states and empires: Theories and synthesis.” *Journal of Archaeological Research* 20.3, 205–256.

–. 2017. “Inner Asian polities and their built environment.” *Archaeological Research in Asia* 11, 1–14.

–. 2019. ‘The complexity of nomadic empires.” *Social Evolution & History* 18.2.

Rougemont, G. 2012. *Corpus inscriptionum iranicarum.* Part 2. Vol. 1.1, *Inscriptions grecques d'Iran et d'Asie centrale.* London: School of Oriental and African Studies.

Rouse, L. M., P. N. Doumani Dupuy, and E. Baker Brite. 2022. "The Agro-pastoralism debate in Central Eurasia: Arguments in favor of a nuanced perspective on socio-economy in archaeological context." *Journal of Anthropological Archaeology* 67.101438.

Rtveladze, E. V. 2009. "К ранней истории Чача (Новые нумизматические и эпиграфические источники)" [On the early history of Chach (new numismismatic and epigraphic sources)]. In Столице Узбекистана Ташкенту 2200 лет. Материалы международной научной конференции посвященной 2200-летнему юбилею города Ташкента, 135–140. Ташкент: Издательство "Фан".

Salzman, P. 1972. "Multi-resource nomadism in Iranian Baluchistan." In W. Irons and N. Dyson-Hudson (eds.), *Perspectives on nomadism*, 60–68. Brill: Leiden.

Schwarz, F. 2022. "Land behind Bukhara: Materials for a landscape history of the Bukhara oasis in the long first millennium." In R. Rante, F. Schwarz, and L. Tronca, *The Oasis of Bukhara.* Vol. 2, *An Archaeological, Sociological and Historical Study*, 60–144. Leiden: Brill.

Sharakhimov, Sh. S. 1977. "К истории изучения гончарного дела на Афрасиабе" [On the history of the study of pottery at Afrasiab]. История материальной культуры Узбекистана 13, 107–116.

Shenkar, M. 2020. "The origin of the Sogdian civic communities (nāf)." *Journal of the Economic and Social History of the Orient* 63, 357–388.

–. 2022. "The Arab conquest and the collapse of the Sogdian civilization." In D. G. Tor and M. Inaba (eds.), *The history and culture of Iran and Central Asia: From the pre-Islamic to the Islamic period*, 95–124. Notre Dame, IN: University of Notre Dame Press.

Shepherd, B. A. 2012. "Political economic reorganization among non-state societies: A case study using Middle Holocene mortuary data from the Cis-Baikal, Russia." *Journal of Anthropological Archaeology* 31, 365–380.

Shiratori, K. 1928. "A study on Su-tʿê, or Sogdiana." *Memoirs of the Research Department of the Toyo Bunko (the Oriental Library)* 2, 81–145.

Shishkina, G. V. 1979. Древняя и средневековая культура Чача [*Ancient and medieval culture of Chach*]. Ташкент: Издательство "Фан" Узбекской ССР.

–. 1994. "Ancient Samarkand: Capital of Soghd." *Bulletin of the Asia Institute* 8, 81–99.

Shishkina, G. V. and O. N. Inevatkina. 2012. "Западные земли Самаркандского Согда. Типология археологических памятников" [Western lands of Samarkand Soghd. Typology of archaeological monuments]. Проблемы истории, филологии, культуры 4.38, 33–68.

Shishkina, G. V., R. Kh. Suleimanov, and G. A. Koshelenko. 1985. "Согд" [Soghd]. In G. A. Koshelenko (ed.), Древнейшие государства Кавказа и Средней Азии, 273–292. Москва: Наука.

Sims-Williams, N. 2022. "The proto-Sogdian inscriptions of Kultobe: New fragments and new reconstructions." In D. G. Tor and M. Inaba (eds.), *The history and culture of Iran and Central Asia: From the pre-Islamic to the Islamic period*, 41–56. Notre Dame, IN: University of Notre Dame Press.

–. Forthcoming. *The Sogdian ancient letters and other early Sogdian inscriptions and documents*.

Sims-Williams, N. and B. Bi. 2018. "A Sogdian fragment from Niya." In H. Chen and X. Rong (eds.), *Great journeys across the Pamir Mountains: A Festschrift in honor of Zhang Guangda on his eighty-fifth birthday*, 83–104. Leiden: Brill.

Sims-Williams, N. and F. Grenet. 1987. "The historical context of the Sogdian Ancient Letters." In P. Gignoux (ed.), *Transition periods in Iranian ancient history. Actes du symposium de Fribourg-en-Brisgau (22–24 mai 1985)*, 101–122. Leuven: E. Peeters.

Skaff, J. K. 2003. "The Sogdian trade diaspora in East Turkestan during the seventh and eighth centuries." *Journal of the Economic and Social History of the Orient* 46.4, 475–524.

Smith, M. L. 2018. "Urbanism and the middle class: Co-emergent phenomena in the world's first cities." *Journal of Anthropological Research* 74.3, 299–326.

Sneath, D. 2016. "Tribe." *Cambridge Encyclopedia of Anthropology*, online edition, https://www.anthroencyclopedia.com/entry/tribe.

Spengler, R. N., A. V. Miller, T. Schmaus, G. M. Matuzevičiūtė, B. K. Miller, S. Wilkin, W. T. T. Taylor, Y. Li, P. Roberts, and N. Boivin. 2021. "An imagined past? Nomadic narratives in Central Asian archaeology." *Current Anthropology* 62.3, 251–286.

Stančo, L. 2021. "In the shadow of the wall: Hellenistic settlement in the Baysun and Kugitang piedmonts." *Studia Hercynia* 25.2, 64–95.

Stark, S. 2012. "Nomads and networks: Elites and their connections to the outside world." In S. Stark and K. S. Rubinson (eds.), *Nomads and networks. The ancient art and culture of Kazakhstan (exhibition catalogue)*, 107–138. Princeton, NJ: Princeton University Press.

–. 2016. "'Hellenism' at the fringes: On the relationship between Bactria and western Sogdiana (Bukhara oasis)." In История и археология Турана 3: Посвящённый юбилею Джамалиддина Камаловича Мурзаахмедова, 134–150. Самарканд: Институт археологии АН РУз.

–. 2020. "Central Asia and the steppe." In R. Mairs (ed.), *The Graeco-Bactrian and Indo-Greek world*, 78–105. London: Routledge.

–. 2021. "The Iranian East." In B. Jacobs and R. Rollinger (eds.) *A companion to the Achaemenid Persian Empire*. Vol. 1, 695–709. Hoboken: Wiley Blackwell.

–. Forthcoming a. "Between desert and oasis: Border markets and their role in economic networks in southwestern Central Asia." In L. Fabian, K. Leese-Messing, E. J. S. Weaverdyck, L. Morris, and M. Dwivedi (eds.), *Economies of the edge: Frontier-zone processes at regional, imperial, and global scales (300 BCE–300 CE)*. Heidelberg: HeiUP.

–. Forthcoming b. "The Hunnic period in Bukharan Soghd: Archaeological perspectives and historical considerations." In S. Stark and Dj. Mirzaakhmedov (eds.), *Western Sogdiana during antiquity: Archaeological, numismatic, and historical studies*. New York, NY: ISAW/New York University Press.

Stark, S., F. Kidd, Dj. Mirzaakhmedov, S. Silvia, S. Mirzaakhmedov, S. Evers, and A. I. Naymark. 2016. "Bashtepa 2016: Preliminary report of the first season of excavations." *Archäologische Mitteilungen aus Iran und Turan* 48, 219–264.

Stark, S., F. Kidd, J. K. Mirzaakhmedov, S. Wang, R. N. Spengler, S. J. Mirzaakhmedov, Z. Silvia, S. Pozzi, H. Rakhmonov, M. Sligar, and M. Sultanova. 2020. "The Uzbek-American expedition in Bukhara. Preliminary report on the third season (2017)." *Iran* 60.2, 1–51.

Strootman, R. 2011. "Hellenistic court society: The Seleukid imperial court under Antiochos the Great, 223–187 BCE." In J. Duindam, M. Kunt, and T. Artan (eds.), *Royal courts in dynastic states and empires: A global perspective*, 63–89. Leiden: Brill.

Suleimanov, R. Kh. 2000. Древний Нахшаб [*Ancient Nakhshab*]. Ташкент: Издательство "Фан" АН РУз.

Sverchkov, L. M. 2009. "A history of research on ancient mining in Uzbekistan." *Archäologische Mitteilungen aus Iran und Turan* 41, 141–164.

Takao, Uno 宇野隆夫 and A. Berdimurodov, eds. 2013. ダブシア城 –中央アジア・シルクロードにおけるソグド都市の調査- Кала-и Дабусия "Согдийский город на Великом Шелковом Пути. Научные исследования городского центра Средней Азии" [Kala-i Dabusiia "Sogdian city on the Great Silk Road. Scientific research on the urban center of Central Asia"]. Kyoto: 真陽社 Shinyosha.

Tavernier, J. 2007. *Iranica in the Achaemenid period (ca. 550–330 B.C.). Lexicon of Old Iranian proper names and loanwords, attested in non-Iranian texts*. Leuven: Peeters.

Terenozhkin, A. I. 1950. "Согд и Чач" [Soghd and Chach]. Краткие сообщения о докладах и полевых исследованиях Института истории материальной культуры 33, 152–159.

The Palace Museum and Northwest University. 2020. 绝域苍茫万里行：丝绸之路(乌兹别克斯坦段)考古成果展 / *Across vast and distant deserts: Archaeological discoveries on the Silk Road (Uzbekistan)*. Beijing: 故宫出版社 The Forbidden City Publishing House.

Thordarson, F. 1987. "Asii." *Encyclopaedia Iranica*, online edition. https://iranicaonline.org/articles/asii-or-asiani-an-ancient-nomadic-people-of-central-asia-who-about-130-b.

Torday, L. 1997. *Mounted archers: The beginnings of Central Asian history*. Durham: The Durham Academic Press.

Torgoev, A. I. and A. A. Erzhigitova. 2020. “Генезис и вопросы хронологии погребальных сооружений Кангюя II в. до н. э.–IV вв. н. э.” [Genesis and chronological questions of Kangju burial structures of the second century BCE to the fourth century CE]. In Yatsenko et al. (2020), 136–152.

Torgoev, A. I. and A. V. Kulish. 2020. “Городище Культобе в г. Туркестане: генезис поселенческой структуры” [Settlement Kul’tobe in the city of Turkestan: Genesis of the settlement structure]. In Yatsenko et al. (2020), 87–102.

Torgoev, A. I., A. V. Kulish, and A. A. Erzhigitova. 2020. “Хронология Культобе в г. Туркестане и следы ремесел на поселении” [Chronology of Kul’tobe in the city of Turkestan and traces of crafts at the settlement]. In Yatsenko et al. (2020), 103–124.

Torgoev, A. I., A. V. Kulish, and N. Zh. Torezhanova. 2020. “Замок Бака-тобе и крестообразные постройки Кангюя” [Castle Baka-tobe and Kangju cruciform constructions]. In Yatsenko et al. (2020), 69–86.

Treister, M. Yu. 2018. “Фигурные пронизи и подвески из так называемого египетского фаянса в Евразии в I в. до н. э.–III в н. э.” [Figural beads and pendants of so-called Egyptian faience in Eurasia in the first century BCE to the third century CE]. In I. N. Khrapunov (ed.), Крым в сарматскую эпоху (II в. до н. э.–IV в. н. э.). IV. Сб. научных статей, 9–49. Симферополь: ИП Бровко А. А.

–. 2022. “Существовал ли трансъевразийский ‘меховой путь’ в эпоху Хань? (Размышления на основании материалов археологии)” [Was there a trans-Eurasian ‘fur route’ in the Han era? (Reflections on the basis of archaeological materials)]. Материалы по археологии и истории античного и средневекового Причерноморья S1, 50–109.

Tse, W. W. K. 2021. “Opportunism in foreign affairs in first century BCE China: Chen Tang, his fellows, and their patrons.” *T’oung Pao* 107.3–4, 233–261.

de la Vaissière, É. 2005. *Sogdian traders: A history*. J. Ward (trans.). Leiden: Brill.

–. 2006. “Čākar.” *Encyclopaedia Iranica*, online edition. https://www.iranicaonline.org/articles/cakar.

–. 2013. “Iranian in Wusun? A tentative reinterpretation of the Kultobe inscriptions.” In S. Tokhtasev and P. Lurje (eds.), *Commentationes iranicae. Vladimiro f. Aaron Livschits nonagenario donum natalicium*, 320–325. St Petersburg: Nestor-Historia.

Vallée-Raewsky, J. 2013. “Résultats préliminaires de la fouille des kourganes de Yangi-rabat et Akdzhar-tépé dans la région de Samarkand (Ouzbékistan).” In J. Bendezu-Sarmiento (ed.), *L’archéologie française en Asie centrale. Nouvelle recherches et enjeux socioculturels*. Special issue, *Cahiers d’Asie centrale* 21/22, 399–410.

Wang, S., S. Mirzaakhmedov, and S. Stark. 2020. “Раскопки курганов у оазисной стены Кампир Девор Бухарского Согда в 2018 году (Лявандак и Кызыл-тепа)” [Excavations of kurgans at the oasis wall Kampir Devor of Bukharan Soghd in 2018 (Liavandak and Kyzyl-tepa)]. Археологические исследования в Узбекистане 12, 62–72.

Watson, B., trans. 1993. *Records of the Grand Historian: Han dynasty II*. Revised ed. New York, NY: Columbia University Press.

Wink, A. 2011. “Post-nomadic empires: From the Mongols to the Mughals.” In P. F. Bang and C. A. Bayly (eds.), *Tributary empires in global history*, 120–131. Cambridge: Cambridge University Press.

Winter, T. 2020. “Silk road diplomacy: Geopolitics and histories of connectivity.” *International Journal of Cultural Policy* 26.7, 898–912.

Yang, J. 2015. “Transportation, boarding, lodging, and trade along the early Silk Road: A preliminary study of the Xuanquan manuscripts.” *Journal of the American Oriental Society* 135.3, 421–432.

Yang, T. 2022. trans. *The biographies of eminent monks* 高僧傳. *Shi Huijiao (Liang Dynasty)*. Hong Kong: The University of Hong Kong.

Yatsenko [Iatsenko], S. A. 2020a. “Источники и историография по ‘кангюйской проблеме’” [Sources and historiography of the ‘Kangju problem’]. In Yatsenko et al. (2020), 7–22.

–. 2020b. “Кангюй в региональной торговле и культурном обмене. Кангюй и ‘аланская проблема’” [Kangju in regional trade and cultural exchange. Kangju and the ‘Alan problem’]. In Yatsenko et al. (2020), 50–68.

–. 2020c. “Очерк социально-политической истории ‘кочевой империи’ Кангюй / Канга. Вассальные владения” [Essay on the socio-political history of the Kangju/Kanga ‘nomadic empire’. Vassal domains]. In Yatsenko et al. (2020), 23–49.

Yatsenko [Iatsenko], S. A., A. K. Avizova, A. I. Torgoev, A. Saipov, A. V. Kulish, E. P. Kitov, A. E. Rogozhinskii, E. A. Smagulov, A. A. Erzhigitova, N. Zh. Torezhanova, S. S. Tur, and S. S. Ivanov. 2020. Археология и история Кангюйского государства [*Archaeology and history of the Kangju state*]. Шымкент: Әлем.

Yoshida, Y. 2021. “The Sogdian merchant network.” *Oxford Research Encyclopedia of Asian History*, online edition. https://doi.org/10.1093/acrefore/9780190277727.013.491.

Yu, T. 1998. “A study of Sakā history.” *Sino-Platonic Papers* 80, 1–225.

–. 2004. “A history of the relationship between the Western & Eastern Han, Wei, Jin, Northern and Southern dynasties and the Western Regions.” *Sino-Platonic Papers* 131, 1–378.

Yü, Y.-S. 1967. *Trade and expansion in Han China: A study in the structure of Sino-barbarian economic relations*. Berkeley, CA: University of California Press.

Ursula Brosseder and Bryan K. Miller

5 The Eurasian Steppe: Local Agents and their Participation in Global Networks

I Introduction

The era of intensified transcontinental flows of ideas and items during the late first millennium BCE to early first millennium CE has repeatedly been characterized as a pinnacle age of increased connectivity that linked the east and west flanks of Eurasia. Scholars have reconstructed various configurations of integrated webs of routes and towns traversed by the archetypal monks and merchants,[1] which facilitated long-distance commercial trade and cultural diffusions between the Han Chinese, Parthian, and Roman cradles of civilization and were collectively known as the 'Silk Roads.'[2] Yet missing from these discussions is a consideration of "all of the geographic regions touched by the trade,"[3] including north–south as well as east–west trade routes[4] and economic initiatives of steppe polities such as the Xiongnu.[5] Even the more localized attention paid to the Central Asian realms that follow the archetypal Silk Roads has yet to accord ample agency to the steppe realms further north, leaving them as frontier areas peripheral to any of the transcontinental activity.

Current scholarly contentions therefore run the risk of flattening Eurasia and glossing over the 'people without history' within the steppes as passive participants of interactions between the agrarian empires.[6] In this chapter, we maintain that the numerous steppe groups within Eurasia were not marginal mediators of exchange but critical agentive nodes, with their own internal dynamics and interregional interactions, who helped drive and facilitate 'global' exchange networks that spanned the entirety of the Eurasian continent.

Heightened flows of goods and ideas spanning Eurasia at the turn of the millennium have long been subsumed under the paradigm of Silk Roads. The notion of ancient 'Seidenstrassen' (Silk Roads) was first envisioned in the late nineteenth century, under the pretense of creating a railway line linking Europe and China, as a system of constructed avenues of transmission with nodes of commercial exchange.[7] While one

1 Juliano and Lerner 2001.
2 Cf. Whitfield 2007.
3 Raschke 1978, 677.
4 Christian 2000.
5 Lubo-Lesnichenko 1994; Honeychurch 2014.
6 Wolf 1982.
7 See Chin 2013.

Note: This paper is a revised and expanded version of Brosseder and Miller 2018.

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may certainly speak of watershed expansions and intensifications of pan-Eurasian exchange networks at the turn of the millennium, to assume a formalization of routes that established East–West trade remains a grand conceptual leap and an obstacle to a better understanding of continental flows. Despite historical tales of emissaries and legions traversing the long journey between China and Rome,[8] the cultural spheres of the Mediterranean and East Asia were certainly not coming into direct contact with one another.[9] And in spite of challenges to romantic visions and mirages of East–West 'intervisibility,'[10] scholars continue to rely on the model of Silk Roads and tout cross-continental culture contact like figurative cultural hands stretching out from civilizational anchors over the barbarian realms and meeting in the merchant havens of mediating oasis states.

From an archaeological perspective, materials from one end of Eurasia that appear at the other are often deemed evidence of cross-continental cultural contact. Areas between those regions, in which these particular cross-cultural elements also appear, are in turn deemed interval locales that mediate interaction between the far-distant civilizations. Although theories of culture contact provide ample and suitable descriptions of the dynamics of some types of connectivity and interaction,[11] the more general notion of connectivity, seen in cross-continental materials, should not be mistaken for contact. To conflate connectivity with contact would be to deflate the continent and downplay the agency of groups within Eurasia. Arguments for cross-continental connectivity also often maintain notions of contact that assert continental cultural poles in a system of dominant centers. Instead, pan-Eurasian exchanges should be thought of in terms of a decentered complex web that not only spanned the famous oasis centers and mountain corridors of the so-called Silk Roads but reached deep into the steppe regions of Eurasia. We therefore endeavor to present groups far outside the classic agrarian states as active facilitators of a complex network of connectivity that, only circuitously through numerous local agents and social interactions, linked the far fringes of the continent. In short, rather than trans-Eurasian exchanges between powers in the East and West, we should refocus and broaden our approach to pan-Eurasian interchanges amongst all of the various groups and regions.

Researchers have often employed world-systems theory to characterize broad developments and reconstruct long-distance transmissions that spanned the Eurasian continent.[12] Yet a systems approach to the web of flows and connectivity of ancient Eurasia runs the risk of projecting interregional integration within a singular body of holistic behavior and local developments guided by (exterior) core forces. However,

8 Thorley 1971; Hill 2009.

9 Pulleyblank 1999.

10 Hansen 2012; Brown 2014.

11 E.g., Cusick 1998.

12 Abu-Lughod 1989; Frank 1993; Koryakova 2000, 113; Wilkinson, Sherrat, and Bennett 2011.

pre- and early historic Eurasia was not a systematic structure of hierarchically interconnected units, and thus a world-systems approach seems both ill-fitting and misleading.[13] Even though seemingly new versions of these approaches have been presented under the label 'world-systems analysis,'[14] any such approach rests upon fundamental notions of radial relations and systematized interactions that remain an underlying problem.[15] What blossomed in Eurasia at the turn of the millennium were organic networks, not structured systems, of interregional exchange and interaction. These grew out of preexisting regional networks that in turn coalesced and were thus characterized by a multiplicity of socioeconomic and political hubs. We must hence move beyond notions of a unified and hierarchically structured system of exchanges that was constructed by, and for the benefit of, so-called cores of civilization outside of central Eurasia and embrace configurations that defy any attempt at singularizing or systematizing formulation.[16]

Globalization, on the other hand, denotes "a complex, overlapping, dis-junctive order, which cannot any longer be understood in terms of existing center–periphery models."[17] Within such webs of interactions, various cultural elements and entities accrue, conglomerate, and conflict.[18] Exchanged items and transmitted ideas sometimes even coalesce into new incongruous cultural materials or practices. Through varied manners of consumption, common elements engender not a unifying global culture[19] but rather a cultural 'weft' of connectivity across a 'warp' of distinct yet interwoven societies. These threads serve as strategic cross-cultural expressions of affiliation between members, often elites, of otherwise distinct and disparate societies.[20] A framework of globalization is thus apt for archaeological investigations of pan-Eurasian exchanges between the first century BCE and first century CE, as such a framework entails a motley matrix of distinct local cultures that are interconnected through their differential engagements with components of a 'global' vocabulary of culture.

In this chapter, we heed the call of C. Knappett to analyze patterns of globalization through network analytical constructs. Networks thinking considers both the modes (i.e., ties) and arbitrators (i.e., nodes) of connectivity and addresses their configurations simultaneously at multiple scales of analysis.[21] It accommodates fluid and decentered configurations of interconnectivity characteristic of globalization dynamics, assesses paths and degrees of connectivity between entities not in direct contact, and

13 Kohl 1987; 2008; Stein 1999.
14 Galaty 2011.
15 Jennings 2006.
16 Cf. Morris 2006.
17 Appadurai 1990, 6.
18 Featherstone 2006, 390.
19 Hannerz 1989; Smith 1990.
20 Schortman 1989; Prestholdt 2008.
21 Knappett 2011; 2017.

highlights the effects of individual agents on entire networks. Particularly pertinent to the study of globalization processes in early Eurasia are the recurring patterns of networks that are highly clustered into separate spheres yet still contain short paths of connectivity and enhanced disseminations between seemingly distant entities, thereby constituting what is colloquially referred to as a 'small world.'[22] The ties that link smaller spheres of interaction into larger networks may be relatively few, yet they are key shortcuts to otherwise long-distance paths of connectivity. These bridging ties are often weak, in that they do not consist of a high quantity or intensity of connecting components, especially in comparison to the strong ties that bind together individual clusters of a network or separate spheres of interaction. However, M. S. Granovetter pointed out early on that such so-called weak ties are actually sufficiently strong to play the role of critical connections that hold larger networks together, allow for shorter paths of connectivity, and in turn bear high social traffic that spans across the network as a whole.[23] The notion of an archaic 'small world' is thus not a world centrally organized through a system of strong bonds guided by any core entity. In the case of the so-called Classical realms, scholars have begun to move away from rendering them as merely a Greek small world[24] to a more encompassing and broadly defined Mediterranean realm[25] in which diverse cultures – Greek, Phoenician, and others – were enmeshed within a global yet small world. We argue here that a 'small world' of vast connectivity emerged across Eurasia at the turn of the millennium through the growth of critical nodes that fostered 'weak' ties of exchange and thereby merged disparate cultures and societies into a seemingly tightly woven yet broad conglomerate. The bridging 'weak' ties may be seen archaeologically in the goods, styles, and technologies that were disseminated throughout the continent as material components of a global vocabulary of power and prestige, drawn from often unknown 'other' cultures[26] and differentially selected and consumed within each local culture.[27] The critical nodes that facilitated these bridging ties should be viewed less as static places (e.g., cities and markets) and more as dynamic people, arguably the regional elites of central Eurasia, who actively negotiated and drove the larger globalizing processes of interregional exchange for their own sociopolitical benefit. Although technologies for traversing great spatial distances (e.g., the horse and the wheel) had already existed for a considerable time by the end of the first millennium BCE, it was the local mechanisms and forces for navigating great social distances that were critical impetuses for this era of archaic globalization. Thus, local agents in the steppes and the material manifestations of their long-distance exchanges lie at the heart of our discussions of the global networks that spanned early Eurasia.

22 Watts and Strogatz 1998.
23 Granovetter 1973.
24 *Sensu* Malkin 2011.
25 Morris 2006; Hodos 2014.
26 Cf. Helms 1993.
27 Cf. Miller and Brosseder 2017.

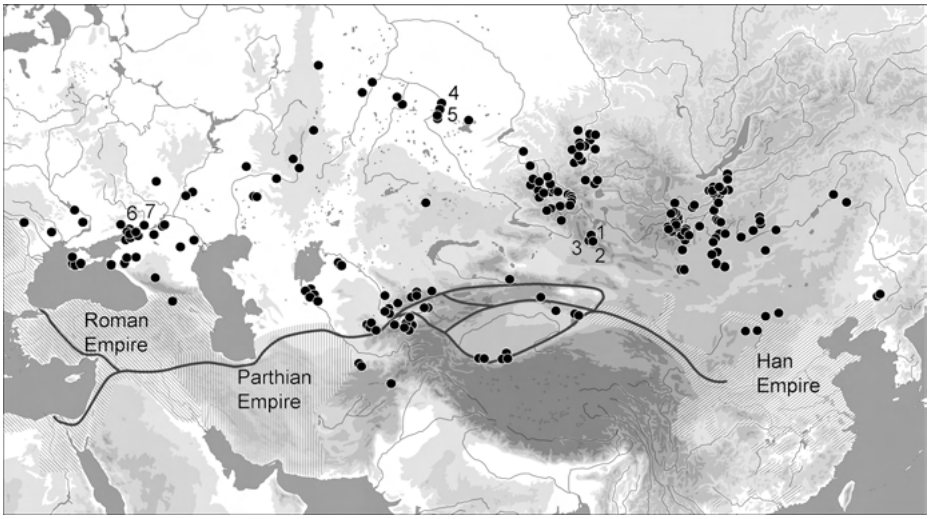
II Local Agents in the Eurasian Steppe

By the late first century BCE, large portions of the Eurasian steppes had already long been in contact. Before the watershed of transcontinental flows of materials at the turn of the millennium, powerful Eurasian steppe groups such as the so-called Pazyryk of the Northern Altai were already consuming materials from as far away as Persia and China and thus constituted independent axes of exchange.[28] As power politics amidst the rise of these regional elites persisted, contact with outside, especially far-distant, cultures became an increasingly sought-after source of prestige,[29] and interregional flows and contact progressed into more deliberate connectivity. By the end of the first millennium BCE, large eastern and western spheres of interacting steppe groups emerged, both of which shared similar expressions of social status through sets of steppe-themed prestige goods often bearing identical components.[30] As large agrarian empires, such as the Han in China, the Parthians in Persia, and the Romans in the Mediterranean, also flourished and grew in their demands, regional elites of the Eurasian steppe became important catalytic agents of cross-continental connectivity, with mounting projections of power and prestige.[31] In terms of network dynamics, these potent steppe elites served as critical nodes that cultivated bridging ties and thereby facilitated global-scale networks of exchange that inflated and expanded the distribution of material goods and ideas across Eurasia at the turn of the millennium.

In order to briefly illustrate the global projections of prestige among the steppe elites, this chapter presents three case studies that exemplify the varied regional engagements with pan-Eurasian global exchanges by steppe elite groups in (1) the Mongolian Altai Mountains, (2) the Middle Irtysh Valley, and (3) the Lower Don Valley (map 1). These groups lie beyond the Central Asian regions most often linked to the perceived Silk Roads, and outside the realms of the societies that produced historical records – documents that have traditionally skewed perspectives toward the agendas of agrarian civilizations. These examples epitomize interregional exchanges that reached north–south as well as east–west[32] and enmeshed far-distant societies into expansive global-scale networks of connectivity facilitated by peoples 'without history' in the Eurasian steppes.[33]

Long-distance connectivities are often manifested in only a handful of materials. The equivalency of object assemblages at two different locales, whether in object styles or in whole parallel objects, may serve as a proxy for social interrelations, and scholars have accordingly (re)constructed networks of connectivity through similarity

28 See Rudenko 1970, 293–309; Polos'mak 2006; Stark 2012.
29 Cf. Helms 1993.
30 Brosseder 2011; 2015.
31 Cf. Amitai and Biran 2014.
32 Christian 2000.
33 Wolf 1982.



Map 1: Eurasia at the beginning of the first century CE: agrarian empires (shaded areas), main routes of perceived Silk Road (lines), distribution of Chinese items in the steppes (dots) (after Brosseder 2015), and case study areas: 1. Mongolian Altai (Xiongnu), 2. Middle Irtysh (Sargat Culture), 3. Lower Don (Sarmatian).

matrices that highlight these interregional equivalencies.[34] However, if we are to understand the manner in which local communities actively engaged with global networks, we must attend to more than simply the presence or absence of parallel items in disparate places. We need to account for the different contexts of accompanying assemblages and patterns of consumption.[35] As of yet, few complete archaeological sites of Eurasian steppe groups have been fully unearthed and reported. But refined considerations of the different cross-cultural materials and their archaeological contexts nevertheless provide an intimation of the manner of dispersal of globally exchanged elements and the character of cross-continental connectivities. In the following discussion, we employ a paradigm of globalization, which emphasizes the dissemination of goods as well as ideas, namely technologies and styles, and often 'glocalizing' processes that entail the creation of new foreign-derived yet locally accommodated materials.[36]

II.1 Mongolian Altai

The first example area spans the Mongolian Altai of eastern Eurasia and a key mountain pass between the eastern Eurasian steppes and Dzungaria in northwest China,

34 Östborn and Gerding 2014.

35 E.g., Thomas 1991; Prestholdt 2008; Mullins 2011.

36 Tobin 1992; Robertson 1995; Appadurai 1996.

and thereby routes westward across the continent. The Mongolian Altai was thus a critical frontier locale of the Xiongnu steppe empire (second century BCE to first century CE), and the construction of monumental terrace tombs during the first century CE at the eastern mouth of the pass, at the site of Takhiltyn Khotgor, demonstrates strategies to politically integrate and exert control over the area.[37] The regional elites interred in these tombs were accompanied not only by livestock offerings, horse-riding gear, and broad-shouldered storage jars typical of the Xiongnu, but also by remains of Chinese-style chariots and other exotic vessels and ornaments.

The contemporary site of Khökh Üzüürin Dugui on the western side of the Altai yielded a large barrow with a stone-encased chamber and a stone ring on the surface, the more standard form of burial demarcation among the Xiongnu.[38] Livestock offerings and horse gear were deposited in the northern end of the cist, together with a typical Xiongnu pot, but also with a bronze Chinese *zhong*-vase and a large steppe-style cauldron, the handles of which resemble cauldrons found at sites in south Kazakhstan (fig. 1B.1–2). Along the eastern wall were standard Xiongnu arrowheads and a Chinese-style sword and sheath, as well as a unique spouted bronze pot with an accompanying spherical cup (fig. 1B.3). Single-handle spouted bronze vessels of expressly Chinese manufacture have been found in several large tombs of the Xiongnu realms,[39] but in this case, the shape of the two ring handles and body of the pot, especially the flared foot, resemble steppe forms of cauldrons and clearly indicate local production.

A small cemetery of 33 standard ring graves within the high mountain passes of the Altai at Shombuuzyn Belchir (first to second century CE) also yielded materials from China and other far-distant regions.[40] Although the grave structures, body treatments, livestock offerings, pottery, riding equipment, and even weaponry were all of typical Xiongnu style, these graves also included several finds of Chinese bronze-mirror and lacquer-vessel fragments, a variety of gilded glass beads similar to those found in Central and Western Asia,[41] and a pervasive presence of silk fragments in even the smallest stone cists. In grave 19, an adult female (with an infant) was buried in a shallow pit with a wooden coffin, her head northward, paste beads around her neck, and sheep and pottery remains just outside the coffin – all normal Xiongnu burial customs (fig. 1A.1). On each side of her waist lay two polished stone belt rings of a light-green hue, which resembled the color of green jade items imported from China and found only in high elite square tombs of the Xiongnu. Although such rings were standard Xiongnu belt ornaments, the material clearly emulated exotic decorations of the uppermost echelon. In addition, the woman was found with silk garment

37 Navaan 1999; Miller et al. 2009; Miller 2011.
38 Kovalev, Erdenebaatar, and Iderkhangai 2011.
39 Yeruul-Erdene 2011.
40 Miller et al. 2011.
41 Liu et al. 2012.

Fig. 1: Remains from the Mongolian Altai: 1A: Shombuuzyn Belchir, grave 19: 1. wood coffin burial, 2. Chinese bronze *siru*-mirror, 3. Egyptian faience pendant, 4. green stone belt rings (after Miller et al. 2011). 1B: Khökh Üzüürin Dugui 2, grave 1: 1. Chinese bronze zhong-vase, 2. steppe style cauldron, 3. bronze and iron spouted pot (Kovalev et al. 2011, fig. 9).

fragments, a piece of a lacquered object, an Egyptian-style faience phallus bead, and broken pieces of both *liubo*-syle (TLV) and *siru*-style Chinese mirrors. The pervasive practice among the Xiongnu of breaking Chinese mirrors[42] was not prevalent within the Han Empire from which these mirrors came, and this difference in treatment[43] suggests a variety of cross-continental patterns in the consumption of Chinese mirrors among diverse regions.

II.2 Middle Irtysh

Northwestward from the Mongolian Altai, a local culture of pastoral peoples, presently referred to as Sargat, occupied the Siberian forest-steppe zone of the Middle Irtysh and Tobol Rivers from the second half of the first millennium BCE through the second

42 See Törbat 2011.
43 See Miller and Brosseder 2017.

century CE.[44] The pastoral groups there had large, often fortified, settlements of multi-room wooden house structures and buried their dead in large earthen kurgans with multiple burial pits in each.[45] An exceptional necropolis near the village of Sidorovka contained five large and richly furnished kurgans from the late Sargat Culture, and which span the entire era from the second century BCE to second century CE.[46] The unlooted southern burial within kurgan 1, the largest mound at the site, yielded a wooden chamber in which was interred a male warrior, armed with a long sword, dagger, composite bow, axe, spear, and pieces of cuirass armor.

The elite status of the warrior is prominently demonstrated not only by a golden 'torque' neck ring, gold ankle buckles, and a tall, gilded hat indicative of Sargat traditions, but also by two gold belt buckles worn at the waist. The decorative style and the scenes of panthers grappling with an intertwined dragon-like serpent all are imitative of the ornamental bronze plaques of belts worn by elites of the Xiongnu Empire. Yet these gold plaques bear turquoise inlays and are cast in the Chinese technique of lost-wax-lost-textile.[47] Such belt ornaments demonstrate a mix of techniques, styles, and motifs from China, Inner Asia, and Central Asia within single objects brandished by high elites of the Sargat realms.

The Sidorovka burial assemblage as a whole exemplifies a similar combination of elements from throughout Eurasia, of goods from various regions to the south, east, and west of the Middle Irtysh. Accompanying several local-style ceramic pots with incised décor were two steppe-style round-belly bronze cauldrons (the larger one with horse and sheep/goat portions for feasting) and a flat-sided flask-shaped ceramic pot more common in areas of Central Asia yet incised with a large star design typical of Sargat pottery.[48] Even more exotic wares in the grave include the fragments of a Chinese lacquered vessel, likely a box, at the feet of the deceased, as well as a spherical silver receptacle and a hemispherical silver bowl.

Among the weaponry was found an exotic mosaic glass 'eye-bead,' of the kind made in Persia and the Mediterranean yet with wide distribution throughout the Eurasian steppes. Along with horse-riding gear were found two exceptional silver phalerae of 'Graeco-Bactrian' style depicting a composite feline beast with wings coiled around the pieces. Although the beastly image is not as 'Hellenistic' in its theme and motifs as silver phalerae found in several other ostentatious graves of steppe elites, its presence among the horse décor links this Sargat elite to other high elites in the broader Eurasian steppes.[49]

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44 Parzinger 2006, 715.

45 Parzinger 2006, 715–724; Koryakova and Epimakhov 2007, 298 ff.

46 Matiushchenko and Tataurova 1997.

47 Linduff and Rubinson 2010; Brosseder 2011, 372–380.

48 Matiushchenko and Tataurova 1997. Interestingly, the same combination of steppe-style bronze cauldron and ceramic flask-pot is also found in the female 'nomad' burial of Kok-Tepe, close to Samarkand (Rapin, Isamiddinov, and Khasanov 2001).

49 Matiushchenko and Tataurova 1997, 141 fig. 19; Mordvintseva 2001, 36–37; Treister 2012; 2016.

Similar richly furnished graves were excavated at nearby Isakovka, though the full contents and contexts of the findings have not yet been published.[50] Nevertheless, the array of exotic goods there further indicates the globalized nature of prestige assemblages of the Sargat elites. Gold and turquoise-inlaid belt plaques similar to those at Sidorovka, and thus also to those in the realms of the Xiongnu Empire, were worn by the elite in the Isakova burial. Whereas the belt plaques at Sidorovka were clearly imitative of Xiongnu belts, the ones at Isakovka were emulative of Xiongnu belt-plaque form and animal-combat themes, depicting scenes of a stag-horned composite beast grappling a camel; yet these specific scenes are not found on belts in Xiongnu realms, and their manufacture signals a combination of Chinese-derived techniques with central-Eurasian-Steppe decorative aesthetics.

Grave inventories included a red lacquered dagger sheath and a dagger with a Chinese-style nephrite hilt as well as a Chinese bronze vessel.[51] But it is the three silver inscribed service vessels that provide the greatest demonstration of participation in continental-scale Eurasian networks of exchange and interaction.[52]

One large silver service vessel is an Achaemenid Persian-style platter-bowl, with lobes around the underbody and an Aramaic inscription stating it to be a "banquet bowl" commissioned by a Chorasmian king, Amurzham, as a gift for another Central Asian lord, Barzavan. Two small silver bowls bear Parthian inscriptions. One of them, with Hellenistic-style dolphins, ducks, and flowers incised on it, was a "gift" to a lord Wardak "through mediation of Ruman(?) Tik." The possession of these feasting vessels by an elite at Isakovka, vessels that had been commissioned by certain rulers for gifting to subordinate or foreign lords, is an even more pointed demonstration of how Sargat leaders were enmeshed in the kinds of diplomatic gift exchanges that were intertwined with long-distance trade and interaction spanning Eurasia.

These Sargat elites, despite their location in the northern Steppe at the edge of the Siberian taiga far away from the Central Asian routes of the so-called Silk Roads, were active participants in the matrices of Eurasian exchanges. They obtained prestigious feasting vessels that were potent articles of political dealings among elites in realms far to their south. They brandished luxurious belts that pronounced close relations with elites of the hegemonic Xiongnu Empire to their east, or perhaps even boasted status of equal power to them. One can only fully grasp these Sargat assemblages if we view the elites as well-connected nodes in a larger network linking them not only with Chorasmia and other Central Asian domains but also with Parthian, Xiongnu, and Han imperial realms. If we take other scattered foreign materials into account, such as the findings of Roman and Han coins across Sargat domains,[53] or the findings of Han Chinese bronze mirrors,[54] then we might speak of these Sargat

50 Cf. Pogodin 1998a; 1998b; Livshits 2003.

51 Mordvintseva 2001, 56 and fig. 45.6; Pogodin 1998a; 1998b; Livshits 2003; cf. also Treister 2012.

52 See Lishvits 2003 for analyses and translations of inscriptions.

53 Mogil'nikov 1992, 304; Polos'mak 1987; see also Koryakova and Epimakhov 2007, 298–311.

54 For summary and discussion of these and other mirrors, see Brosseder 2015.

elites as agents who maintained the 'weak' ties that brought these far northern realms into continental-scale exchanges.

II.3 Lower Don

Numerous elite burials of the first century CE attributed to the historical phenomenon of the Sarmatians have been documented in the Lower Don Valley and attest further to the opulent, exotic, and far-reaching nature of prestige assemblages among Eurasian steppe elites. The designation of 'Sarmatian' serves not as an ethnonym but as an umbrella term for the various steppe pastoral groups in the Pontic steppe – a term used broadly to refer to a widespread material culture, though not as overly extended as the label of Scythian.[55] One Sarmatian woman interred at Khokhlach (end first century, beginning second century CE) was accompanied by an array of gold and bronze vessels, as well as imported silver Roman vessels (fig. 2B.6), and had been dressed in highly crafted jewelry and ornaments bearing intermixed styles.[56] The headdress was adorned with steppe-style deer and ibex, yet at the center was set a Hellenistic-style female torso (fig. 2B.1), and much of the jewelry was made with a gold-and-turquoise decorative technique seen at Tillia Tepe and other areas of Central Asia.[57]

Kurgan 10 at the cemetery of Kobiakovo (late first century CE), located along the lower Don River and close to Rostov na-Donu, contained a richly furnished wooden chamber covered in birch bark with a woman aged 25 to 30 interred according to local burial practices.[58] Similar to Khokhlach, the vessel assemblage was a combination of local pottery and Roman metal vessels, and the woman wore opulent status symbols with Central Asian decorative techniques typical for female elites of that region: a golden diadem and headdress, golden bracelets, and a ring, all in gold-and-turquoise style, as well as small gold-foil appliqués on her clothing. Close to her body was also found a complete Chinese bronze mirror (fig. 2A.4). Although the interment of mirrors was a common practice in Sarmatian burials, female graves of the upper elite in the Pontic steppe contain mirrors of Roman, Central Asian, or even Chinese origin more often than local Sarmatian mirror pendants. Burials of the lesser elite contain more Sarmatian mirrors, and sometimes Roman mirrors, while Chinese mirrors are rare. However, in these lesser elite graves appear another category of conglomerate objects intermixing local forms and foreign decorative styles – a standard disk with handle protrusion typical of Sarmatian mirrors, with symbols borrowed from imported Chinese mirrors placed within the framework.[59] Similarly, in Khapry, a belt plaque de-

55 Cf. Mordvintseva 2013.
56 Zasetskaia 2011.
57 Zasetskaia 2011.
58 Prokhorovka and Guguev 1992; Guguev 1992; fig. 2A.1.
59 Guguev and Treister 1995.

Fig. 2: Remains from the Lower Don: 2A: Kobiakovo, kurgan 10: 1. wooden grave chamber, 2. gold diadem with turquoise inlay, 3. golden arm clasps, 4. Chinese siru mirror, 5. local pottery, 6. ram vessel (after Prokhorova and Guguev 1992; L'or des Amazones). 2B: Khokhlach, selected objects: 1. gold diadem, 2–3. neckring and armrings, both in gold decorated with turquoise inlay and animal style, 4. golden viale with animal style and turquoise inlays, 5. golden cup with deer handle, 6. Roman cup (after Zasetskaia 2011).

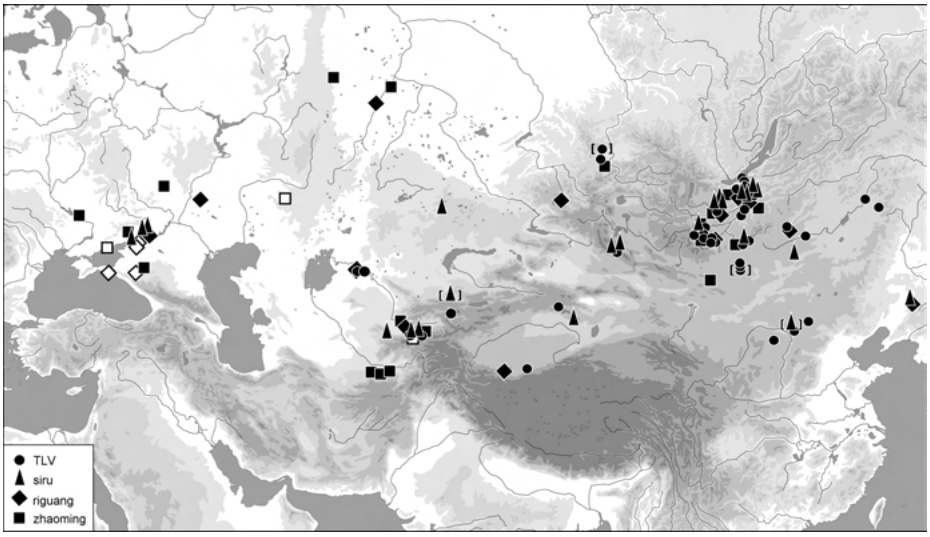
picting a dragon was found which is similar to the Sidorovka ones.[60] It would seem then that whilst the more powerful regional elites of the Pontic steppe were able to procure exotic goods from the other end of Eurasia, the lesser local elites were relegated to foreign objects from neighboring regions (i.e., the Roman Empire) or attempted to participate in global expressions of prestige through the creation of foreign-inspired local products.

III Configurations of Global Prestige

Over the course of the first millennium BCE, regional steppe elites exploited foreign cultural symbols for local material gains.[61] By the turn of the millennium, a degree of intercontinental material cultural flows had emerged that far superseded previous exchanges and consumptions of exotica.[62] This may be seen in the numerous cross-cultural items, styles, and motifs shared between distant or even remote groups across Eurasia. These material components were subjected to highly varied patterns of distribution, selection, and consumption and were accompanied by a persistence of local mortuary practices and pottery traditions. Nevertheless, they demonstrate the emergence of an entangling and extensive 'global'-scale vocabulary of prestige that reached far beyond mere neighboring groups.

Elements of global prestige were most prevalent in personal ornamentations and feasting accoutrements, material arenas readily suited to conspicuous consumption and the costly signaling of prestige.[63] Service vessels included an array of Chinese lacquered cups and bowls, Parthian silver bowls, or Roman silver cups and tended to come from more nearby regions – e.g., Chinese cups in Mongolia and Roman cups in the Pontic steppe. However, the sources of exotic vessels were not completely limited by proximity, as exemplified by Roman glass bowls in Mongolia and Chinese lacquered wares in far western Eurasia.[64] In addition, some vessels were not merely imports but rather local versions of foreign items, such as the spouted pot from Khökh Üzüürin Dugui, which emulated a form of Chinese vessel found in other Xiongnu tombs yet in this case made in a style resembling steppe cauldrons (fig. 1B.3). These exotic vessels almost always appeared alongside local-style storage, cooking, or even service vessels. In addition to items from the agrarian civilizations at the fringes of Eurasia, feasting assemblages among the steppe elites frequently included large, rounded metal cauldrons with broad handles – items that had already become wide-

60 Cf. Brosseder 2011, 378–379 figs. 27–28.
61 Cf. Prestholdt 2008, 33.
62 Cf. Appadurai 1990.
63 Plourde 2009.
64 E.g., Erdenebaatar et al. 2011; Prüch 2013.



Map 2: Distribution of Chinese mirrors in Eurasia indicating diverse connectivities: various imported types (full symbols) and local imitations of them (open symbols) (after Brosseder 2015).

spread among steppe groups during the first millennium BCE and continued to assert cultural affinities with central Eurasia.

Similar to feasting vessels, personal trappings of the steppe elites consisted of exotic imports as well as local adaptations that drew upon foreign elements. Steppe elites donned imported items, such as gilded-glass, faience, and mosaic glass 'eye-beads,' in addition to opulent composite adornments, like the gold headdresses of Sarmatians, the gold belt plaques of Sargats, and the precious-metal horse gear with fantastical beasts in elite Xiongnu burials, all of which combined styles, motifs, and techniques of magnificence from several cultural traditions to create objects, as well as assemblages, of a 'global' nature for local consumption.[65]

But not all materials spread in the same manner across Eurasia, nor were they consumed in the same fashion. Some artifacts, like Chinese mirrors, were disseminated in the form of whole imports, local copies, or emulations, and even incorporations of certain styles or symbols into local equivalent objects.[66] Although some styles of Chinese mirror pervaded most areas of the northern steppes, some regions demonstrate a propensity toward particular styles (map 2). In addition, while Chinese mirrors were interred whole in tombs of the Han Empire, they were almost always fragmented in Xiongnu tombs, and yet most often (along with Central Asian mirrors) interred whole in Sarmatian graves. These patterns intimate an abundant variety

65 Miller and Brosseder 2013.

66 Brosseder 2015; Lai 2006; Khavrin 2011; Guguev and Treister 1995; Yao 2012.

of local consumption patterns throughout Eurasia according to local practices and predilections,[67] rather than flows of items across and into steppe communities governed by the demands of dominant agrarian empires. Although cross-cultural items and ideas spread far and wide, they did not pervade equally, nor were they consumed in equal fashion.

The significant quantity of prestige goods that either merely emulated whole foreign objects or incorporated only particular components of them draws attention to a recurring pattern of conglomerate objects inspired by exotic elements. Although material entanglements are often seen as yielding 'hybrid' objects,[68] constructs of hybridity often retain potent connotations of direct interfaces and of negotiations between cultural groups in imbalanced relationships.[69] Such circumstances of so-called culture contact did not occur in the cases of Chinese styles on artifacts in the Pontic steppe or Hellenistic styles on artifacts in the Mongolian steppes.[70] Conglomerate objects may also be products not of the mediations between cultures so much as the appropriations of foreign materials, styles, and techniques for the creation of items that both adhered to local tastes and flaunted exotic components, in turn evoking the very potent symbolism of connection to 'others,' even if unknown or remote.[71]

We see the above-discussed intermixed belt plaques, headdresses, vessels, and mirror amulets less as hybridized objects of cultural mediations and more broadly as glocalizing objects of cultural appropriations – i.e., global elements reapportioned, reconstituted, and recontextualized within local material objects and assemblages. We argue here that such processes of material entanglement across long distances were instrumental in local social politics and indicative of the engagements with and exploitations of global networks by local elites.[72] We see in these artifacts an intermixed incorporation of a cornucopia of widely dispersed goods and styles from which various elite constituencies drew, not as if from a single 'global' culture,[73] but from the same deep pot of broadly distributed and consumed elements of material culture stemming from numerous regions across Eurasia. The composite assemblages represented not so much a salient social or political *affiliation*,[74] but rather a salient economic, and perhaps to some degree political, *participation* by various steppe elites even as far north as the Sargats in the profitable long-distance networks of Eurasian exchange. Furthermore, we see this broad span of steppe elites not as fringe participants at a seeming frontier of the matrices of exchange, but rather as constituting

67 Cf. Stahl 2002.
68 Stockhammer 2013.
69 Liebmann 2013.
70 Cf. Yao 2012.
71 Stahl 2002; Helms 1993.
72 Thomas 1991; Stockhammer 2013.
73 See arguments in Hannerz 1989; Featherstone 1990; Smith 1990.
74 Schortman 1989.

active 'weak tie' nodes that brought whole other northern regions into the continental network.

By presenting the extreme variety of glocalized material assemblages among steppe elites of different regions, we aim to emphasize the diverse and assertive nature of local expressions of prestige that in turn reflect the very active role of distinct regional powers in the long-distance interregional exchanges that spanned the Eurasian continent.

IV Bridging Elites: Global Connectivity in a Disjunctive Small World

Approaches to pan-Eurasian connectivity in the vein of 'Silk Roads' continue to tempt us to view global flows as systems of exchange structured around juggernaut empires and their goods found scattered across the Eurasian continent. Yet these approaches gloss over steppe groups and the significant and active roles that these people played in the formation and maintenance of global pan-Eurasian networks. We should remain wary of relegating the vast regions and diverse powers of the northern steppes to the roles of sociocultural 'laggers' adopting materials and techniques that are diffused from 'innovator' cultures,[75] or peripheral groups that passively received goods from agrarian civilizations and acted as mere cultural transmitters between dominant 'centers' of East and West. We propose instead to decenter the understanding of globalization dynamics in ancient Eurasia through the adoption of a networks approach that allows for connectivities and flows of goods, technologies, and ideas across multiple agents and avenues. We explain global networks not as systems structured by core civilizations that extend avenues of exchange into the Eurasian interior but as 'disjunctive' configurations[76] of distinct sociocultural spheres held together by bridging 'weak' ties[77] that facilitate shorter social paths of transmission and communication and thereby engender colloquial 'small worlds'[78] of global interconnectivity. A large-scale network with short paths of flow often consists of dense groups of intense interaction and strong social ties that are in turn linked by critical nodes, within each group, that extend bridging weak ties between these groups.[79]

Over the course of the first millennium BCE, numerous regional powers developed in the Eurasian steppes and at times generated influential regional political entities with complex intraregional socioeconomic interactions.[80] By the turn of the millenni-

75 *Sensu* Wejnert 2002.
76 Appadurai 1990.
77 Granovetter 1973.
78 Watts and Strogatz 1998.
79 See Granovetter 1973, fig.2.
80 Parzinger 2006; Koryakova and Epimakhov 2007.

um, in order to inflate their power, elite factions of these distinct regions began to express prestige largely through a conglomerate of objects and symbols combined not only from local and neighboring groups but also from far-distant cultures. Their use of the 'global' vocabulary pronounced their participation in the far-reaching network, a participation that established paths of 'weak ties' from their own local areas and through neighbouring regions into far-distant ones that spanned the continent. Although the exact configurations of prestige varied regionally, and seemingly singular cultural entities may in fact have retained noticeable diversity within,[81] the material elements of prestige, whether whole objects or individual components, exhibited striking similarities between groups definitively not in contact, as well as a remarkable distance and intensity of the flows of such elements. In citing the notion of weak ties that facilitate a small world, we purport that steppe elites like those illustrated here functioned simultaneously as regional ruling factions amongst tightly knit groups and as bridging entities between disparate groups in Eurasia. In this fashion, their emphasis on exotic sources of wealth propelled the expansion and escalation of long-distance exchanges for their own local benefits, and they should hence be recognized as driving forces of archaic globalization in Eurasia.

Pan-Eurasian spreads of cross-cultural materials at the turn of the millennium have most often been thought of as occurring through trade, raid, or diplomacy between agrarian civilizations and neighboring steppe nomads.[82] Yet dichotomous and imbalanced 'steppe-and-sown' reconstructions do not sufficiently explain the flows of materials deep into the steppe regions or far across the continent between cultures not in contact. Historical records of Chinese social and economic expansions into Central Asia during this era do not present a narrative of the conquests of markets so much as the negotiations with powerful regional leaders that ruled over the steppes and exerted power over the oasis routes.[83] It was primarily through such regional powers, whether by force or by diplomacy, that agrarian empires such as the Chinese were able to gain access to and fully exploit long-distance paths of exchange that spanned the continent. These 'paths' – which in this sense were more socioeconomic in nature than physical (silk) roads – were fostered as much by the agendas of steppe regional elites as they were by entities of the peripheral agrarian empires.

Regional steppe elites were thus critical catalysts and mechanisms behind the far-reaching flows of materials and the associated globalization of prestige systems across Eurasia. They acted as connecting nodes through which global exchanges extended across varied regions of Eurasia and facilitated both cross-continental flows and local disseminations into social substrata. Stemming from the notion that these flows were more a consequence of local culture politics than interregional commerce,[84] we argue

81 E.g., Miller 2011; Mordvintseva 2013.

82 Yu 1967; Barfield 1981; Koryakova 2000.

83 Loewe 1979.

84 Brown 2014.

that exotic cross-cultural elements were instruments of prestige and alienable social capital in complex networks of social interaction and long-distance connectivity among disparate steppe elites. The transmissions and consumptions of exotic materials thus fed coeval processes of local power politics and global socioeconomic interconnectivity.

The focus in this chapter on several far-distant groups and broad-sweeping spreads across Eurasia serves to demonstrate that the cross-continental transferral of goods and ideas was not a design of the agrarian states on the fringes, nor was it a result of culture contact merely between the steppe and the sown. Global flows, which clearly extended beyond the so-called Silk Roads and deep into the steppe regions (map 1), were more a product of numerous local agents (or nodes) within Eurasia. The global networks through which these flows occurred were maintained by steppe elites as critical nodes, the bridging 'weak' ties that linked different spheres and held together the overall web of connectivity. For as quickly as this web of heightened cross-continental flows emerged, it appears to have collapsed by the second century CE, when the prominent bridging sociopolitical ties began to dissipate, leaving circulations to individual cultural spheres or circumstances of more direct culture contact. The considerations of archaeological remains presented here are but preliminary examinations of the agents of globalization in Eurasia within a framework of networks thinking. What remains is a more intricate networks analysis, or networks synthesis,[85] that would elucidate the social avenues of transmission and paths of connectivity.

References

Abu-Lughod, J. 1989. *Before European hegemony: The world system AD 1250–1350*. Oxford: Oxford University Press.

Amitai, R. and M. Biran, eds. 2014. *Nomads as agents of cultural change: The Mongols and their Eurasian predecessors*. Honolulu, HI: University of Hawai'i Press.

Appadurai, A. 1990. "Disjuncture and difference in the global cultural economy." *Public Culture* 2.2, 1–24.

–. 2000. "Grassroots globalization and the research imagination." *Public Culture* 12.1, 1–19.

–. 1996. *Modernity at large: Cultural dimensions of globalization.* Minneapolis, MN: University of Minnesota Press.

Barfield, T. J. 1981. "The Hsiung-nu imperial confederacy: Organization and foreign policy." *The Journal of Asian Studies* 41.1, 45–61.

Brosseder, U. 2011. "Belt plaques as an indicator of East–West relations in the Eurasian steppe at the turn of the millennia." In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 349–424. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

–. 2015. "Dynamics of communication and exchange along the 'steppe highway' in the centuries around the turn of the era." In J. Bemmann and M. Schmauder (eds.), in collaboration with U. Brosseder

85 Sindbæk 2013.

and T. Stickler, *The complexity of interaction along the Eurasian steppe zone in the first millennium AD*, 199–332. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

Brosseder, U. and B. K. Miller. 2018. "Global networks and local agents in the Iron Age Eurasian steppe." In N. Boivin and M. D. Frachetti (eds.), *Globalization in prehistory: Contact, exchange, and the 'people without history*,' 162–183. Cambridge: Cambridge University Press.

Brown, P. 2014. "The Silk Road in late antiquity." In V. H. Mair and J. Hickman (eds.), *Reconfiguring the Silk Road: New research on East–West exchange in antiquity*, 15–22. Philadelphia, PA: University of Pennsylvania Museum of Archaeology and Anthropology.

Chin, T. 2013. "The invention of the Silk Road, 1877." *Critical Inquiry* 40.1, 194–219.

Christian, D. 2000. "Silk Roads or Steppe Roads? The Silk Roads in world history." *Journal of World History* 11.1, 1–26.

Cusick, J. G., ed. 1998. *Studies in culture contact: Interaction, culture change, and archaeology*. Carbondale, IL: Southern Illinois University Press.

Erdenebaatar, D., T. O. Iderkhangai, B. Galbadrakh, E. Minzhiddorzh, and S. Orgilbaiar. 2011. "Excavations of satellite burial 30, tomb 1 complex, Gol Mod 2 necropolis." In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*. Bonn Contributions to Asian Archaeology 5. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität, 303–314.

Featherstone, M. 1990. Global culture: An introduction. *Theory, Culture and Society* 7.2, 1–14.

–. 2006. "Genealogies of the global." *Theory, Culture and Society* 23.2–3, 387–419.

Frank, A. G. 1993. "Bronze Age world system cycles." *Current Anthropology*, 34.4, 383–405.

Galaty, M. L. 2011. "World-systems analysis and anthropology: A new détente?" *Reviews in Anthropology* 40.1, 3–26.

Granovetter, M. S. 1973. "The strength of weak ties." *American Journal of Sociology* 78.6, 1360–1380.

Guguev, V. K. 1992. "Kobiakovskii kurgan (k voprosu o vostochnykh vliianiiakh na kul'turu sarmatov I v. n. e. – nachala II v. n. e.)." *Vestnik drevnei istorii* 4, 116–129.

Guguev, V. K. and M. Treister. 1995. "Khanskie zerkala i podrazhaniia im na territorii iuga Vostochnoi Evropy." *Rossiiskaia Arkheologiia* 1995.3, 143–156.

Hannerz, U. 1989. "Notes on the global ecumene." *Public Culture* 1.2, 66–75.

–. 1990. "Cosmopolitans and locals in world culture." *Theory, Culture & Society* 7, 237–251.

Hansen, V. 2012. *The Silk Road: A new history*. Oxford: Oxford University Press.

Helms, M. W. 1993. *Craft and the kingly ideal: Art, trade, and power*. Austin, TX: University of Texas Press.

Hill, J. E. 2009. *Through the jade gate to Rome: A study of the silk routes during the later Han dynasty, 1st to 2nd centuries CE*. Charleston, SC: Book Surge.

Hodos, T. 2014. "Stage settings for a connected scene: Globalization and material-culture studies in the early first millennium BCE Mediterranean." *Archaeological Dialogues* 21.1, 24–30.

Honeychurch, W. 2014. "From Steppe Roads to Silk Roads: Inner Asian nomads and early interregional exchange." In R. Amitai and M. Biran (eds.), *Eurasian nomads as agents of cultural change.* Honolulu, HI: University of Hawai'i Press, 50–87.

Jennings, J. 2006. "Core, peripheries and regional realities in Middle Horizon Peru." *Journal of Anthropological Archaeology* 25, 346–370.

Juliano, A. L. and J. A. Lerner. 2001. *Monks and merchants: Silk Road treasures from Northwest China*. New York, NY: Harry N. Abrams.

Khavrin, S. V. 2011. "Metal of the Xiongnu period from the Terezin cemetery, Tuva." In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 537–538. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

Knappett, C. 2011. *An archaeology of interaction: Network perspectives on material culture and society*. Oxford: Oxford University Press.

–. 2017. "Globalization, connectivities and networks: An archaeological perspective. In T. Hodos (ed.), *The Routledge handbook of archaeology and globalization*, 29–41. New York, NY: Routledge.

Kohl, P. L. 1987. “The use and abuse of world systems theory: The case of the pristine West Asian state.” *Advances in Archaeological Method and Theory* 11, 1–35.

–. 2008. “Shared social fields: Evolutionary convergence in prehistory and contemporary practice.” *American Anthropologist* 110.4, 495–506.

Koryakova, L. 2000. “On the northern periphery of the nomadic world: Research in the Trans-Ural region.” In J. Aruz (ed.), *The golden deer of Eurasia: Perspectives on the steppe nomads of the ancient world*, 102–113. New Haven, CT: Yale University Press.

Koryakova, L. and A. Epimakhov. 2007. *The Urals and Western Siberia in the Bronze and Iron Ages.* Cambridge: Cambridge University Press.

Kovalev, A. A., D. Erdenebaatar, and T. O. Iderkhangai. 2011. “An unlooted elite Xiongnu barrow at Khökh Üzüüriin Dugui-II, Bulgan sum, Khovd aimag, Mongolia: Relative chronological dating and its significance for the study of Xiongnu burial rites. In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 291–302. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

Lai, G. 2006. “The date of the TLV mirrors from the Xiongnu tombs.” *The Silk Road* 4.1, 36–44.

Liebmann, M. 2013. “Parsing hybridity: Archaeologies of amalgamation in seventeenth-century New Mexico.” In J. J. Card (ed.), *The Archaeology of hybrid material culture*, 25–49. Carbondale, IL: Southern Illinois University Press.

Linduff, K. M. and K. Rubinson. 2010. “Exchange of metallurgical technology, objects and people in Eurasia in the late 1st millennium BCE–early 1st millennium CE. In V. A. Alyokshin (ed.), *Drevnie kul’tury Evrazii: Materialy mezhdunarodnoi nauchnoi konferentsii, posviashchennoi 100-letiiu dnia rozhdeniia A. N. Bernshtama*, 172–182. St. Petersburg: Institut Istorii Material’noi Kul’tury RAN.

Liu, S., Q. H. Li, F. Gan, P. Zhang, and J. W. Lankton. 2012. “Silk Road glass in Xinjiang, China: Chemical compositional analysis and interpretation using a high-resolution portable XRF spectrometer.” *Journal of Archaeological Science*, 39, 2128–2142.

Livshits, V. A. 2003. “Three silver bowls from the Isakovka Burial-Ground No.1 with Khwarezmian and Parthian inscriptions.” *Ancient Civilizations from Scythia to Siberia*, 9.1–2, 147–172.

Loewe, M. 1979. “Introduction.” In A. F. P. Hulsewé (ed.), *China in Central Asia: The early stage: 125 BC–AD 23*, 1–70. Leiden: Brill.

L’or des Amazones. 2001. *L’or des Amazones. Peuples nomads entre Asie et Europe VIe siècle av. J.-C. – IVe siècle apr. J.-C.* Paris: Éditions Findakly.

Lubo-Lesnichenko, E. I. 1994. *Kitai na shelkovom puti: Shelk i vneshnie sviazi drevnego i rannesrednevekovogo Kitaia.* Kul’tura narodov Vostoka. Moscow: Vostochnaia literatura.

Mair, V. ed. 2006. *Contact and exchange in the ancient world.* Honolulu, HI: University of Hawai’i Press.

–. 2014. “Introduction.” In V. Mair and J. Hickman (eds.), *Reconfiguring the Silk Road: New research on East–West exchange in antiquity*, 1–4. Philadelphia, PA: University of Pennsylvania Museum of Archaeology and Anthropology.

Malkin, I. 2011. *A small Greek world: Networks in the ancient Mediterranean.* Oxford: Oxford University Press.

Matiushchenko, V. I. and L. V. Tataurova. 1997. *Mogil’nik Sidorovka v Omskom Priirtysh’e.* Novosibirsk: Nauka.

Miller, B. K. 2011. “Permutations of peripheries in the Xiongnu Empire.” In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 559–578. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

Miller, B. K. and U. Brosseder. 2013. “Beasts of the north: Global and local dynamics as seen in horse ornaments of the steppe elite.” *Asian Archaeology* 1, 94–112.

Miller, B. K. and U. Brosseder. 2017. “Global dynamics in local processes of Iron Age Inner Asia.” In T. Hodos (ed.), *The Routledge handbook of archaeology and globalization*, 470–487. New York, NY: Routledge.

Miller, B. K., Z. Bayarsaikhan, T. Egiimaa, P. B. Konovalov, and J. Logan. 2009. “Elite Xiongnu burials at the periphery: Tomb complexes at Takhiltyn Khotgor, Mongolian Altai.” In J. Bemmann,

H. Parzinger, E. Pohl, and D. Tseveendorzh (eds.), *Current archaeological research in Mongolia: Papers from the First International Conference on "Archaeological Research in Mongolia" held in Ulaanbaatar, August 19th–23rd, 2007*, 301–314. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

Miller, B. K., Z. Bayarsaikhan, T. Egiimaa, P. B. Konovalov, E. Johannesson, M. Machicek, J. Logan, and C. Neily. 2011. "Shombuuzyn Belchir dekh Khünnügiin dursgal." *Nüüdelchdiin öv sudlal* 11, 156–183.

Mogil'nikov, V. A. 1992. "Khunnu Zabaikal'ia." In: M. G. Moshkova (ed.), *Stepnaia polosa Aziatskoi chasti SSSR v skifo-sarmatskoe vremia*, 254–273. Moscow: Nauka.

Mordvintseva, V. I. 2001. *Sarmatische Phaleren*. Rahden/Westfalen: Marie Leidorf.

–. 2003. *Polikhromnyi zverinyi stil'*. Simferopol': Universum.

–. 2013. "The Sarmatians: The creation of archaeological evidence." *Oxford Journal of Archaeology* 32.2, 203–219.

Morris, I. 2006. "Mediterraneanization." *Mediterranean Historical Review* 18.2, 30–55.

Mullins, P. R. 2011. "The archaeology of consumption." *Annual Review of Anthropology* 40, 133–144.

Navaan, D. 1999. *Khünnügiin öv soyol: arkheologiin sudalgaany material*. Ulaanbaatar: Institute of Archaeology MAS.

Östborn, P. and H. Gerding. 2014. "Network analysis of archaeological data: A systematic approach." *Journal of Archaeological Science* 46, 75–88.

Parzinger, H. 2006. *Die frühen Völker Eurasiens: Vom Neolithikum bis zum Mittelalter.* Munich: Beck.

Plourde, A. M. 2009. "Prestige goods and the formation of political hierarchy: A costly signaling model." In S. Shennan (ed.), *Pattern and process in cultural evolution*, 265–276. Berkeley, CA: University of California Press.

Pogodin, L. I. 1998a. "Lakovye izdeliia iz pamiatnikov Zapadnoi Sibiri rannego zheleznogo veka." In N. P. Dovgaliuk (ed.), *Vzaimodeistvie sargatskikh plemen s vnezhnim mirom: sbornik nauchnykh state*, 26–38. Omsk: Omsk National University.

–. 1998b. *Vooruzhenie naseleniia Zapadnoi Sibiri rannego zheleznogo veka.* Omsk: Omsk National University.

Polos'mak, N. V. 1987. *Baraba v epokhu rannego zheleza.* Nobvosibirsk: Nauka.

–. 2006. *Tekstil' iz "Zamerzshikh" mogil Gornogo Altaia IV–III do n. e. (opyt mezhdistsiplinarnogo issledovaniia).* Novosibirsk: Sibirskiy otdeleniiy RAN.

Prestholdt, J. 2008. *Domesticating the world: African consumerism and the genealogies of globalization.* Berkeley, CA: University of California Press.

Prokhorovka, T. A. and V. K. Guguev. 1992. "Bogatoe sarmatskoe pogrebenie v kurgane 10 Kobyakovskogo mogil'nika." *Sovetskaia Arkheologiia* 1, 142–161.

Prüch, M. 2013. "Die Lackkästchen aus der Grabung von Ust'-Al'ma." In S. Müller and M. Schmauder (eds.), *Die Krim: Goldene Insel im Schwarzen Meer. Griechen – Skythen – Goten*, 42–51. Darmstadt: Primus.

Pulleyblank, E. G. 1999. "The Roman Empire as known to Han China." *Journal of the American Oriental Society* 119.1, 71–79.

Rapin, C., M. Isamiddinov, and M. Khasanov. 2001. "La tombe d'une princesse nomade à Koktepe près de Samarkand." *Comptes-rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 145.1, 33–92.

Raschke, M. 1978. "New studies in Roman commerce with the East." In H. Temporini (ed.), *Aufstieg und Niedergang der römischen Welt*. Part 2, vol. 9.2, 604–1363. Berlin: De Gruyter.

Renfrew, C. and J. F. Cherry, eds. 1986. *Peer polity interaction and socio-political change*. Cambridge: Cambridge University Press.

Robertson, R. 1995. "Glocalization: Time–space and homogeneity–heterogeneity." In M. Featherstone, S. Lash and R. Robertson (eds.), *Global modernities*, 25–44. London: Sage.

Rudenko, S. I. 1970. *Frozen tombs of Siberia: The Pazyryk burials of Iron Age horsemen.* M. W. Thompson (trans.). Berkeley, CA: University of California Press.

Schortman, E. 1989. “Interregional interaction in prehistory: The need for a new perspective.” *American Antiquity* 54.1, 52–65.

Sindbæk, S. M. 2013. “Broken lines and black boxes: Material affiliations and contextual network synthesis in the Viking world.” In C. Knappett (ed.), *Network analysis in archaeology: New approaches to regional interaction*, 71–94. Oxford: Oxford University Press.

Smith, A. D. 1990. “Towards a global culture?” *Theory, Culture and Society* 7, 171–191.

Stahl, A. B. 2002. “Colonial entanglements and the practices of taste: An alternative to logocentric approaches.” *American Anthropologist* 104.3, 827–845.

Stark, S. 2012. “Nomads and networks: Elites and their connections to the outside world.” In S. Stark, K. S. Rubinson, Z. Samashev and J. Y. Chi (eds.), *Nomads and networks: The ancient culture of Kazakhstan*, 107–138. Princeton, NJ: Princeton University Press.

Stein, G. J. 1999. *Re-thinking world systems: Diasporas, colonies, and interaction in Uruk Mesopotamia*. Tucson, AZ: University of Arizona Press.

Stockhammer, P. W. 2013. “From hybridity to entanglement, from essentialism to practice.” *Archaeological Review from Cambridge* 28.1, 11–28.

Thomas, N. 1991. *Entangled objects: Exchange, material culture, and colonialism in the Pacific.* Cambridge, MA: Harvard University Press.

Thorley, J. 1971. “The silk trade between China and the Roman Empire at its height, circa AD 90–130.” *Greece & Rome* 18.1, 71–80.

Tobin, J. J. 1992. “Introduction: Domesticating the West.” In J. J. Tobin (ed.), *Re-made in Japan: Everyday life and consumer taste in a changing society*, 1–41. New Haven, CT: Yale University Press.

Törbat, T. 2011. “A study on bronze mirrors in Xiongnu graves of Mongolia.” In U. Brosseder and B. K. Miller (eds.), *Xiongnu archaeology: Multidisciplinary perspectives of the first steppe empire in Inner Asia*, 315–326. Bonn: Vor- und Frühgeschichtliche Archäologie, Rheinische Friedrich-Wilhelms-Universität.

Treister, M. Y. 2012. “Silver phalerae with a depiction of Bellerophon and the Chimaira from a Sarmatian burial in Volodarka (Western Kazakhstan): A reappraisal of the question of the so-called Graeco-Bactrian style in Hellenistic toreutics.” *Ancient Civilizations from Scythia to Siberia* 18, 51–109.

–. 2016. “On the find of a phalera made from the medallion of a Hellenistic cup in barrow no. 20 of the Noin-Ula burial-ground (northern Mongolia).” *Ancient Civilizations from Scythia to Siberia* 22, 55–95.

Watts, D. J. and S. H. Strogatz. 1998. “Collective dynamics of ‘small world’ networks.” *Nature* 393, 440–442.

Wejnert, B. 2002. “Integrating models of diffusion of innovations: A conceptual framework.” *Annual Review of Sociology* 28, 297–326.

Whitfield, S. 2007. “Was there a Silk Road?” *Asian Medicine* 3, 201–213.

Wilkinson, T. C., S. Sherrat, and J. Bennett, eds. 2011. *Interweaving worlds: Systematic interactions in Eurasia, 7th to 1st millennia BC*. Oxford: Oxbow Books.

Wolf, E. 1982. *Europe and the people without history.* Berkeley, CA: University of California Press.

Yao, A. 2012. “Sarmatian mirrors and Han ingots (100 BC–AD 100): How the foreign became local and vice versa.” *Cambridge Archaeological Journal* 22.1, 55–70.

Yeruul-Erdene, C. 2011. “Khürel zav’ya.” In G. Eregzen (ed.), *Khünnügiin öv: Nüüdelchdiin ankhny tör-Khünnü gürnii*, 166–169. Ulaanbaatar: Institute of Archaeology MAS.

Yü, Y. 1967. *Trade and expansion in Han China: A structure in the study of Sino-barbarian economic relations*. Berkeley, CA: University of California Press.

Zasetskaia, I. P. 2011. *Sokrovishcha kurgana Khokhlach: Novocherkasskii klad*. St. Petersburg: Gosudarsvennyi Ermitazh.

Part II: **Oceans and Coasts**

Map 1: Physical geography and major centers in East Asia. © Peter Palm.

Maxim Korolkov

6 Southern Sea Ports of the Han Empire: Urbanization and Trade in Coastal Lingnan

I Introduction

The historical region of Lingnan straddles the line between East and Southeast Asia, encompassing the present-day Guangdong Province and Guangxi Zhuang Autonomous Region of China and the northern part of Vietnam. Its Chinese name, 'South of the Mountains,' alludes to the Nanling ('Southern Mountains') ranges between the Yangzi basin in the north and the Pearl River in the south (map 1). Soon after the state of Qin completed the conquest of the Middle Yangzi valley in 222 BCE, its armies crossed the Southern Mountains along the routes traveled by generations of traders and migrants who introduced the elements of Chinese culture to Lingnan during the Warring States period (453–221 BCE).[1] According to succinct written records, the Qin established three commanderies in Lingnan by 214 BCE. Seven years thereafter, the empire was falling apart, and a renegade Qin administrator in Lingnan carved out a state for himself.[2] This state, Nanyue, lasted about 100 years before it was conquered by the expanding Han Empire in 111 BCE, inaugurating the second, much longer period of imperial administration in Lingnan.

The ancient Chinese authors barely explain what drove the southward expansion of their empires. The mid-second century BCE treatise *Huainanzi* 淮南子 (*The Masters of Huainan*) mentions that the First Emperor of Qin (r. 221–210 BCE) craved southern exotica: "the rhinoceros horns, ivory, jade and pearls of Yue."[3] An oft-quoted passage from the official history of the Former Han Empire (202 BCE–9 CE), the *Hanshu* 漢書 (first century CE), hints at the possible origin of these luxuries. It describes the sea-trade route between the Lingnan ports and the distant lands that, as most scholars agree, were located in the South China Sea and Indian Ocean basins. The terminal point of the journey may have been Sri Lanka.[4]

This *Hanshu* passage is important not only as our earliest evidence for the 'maritime Silk Road,' the seaborne trade route between East Asia and the Indian Ocean. The text names three Lingnan locations, Rinan, Hepu, and Xuwen, as the starting points of this route. The precise location of Rinan remains unknown (probably some-

1 Falkenhausen 2002, 193–236; Allard 2004, 1–21; Müller 2004, 23–49.
2 *Shiji* 6.253, 113.2967–2969.
3 *Huainan honglie jijie* 18.617.
4 *Hanshu* 28B.1671; for an English translation, see Borell 2011, 64.

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where on the coast of central Vietnam), but the archaeological remains of Hepu and Xuwen have recently been identified in Guangxi and Guangdong. No other Han-period city or town, to my knowledge, is explicitly described as a sea-trade port. This raises questions about the origins and nature of urbanization on the southern maritime frontier of the Han Empire, and about the role these centers played in the regional and imperial economies. Sitta von Reden and coauthors have recently demonstrated that imperial state formation stimulated urbanism across Afro-Eurasia between 300 BCE and 300 CE, and that urbanization was one of the crucial factors of economic growth in the ancient empires.[5] Were the trade ports such as Hepu and Xuwen the product of imperial expansion, or did their development also involve indigenous and cross-regional urbanization processes not directly related with East Asian empire building? Did these ports have a distinctive economic, social, and cultural profile compared to other urban centers in the early Chinese empires? How were they integrated into the imperial economy, if at all? What role did they play in the political-economic changes that accompanied the empire's decline from the late second century CE onward and in the intensification of Afro-Eurasian connectivity networks during late antiquity?

These are the questions addressed in the present chapter. Section II defines Lingnan on the eve of Qin conquest as the crossroads of interaction spheres, configurations of which were changing as the local communities decided about their engagements with the broader world. As far as we know, these decisions were not directly influenced by any overarching political structure until 221 BCE. Section III presents written and archaeological evidence for urban development in Lingnan between 300 BCE and 300 CE. This evidence suggests several urbanization scenarios. I argue that the sea-oriented port towns of coastal Lingnan were rooted in multiple urban traditions, which shaped these centers' distinctive economic and cultural physiognomy. Section IV develops a model of the southern urban economy and discusses its place within the alternative frameworks of economic integration in southern East Asia: the centralized empire and the trade network of peer polities around the South China Sea. Finally, Section V considers the implications of urbanism on the Han maritime frontier for the political and economic reorganization of East Asia in the post-Han period and for its engagement in the Old World globalization processes.

II Lingnan in Transregional Interaction Spheres

Dynamic and complex connections between communities in Lingnan and the neighboring regions in the latter half of the first millennium BCE qualify any definition of distinct interaction zones. More often than not, the same groups were simultaneously

5 Von Reden, vol. 2, ch. 12.A, 591–629; Fabian, vol. 2, ch. 12.B, 631–646.

involved in multiple networks, some local, some longer-distance. These networks provided access to prestige goods used by the elites to enhance their status, facilitated the distribution of new weapons, military tactics, and construction techniques that enhanced communities' collective power and transformed settlement landscapes, and channeled the movements of migrants with their religious beliefs, cultural ideas, consumption habits, and production skills.

Despite the fuzziness and multidirectionality of these interactions, they took place along several communication corridors defined by the convenience of waterborne transportation. These corridors included, in the east, the coastal cabotage route between the Yangzi Delta in the north and the Pearl and Red River estuaries in the south; in the center, the southern tributaries of the Middle Yangzi, especially the Gan and Xiang Rivers, leading to the Nanling mountain passes; and, in the southwest, the Pearl and Red Rivers that connected Lingnan's coastal plains with the Yunnan-Guizhou Plateau, also known as the Southwestern Highlands (map 1).

By the middle of the first millennium BCE, these routes had been known and used for many centuries. They channeled the agricultural settlement of Southeast Asia in the third and second millennia BCE and the spread of bronze metallurgy around 1000 BCE.[6] As the growth of state power and cultural homogenization in the Sinitic world north of the Yangzi gained momentum by ca. 500 BCE,[7] the central route became the axis of military and economic expansion of one of the most powerful Sinitic states, the Chu. I refer to the contacts triggered by this expansion as the Sinitic network. Around the same time, other Lingnan communities, most noticeably in the lower Red River basin, intensified their interactions with the emerging warrior chiefdoms of the Southwestern Highlands, known in Chinese written sources as Dian 滇, Yelang 夜郎, and other groups.[8] These contacts will be discussed below as the highland network. The Chu conquests in the Yangzi valley set in motion the migrations of the so-called Yue 越 people, including those associated with the Yue polity south of the Yangzi Delta. In Chinese texts, 'Yue' is a generic term for southern non-Sinitic people who are hard to identify with any single ethnolinguistic group.[9] Here, the 'Yue network' indicates Lingnan's contacts with non-Sinitic populations of the lower and middle Yangzi basin.

II.1 The Sinitic Network

After ca. 500 BCE, the Sinitic polities, reinvigorated by state-strengthening reforms, expanded into the Yangzi valley to claim its opulent natural resources, open up agri-

6 Pigott and Ciarla 2007, 76–88; Higham 2014, 131–138; Stevens and Fuller 2017, 152–186; Higham 2021, 63–93.

7 Falkenhausen 2006, 244–288; Falkenhausen 2022, 15–51.

8 Allard 1999; Yao 2016.

9 Milburn 2010; Brindley 2015.

cultural fields, and outflank their rivals. In the west, the state of Qin conquered the Sichuan Basin in 316 BCE.[10] Around the same time, the rulers of Chu sent their troops and officials across the Yangzi River into what is now Hunan Province. They were likely driven by the quest for material supplies to provision the burgeoning Chu urban centers on the Jianghan Plain north of the Middle Yangzi – grain, timber, and metals – although strategic considerations may have also played a role. The Chu state followed in the footsteps of Chu settlers who tilled the alluvial plains around Lake Dongting from the sixth century BCE or even earlier. By the third century BCE, the Chu territorial administration encompassed the valleys of the Xiang and Yuan Rivers, the two major southern tributaries of the Middle Yangzi, although much of the surrounding uplands probably remained beyond its effective reach.[11]

Later historical tradition passed down remembrances of Chu claims to sovereignty over the entire tribal world south of the Yangzi, the "hundred Yue" (*baiyue* 百越). It is possible that the very term, which is not attested prior to the closing decades of the Warring States period, appeared as part of ethnogeographical demarcation of the Chu sphere of influence in the late fourth and third century BCE.[12]

By 300 BCE, the Chu state controlled the lower course of the Yangzi and the river corridors between the Middle Yangzi and the Nanling Mountains. All these lands came to be seen as Yue territories in the early imperial historiography. However, there is little to suggest any attempt to extend the Chu conquest and colonization into Lingnan.[13] Fortified administrative towns of Chu dotted the Yuan and Xiang River valleys, but no such settlements, nor any urban centers, have so far been identified south of Nanling. There is also no evidence for large Chu cemeteries comparable to those excavated in Hunan and the Three Gorges region. No archaeological discovery of Chu coinage has so far been reported in Lingnan, and the finds remain extremely rare even in the areas immediately north of Nanling.[14]

Yet contacts across the Nanling Mountains had a profound effect on the Lingnan communities by drawing them into exchange relations with the Sinitic societies in the north. These connections are reflected in the finds of Chu-style bronze vessels, bells, and weapons in local burials after 600 BCE. The wealthy tombs are concentrated

10 Sage 1993, 112–117.

11 For urban growth during late Spring and Autumn (771–453 BCE) and Warring States periods, see Falkenhausen 2018, 161–169; Falkenhausen 2022, 17–20. For the Chu administration in Hunan, see Korolkov 2022, 43–52.

12 For the early medieval account of the Chu effort to subjugate the "hundred Yue," see *Hou Hanshu* 86.2835. For the appearance of term *baiyue* in the late Warring States texts, see Tan 2012, 96–101; Brindley 2015, 31–32; Gao 2017, 47–51. For the possible relationship between the two, see Korolkov 2022, 98.

13 Allard 2004, 1–21.

14 For the Chu towns in the Yuan River valleys and the Chu cemeteries in Hunan and the Three Gorges, see Korolkov 2022, 45–47, 71–72. For the lack of archaeological finds of Chu coins in Lingnan, see Emura 2011, 313–372; Z. Huang 2015, 64.

along the rivers leading to the Nanling passes.[15] The richest of these tombs, such as the tomb at Songshan 松山 in Zhaoqing 肇慶 Municipality west of present-day Guangzhou (Panyu, map 1), contained imported Chu vessels of exquisite quality along with bronze bells that may have been cast locally.[16] It was argued that the elites in Lingnan used the possession of imported luxury goods to assert their superiority over rival contenders to power, and that the trade with Chu may have destabilized local society by creating opportunities for self-aggrandizing individuals to exploit their privileged access to prestige goods networks.[17]

Interactions with the north were not restricted to the top echelons of the Lingnan elite. Chu-style weapons, especially pikes and swords, became so popular in Lingnan by the late Warring States era that specimens are excavated from almost every tomb that contains bronzes.[18] Many of these weapons are likely of local manufacture, suggesting not only the successful transfer of Sinitic production techniques and preferences for weapons, but also the social conflict coinciding with integration in more extensive exchange networks.

II.2 The Highland Network

Around the same time as Chu was pushing its frontiers south of the Yangzi River, economic and social changes in the highlands of southwest China and in the plains of northern Vietnam stimulated connections along the Red River corridor. In both regions, agricultural developments, including the spread of multicropping and plowing, caused population growth, expansion of settlement, intercommunal coordination, and consolidation of social elites.[19] After the middle of the first millennium BCE, communities in the Red River Delta (also known as the Bac Bo Plain) and in Yunnan shared an elite culture manifest in the common presence of certain artifacts and iconography, most noticeably the bronze drums that, according to the later written accounts, were used in military rituals.[20]

Described by some scholars as a peer network of belligerent, raiding polities, the Red River interaction sphere encompassed multidirectional flows of people, materials,

15 Falkenhausen 2002, 193–236; Müller 2004, 23–49; Allard 2014, 807–823; Z. Huang 2015, 275–306; Allard 2017, 454–469.

16 Falkenhausen 2002, 212–219.

17 Allard 1997, 37–58; Falkenhausen 2002, 221.

18 Müller 2004, 32; Z. Huang 2015, 285–286.

19 For the maturation of the multicropping system in the Dian 滇 Culture (eighth to first century BCE) of central Yunnan, which involved the rotation of winter (wheat and barley) and summer crops (rice and millets), see Dal Martello 2020, 330–334; Dal Martello, Li, and Fuller 2021, 1–21. For the socketed bronze plowshares in Dong Son Culture (ca. 600 BCE–200 CE) burials and intensification of agriculture after 500 BCE, see Higham 2014, 207–211.

20 Kim 2015, 136–142; Carter and Kim 2017, 730–750. For the early-medieval-period Chinese accounts about the use of bronze drums to assemble war parties, see Churchman 2015, 63.

goods, and artistic styles. Murowchick and Kim suggested that the highland interactions, which involved a large part of mainland Southeast Asia, centered on the circulation of metal resources, especially the copper, tin, and lead ores needed for bronze casting.[21] It is unclear if the highlanders of southwest China and Southeast Asia engaged in direct trade or warlike interaction with the Dong Son populations in the Red River Delta. The possibility of such contacts is suggested by the later record of military expeditions from Yunnan into northern Vietnam along the Red River and, more directly, by the enormous investment of labor in the construction of multiple defensive perimeters at Co Loa at the heart of the Bac Bo Plain (around Jiaozhi, map 1).[22] As in the case of northern Lingnan, local responses to intensifying long-distance interactions included changes in settlement pattern and sociopolitical structures. In the case of the lower Red River basin, one of the crucial transformations was the emergence of a large urban center at Co Loa, which is further discussed in Section III.

Archaeological evidence for the highland network is much denser in the Red River than in the Pearl River valley. The presence of Dian-style bronze drums, weapons, tools, and jade ornaments in the late Warring States or early Former Han burials at Guogailing 鍋蓋嶺, Tiandong 田東 County in Guangxi point to certain connections with the contemporaneous chiefdoms of central Yunnan that continued into the Nanyue period (207–111 BCE). In the second century BCE, the trade between the Nanyue state, with its center in the Pearl River Delta, and another constellation of highland groups, the Yelang (in the present-day Guizhou Province of China), was important enough for a Han envoy to argue that Nanyue rulers were using their state's wealth to politically control Yelang.[23]

II.3 The Yue Network

Along with Chu-style bronze vessels, weapons, and tools, most of the burial assemblages in Lingnan include the so-called Yue-style bronzes. As pointed out by Huang Zhanyue 黃展岳, a prominent archaeologist of southern China, the Chu and Yue influences in Lingnan increased simultaneously after ca. 500 BCE and cannot be isolated from each other in the archaeological record.[24] Both resulted from the economic and military-administrative expansion of Sinitic polities in the Yangzi basin. This set in motion migrations, trade, diplomacy, and other forms of connection. The 'Yue network' refers to the interactions between the Lingnan communities, on the one hand, and non-

21 Murowchick 2001, 133–192; Kim 2015, 124–126.

22 For the military expeditions from Yunnan into northern Vietnam along the Red River route in the early medieval period, see Herman 2009, 241–286. For the Co Loa citadel, see Higham 2014, 203–204; Kim 2015, 187–226.

23 For the Guogailing burials, see Z. Huang 2015, 299–300. For the Nanyue trade with Yelang, see *Shiji* 116.2993–2995; *Hanshu* 95.3839–3840.

24 Z. Huang 2015, 296.

Sinitic populations along the Middle and Lower Yangzi and in the coastal zone between the Yangzi and the Pearl River estuaries, on the other. By the beginning of the Warring States era, some of these groups had powerful polities, particularly Wu 吳 and Yue in the Yangzi Delta, which were recognized as peers in the multistate Zhou world. However, their social organization and ritual culture differed markedly from the Sinitic societies, including Chu.[25]

Coastal navigation enabled connections along China's southeastern littoral, reflected in the cultural continuities in the coastal zone between the Lower Yangzi in the north and the Red River Delta in the south as far back as the Late Neolithic.[26] The tempo of elite culture transfers from the Lower Yangzi to Lingnan picked up after 500 BCE, when the assemblages of the so-called Yue-style bronzes make a strong appearance in the Lingnan burials. Unornamented, slender-legged Yue-style *ding* 鼎 tripods are much better represented in the Warring States-period Lingnan burials than the Chu-style tripods.[27] The Yue-style bronze objects with Lower Yangzi associations, including tripods, basins, bells, swords, and sickles, are found in tombs throughout Lingnan, down to the Red River in the south.[28]

"Narrow graves" associated with the "Yue" populations of the Middle Yangzi start to appear in Lingnan cemeteries around the middle of the Warring States period. Müller has interpreted this new type of burial as a possible marker of groups moving from the Yangzi basin to Lingnan along the Xiang River valley, which, she argues, replaced the coastal route as the primary conduit of Yue migrations.[29]

The contacts between Lingnan and the Yangzi valley, and the population displacements likely behind these contacts, intensified at the time when Chu wiped out the state of Yue in the Lower Yangzi and subjugated or expelled indigenous communities south of the Middle Yangzi.[30] Later written sources narrate the adventures of Yue leaders forced to flee their country and search for a new home beyond the reach of the Chu armies. According to one such story, preserved in a Ming-period (1368–1644 CE) collection but alluding to earlier texts, a Yue commander, Gongshi Yu 公師隅, acting on the orders of the king of Yue recently defeated by Chu, founded a walled town Nanwucheng 南武城 in the Pearl River Delta near present-day Guangzhou.

25 Falkenhausen 2006, 271–284.

26 Laptev 2011, 93–102; Brindley 2015, 62–81; Allard 2017, 456; M. Li 2018, 54–56. For the origins of seafaring in the Late Neolithic East Asia, see Rolett, Zheng, and Yue 2011, 788–797; Tan 2012, 97; Wu 2019, 3–40.

27 Z. Huang 2015, 278.

28 Falkenhausen 2002, 193–236; Müller 2004, 23–49; Wei and Shiung 2014, 77–92; Z. Huang 2015, 275–306.

29 Müller 2004, 35–38.

30 For the Chu conquest of the state of Yue in the late fourth century BCE, see Yang 2003, 364–365. For the Chu immigrants replacing aboriginal population in the river valleys of Hunan, see Falkenhausen 2006, 285–286.

Archaeology has not so far substantiated this account.[31] Yet the migration of the Yue elites from the north, the emulation of their mortuary styles by self-aggrandizing local individuals, and the possible realignment of population centers along the routes leading to the Yangzi basin highlight the transformative impact of growing connectivity on social structures and settlement organization in Lingnan.[32]

III Urbanizations in Lingnan, 300 BCE to 300 CE

The emergence of urban centers in Lingnan coincided with its conquest first by the Qin and then, a century later, by the Han Empire. Many scholars consider this conquest the principal driver of urbanization in the region. Most of the cities and towns in Lingnan were founded as the seats of imperial administration. Their excavated sites have recognizable Sinitic features, including the rectangular layout and the buildings with stamped-earth foundations and tiled roofs, some of which have been identified as government offices. The location of some of these towns matches that of the county centers as reconstructed on the basis of official histories and geographical compendia. Others probably served as military headquarters.[33]

At the same time, archaeological excavations at Co Loa in the lower Red River valley in northern Vietnam have recently established that a large, heavily fortified settlement, which at the peak of its extent covered an area of approximately 600 ha, developed two centuries prior to the Han conquest, probably as the result of indigenous socioeconomic dynamics. Some thousand kilometers to the northeast, the capital of a hybrid Sino-Yue polity of Nanyue (ca. 207–111 BCE), Panyu 番禺, had an estimated area of ca. 100 ha in the early second century BCE. Even if we discard the accounts of Nanwucheng as unreliable and attribute the origins of Panyu to the brief period of Qin occupation in 214–207 BCE, the urban formation in the Pearl River Delta had as much to do with the sociopolitical transformation in northern Lingnan in the late third and early second century BCE as with the Sinitic imperialism.[34]

The complexity of Lingnan urbanization cannot be reduced to the dichotomy of 'indigenous' and 'imperial.' In particular, 'indigenous urbanization' refers to many developments, which for the most part themselves remain poorly understood, let

31 For the written records about Nanwucheng, see Guo 2009, 165–184. For the lack of archaeological evidence on the urban settlement in the Guangzhou area prior to the Qin conquest, see Allard 2004, 8–9; L. Xu 2010, 63–74.

32 For the geography of cemetery distribution in Lingnan during the Warring States period as an indicator of changing settlement pattern, see Müller 2004, 38.

33 For one of the most up-to-date surveys of archaeological data on the urban centers in Lingnan during the early imperial period, see L. Xu 2013, 255–270.

34 For Co Loa, see Kim, Lai, and Trinh 2010, 1011–1027; Kim 2015; for Panyu, see L. Xu 2010, 63–74; 2013, 257–260.

alone the relationship between them. Also, as I have just pointed out in the case of Panyu, it is often difficult to qualify specific urbanization cases under either of the two categories. The reason I am using this terminology is because I find it adequate for describing the important distinction between the inputs of centralized empire, on the one hand, and acephalous, fluid nonimperial networks, on the other, in the economic phenomenon of southern sea ports, discussed in Section IV.

III.1 Indigenous Urbanizations

The key shared feature of the two cases of indigenous urbanization considered here is their location in the transition zones between the interaction spaces: the highlands and coastal "Yue," in the case of Co Loa, and the coastal, highland, and Sinitic spheres, in the case of Panyu. In both cases, the emergence of new forms of settlement co-occurred with intensification of cross-regional interactions, destabilization of social relations, and changes in settlement ecology. The sea-level decline between 2000 and 1 BCE, which ranged from 0.5 to 4 m along the coast of the South China Sea, accelerated the formation of the Red and Pearl River deltas. Their fertile alluvial soils were gradually reclaimed by rice farmers who advanced from the hillsides flanking the river valleys and benefited from the introduction of metal plowshares to turn over heavy alluvium. At Co Loa, 96 bronze plowshares have been recovered from a single bronze drum.[35]

While certain architectural features at Co Loa, particularly the use of roof tiles, as well as the discovery of thousands of crossbow arrowheads from an adjacent site, suggest familiarity with Sinitic technology, recent scholarship considers this fortress as part of a larger Southeast Asian pattern of prehistoric moated settlements.[36] Such sites, often characterized by circular earthworks and moats, sprang up across mainland Southeast Asia, from the central plains of Cambodia through the Khorat Plateau, in the second half of the first millennium BCE. The largest did not exceed 50 ha, an order of magnitude lower than Co Loa's area at its greatest extent, and most of them were much smaller. However, just like Co Loa, their development was probably driven by a combination of agricultural expansion and population growth; the quest for resources, especially salt and metals, stimulated by the burgeoning exchange networks that increasingly connected maritime and inland spaces; intensifying conflict between the communities, indicated by settlement fortifications and finds of weapons;

35 For the formation of the Red and Pearl River deltas, see Tanabe et al. 2003, 2345–2361; Weng 2007, 1048–1062; T. Li 2015, 199–211. For the expansion of settlement from the hillsides into the lowlands of the Red River delta during the Late Iron Age, see Higham 2014, 199; Kim 2015, 111. For the bronze drum that contained plowshares, see Kim, Lai, and Trinh 2010, 1014.

36 Kim 2015, 152–157; Carter and Kim 2017, 743. See also Stark 1998, 186–187.

and wealthy elites celebrating their status through new media of personal ornamentation, often imported from the coastal manufacturing sites.[37]

The archaeological investigation of Panyu is hampered by the dense urban development in downtown Guangzhou. The only excavated site within the ancient city is the royal palace of Nanyue, with an area of ca. 15 ha. Later sources refer to the Panyu city walls as being over 5,500 m long, suggesting a walled area of around 100 ha.[38] Despite some idiosyncratic features addressed below, the Nanyue palace was most likely modeled on those of the Han capital Chang'an. However, the city layout probably deviated from the standard rectangular or semirectangular plan of the Warring States and early imperial cities in the Central Plains. Rather, in its accommodation of the natural contours of the landscape, it is comparable to Wuyishan 武夷山, the likely capital of an indigenous "Eastern Yue" polity in central Fujian contemporaneous with Nanyue.[39]

Another unique structure in late third- and second-century Panyu is the so-called Qin-Han shipyard. The remains of a wooden dock – by some estimates, spacious enough for a seaworthy vessel 20 to 30 m long and 8 to 9 m wide, with a load-bearing capacity of 25 to 30 metric tons – were excavated in 1976 and interpreted as a military facility built by the Qin Empire to support the conquest of the coastal Yue territories.[40] Yet, according to the nineteenth-century *Gazetteer of Lianzhou Prefecture* 廉州府志, a dockyard of similar dimensions, dated to the Warring States period, was discovered during the Tongzhi 同治 reign period (1856–1875) of the Qing Dynasty on the Guangxi coast near the location of the Han-period Hepu County.[41] This suggests the possibility of an alternative scenario for the Panyu shipyard, in which it served Nanyue's interactions with peer sea-based polities, even though the Qin Empire may have been responsible for introducing iron shipbuilding tools previously unknown in Lingnan.[42]

Indeed, while the adoption of Sinitic-style administration in Nanyue is attested by the excavation of about 100 documents and fragments on wooden slips at the palace in Guangzhou, the kings in Panyu also appear to have represented themselves as the leaders of boat-faring warriors, depicted in their feather headdresses on the bronze container from the tomb of Zhao Mo 趙昧 (r. 137–124 BCE), the second king of Nanyue. This motif is well known from Dong Son drums, and the container may have

37 For the dating of circular walled settlements in Cambodia, see Dega 1999, 181–190; Haidle 2001, 195–208. For the survey of Iron Age settlement archaeology in mainland Southeast Asia, see Higham 2014, 233–265.

38 For the royal palace of Nanyue, see Institute of Archaeology, CASS, and Guangzhou Municipal Institute of Antiquity and Archaeology 2003, 110–115; Guangzhou shi wenwu kaogu yanjiusuo et al. 2007, 15–31. For the approximate length of the Panyu city walls, see L. Xu 2010, 67–68.

39 L. Xu 2010, 68–69. For Wuyishan, see Fujian bowuyuan and Fujian Minyue wangcheng bowuguan 2004; L. Xu 2013, 260–264; Brindley 2015, 106–108.

40 Höllmann 1999, 109–113; Borell 2011, 63; Quan 2012, 37–41; Brindley 2015, 98; Z. Huang 2015, 60–61.

41 J. Zhou 2002, 71–73; Tan 2012, 100.

42 Korolkov 2022, 188.

originated in Co Loa or some other location in the Red River Delta.[43] Such a visual representation tallies well with the written tradition about the Nanyue founding ruler, Zhao Tuo 趙佗 (r. 207–137 BCE) calling himself "the great and venerable chief of the Man and Yi" (that is, southern non-Sinitic people) who unified the "Hundred Yue" under his scepter.[44]

The concentration of people, resources, and production in the metropolitan centers of the lower Pearl and Red River valleys acted in synergy with the extending cultural horizons of their elites and rulers to promote further expansion of exchange circuits and globalizing tendencies, including the adoption of cosmopolitan consumption styles and cross-regionally shared leadership strategies and symbolic language of power and authority.[45] The stone structures in the royal palace in Panyu, which, some authors argued, was influenced by Egyptian, Mesopotamian, and Central Asian architecture, along with the presence in the Nanyue royal tomb of African ivory, frankincense from the Arabian Peninsula, and metal items of likely West Asian and Iranian manufacture, reveal the dramatic increase in the range of maritime connectivity, even though the contacts most likely remained indirect and irregular. The funerary assemblages of 182 tombs excavated in Guangzhou and dated to the Nanyue period consist of a mixture of Han-style and Yue-style objects and reflect the growing popularity of incense burning among the Panyu urbanites: Ceramic censers were found in 15 tombs. Scholars related this fashion, which continued through the Han era, with the availability of aromatics through trade with the coastal communities of Southeast Asia.[46]

The Red River-centered network of Dong Son communities also expanded with the emergence of Co Loa as its principal hub in the fourth and third centuries BCE. The distribution of certain tools, such as knives, chisels, and axes of the 'Yue type' with an elongated heel, suggests growing connections along the north–south axis from northern Vietnam to the Middle Yangzi via Guangdong and Guangxi.[47] However, despite the likelihood of seaborne communication between the Red and Pearl River estuaries and Co Loa's proximity to the sea coast, its elites showed little interest in

43 For the administrative documents from the Nanyue palace, see Guangzhou shi wenwu kaogu yanjiusuo and Guangzhou shi bowuguan 2006, 3–13. For the bronze container, see Prüch 1999, 152–155. For the boat-and-warrior motif in Dong Son art, see Ballard et al. 2004, 385–403; Swadling 2019, 53–57.

44 *Suishu* 31.888; *Shiji* 113.2967–2968.

45 Carter and Kim 2017, 741–744.

46 For the evidence of long-distance maritime trade from the Nanyue sites, see Erickson, Yi, and Nylan 2010, 135–168; Quan 2012, 37–41; Z. Huang 2015, 173–176; Zhang, Zhou, and Wu 2015, 127–150. For the possible involvement of the Nanyue state in overseas trade, see F. Zhou 2019, 171–216. For the Nanyue-period tombs in the Guangzhou area, see Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981, vol. 1, 23–183. For the custom of incense burning in Lingnan during the Han era, see Liang and Deng 2001, 86–91; L. Li 2010, 164–176.

47 Z. Huang 2015, 288–296.

the burgeoning stone-ornament industries of the South China Sea zone until after the Han conquest.[48] The expansion of bronze-drum culture into coastal Southeast Asia, according to the periodization suggested by Imamura, also occurred after the lower Red River passed under Han control.[49] This contrasts with the pattern of maritime exchange reflected by the archaeological record of Panyu. It seems that, despite the economic and possible military-political contacts between the two regions, their interaction networks overlapped only partly, and they were not integrated into any dominant framework, such as the South China Sea network or 'maritime Silk Road.'

III.2 Imperial Urbanization

Despite the growing evidence for urban centers in Lingnan prior to the Sinitic conquest, there is no doubt that the southward expansion of the Qin and Han empires was a crucial factor of urbanization. A recent survey identified 17 archaeologically attested towns in the territory of present-day China south of the Nanling Mountains (map 2).[50] Most of them were founded after Lingnan passed under Han control in 111–110 BCE. The administrative organization of early Sinitic empires was anchored on towns that served as seats of county and commandery governments, bases for military garrisons, and market centers where the local artisans and residents of the surrounding countryside could trade their products. As the result, when an area was incorporated into the empire, the imperial authorities immediately initiated a town-building program.

According to the official history of the Former Han Empire, in 2 CE, the imperial administration in Lingnan consisted of seven commanderies and 55 counties, meaning that there should have been at least 55 walled towns in the region at the time.[51] What many of these towns probably looked like is evinced by the excavations at Qiliwei Wangcheng 七里圩王城 in Xing'an 興安 County, Guangxi Autonomous Region. This small town with a walled area of less than 4 ha was located at the confluence of Darong 大溶 River and the Ling Canal 靈渠 built by the Qin Empire to connect the Yangzi and Pearl River systems across the Nanling. The strategic importance of this area is suggested by the presence of at least two more fortresses, including one that was possibly founded by the Qin.[52] The rectangular layout of Qiliwei Wangcheng, its powerful ramparts with corner towers circled by a 10–20 meters-wide moat, and finds of weapons, especially bronze arrowheads for crossbow bolts, point to the military function of this town, which looked over the all-important route into Lingnan. It was

48 Francis Allard, personal communication on July 2, 2022.
49 Imamura 2010, 29–44.
50 L. Xu 2013, 256–257.
51 *Hanshu* 28B.1628–1630.
52 Li, Qin, and Wang 2019, 210–218.

Map 2: Archaeologically attested towns of the Lingnan region. © Peter Palm.

built in the mid-Former Han period, soon after the Han conquests in the south, and abandoned during the early medieval period, when communication routes shifted eastward.[53]

It is not a coincidence that the majority of Han-period towns discovered in Lingnan were distributed along the northern tributaries of the Pearl River. The Han authorities funneled the movement of people, goods, and materials into the north–south corridor between the Middle Yangzi and the Pearl River basins by building infrastructure, concentrating government spending in and around administrative towns, organizing new industries, particularly iron metallurgy, and importing and distributing metal agricultural tools. The Xiang River valley, the Nanling watershed, and the northern valleys of the Pearl River system leading to the Lingqu Canal saw the highest rates of population and urban growth in southern East Asia during the early imperial period. In some areas within this zone, population increased more than sevenfold between 2 and 156 CE.[54]

53 Guangxi zhuangzu zizhiqu wenwu gongzuodui and Xing'an xian bowuguan 1998, 34–47; Qu 2003, 127; Xu 2013, 265–266.

54 For the factors of population growth in the Middle Yangzi–Pearl River corridor, see Korolkov 2022, 183–191, 232–233. For urbanization in the Xiang River valley north of the Nanling Mountains, see B. Chen 2016, 124–129. For the archaeological evidence of 'Yue' migrations from the coastal regions of Guangdong and Fujian into the Xiang, Yuan, and Gan River basins south of the Middle Yangzi during the middle and late Former Han period, see R. Liu 2019, 371–380.

At its southern end, the Middle Yangzi–Pearl River route adjoined the South China Sea coast. Several towns appeared here after the middle of the Former Han period. Their development may have to do with the temporary decline of Panyu in the wake of the Han conquest, which some scholars explain by the government's deliberate policies to reduce the regional importance of the former Nanyue capital.[55] Crossing the southeastern part of Guangxi, the Nanliu 南流 River is a natural continuation of the north–south corridor between Lingnan and the Yangzi basin. Archaeologists excavated two Han-period walled towns in its lower reaches. At Caoxiecun 草鞋村 in the present-day Hepu County of Guangxi, an urban settlement with a rectangular plan and an area of more than 10 ha was divided into residential and manufacturing areas. The latter included a large ceramic workshop that, among other things, produced roof tiles modeled on the Central Plains prototypes. Caoxiecun is believed to be the seat of Hepu Commandery. Its importance as a population center is suggested by the large cemetery cluster in the area, where more than 10,000 tombs have been identified. The settlement at Caoxiecun was discontinued after the end of the Han period.[56]

Some 15 km upstream, a much smaller town was excavated at Dalang 大浪. It was surrounded by a wall and a moat, which served as a canal leading to the river. Excavated structures include the remains of a large pole building, which has been interpreted as a government office, and a pier outside the western gates of the town. The settlement was occupied for a relatively short period in the mid-Former Han, after which it was abandoned, possibly because of the siltation of its river port. Its former residents may have partly moved to Caoxiecun.[57]

There is also some evidence for another South China Sea port, Xuwen. Based on the written sources, the town was located at the tip of Leizhou 雷州 Peninsula in southwest Guangdong, where the remains of a settlement were discovered at Erqiaocun 二橋村 in 1990. It was occupied since the mid-Former Han until the end of the Han period. The finds include burials, ash pits, wells, the remains of pole structures, and numerous roof tiles. About 300 Han tombs within present-day Xuwen County indicate the presence of a population center in this area. Some scholars have interpreted Erqiaocun as the county town and port of Xuwen founded after the Han conquest, while others remain unconvinced. Just like Hepu, this settlement was deserted at the end of the Han period, presumably due to the relocation of sea-trade routes toward the Guangzhou port.[58]

In the lower Red River valley, the Han Empire inherited the preexisting settlement pattern centered on Co Loa. After the suppression of the great Lingnan uprising

55 R. Liu 2019, 383–389.

56 Guangxi wenwu baohu yu kaogu yanjiusuo, Xiamen daxue lishixi kaogu zhuanye, and Guangxi shifan daxue wenhua yu lüyou xueyuan 2016, 50–74; Xiong 2017, 21–26.

57 Guangxi wenwu baohu yu kaogu yanjiusuo and Hepu xian bowuguan 2016, 41–49.

58 Cui 2000, 34–38; Z. Wang 2000, 51–54.

of 40–43 CE, the Han government set out on the administrative reconstruction of the Red River Delta, which probably involved the resettlement of colonists from the north. The fortified town at Luy Lâu, about 25 km northeast of Co Loa, which was most likely founded in the first century BCE and expanded in the first and second centuries CE, became the new center of Jiaozhi 交趾 Commandery. Wei Weiyan's 韋偉燕 study of the Han-period cemeteries in northern Vietnam suggests this was part of a broader change in settlement distribution, as population centers relocated to the eastern delta, which had recently formed through sedimentation and decline in the sea level.[59] According to written records, imperial authorities spearheaded land reclamation by distributing agricultural tools, probably cast in the government-managed iron foundries, and instructing locals in advanced farming methods.[60] By the end of the Later Han (25–220 CE), the settlement landscape of the Red River Delta was transformed through imperial interventions.

IV Southern ports and Their Networks: A Sea-Oriented Urban Economy at the Empire's Edge

Recent archaeological excavations in the Guangdong and Guangxi regions of China allow a glimpse of urban life in Lingnan under Han rule. Most of the evidence comes from burials. About 800 tombs were excavated in the Guangzhou area.[61] In Hepu County on the Guangxi coast, archaeologists identified more than 10,000 Han-period burials in the cemeteries around the remains of the town at Caoxiecun. Over 1,000 of these tombs have been excavated since the late 1980s.[62] Outside of China, Olov Janse undertook a survey of the Han tombs around Hanoi (Jiaozhi, map 1) in the years preceding the Second World War. He identified 13 groups of tombs and excavated several burials.[63] Tomb architecture and funerary assemblages illustrate the adoption of Han lifestyles and consumption habits in the urban centers on the Gulf of Tonkin,

59 For the suppression of the Lingnan rebellion and subsequent intensification of Han rule in northern Vietnam, see Taylor 1983, 35–37; Higham 2014, 330–332; Miyamoto 2018, 83–95. For the Jiaozhi Commandery center at Luy Lâu and the changes in the distribution of settlement in the Red River Delta during the Later Han, see Wei 2017; X. Huang 2018, 11–29.

60 *Hou Hanshu* 76.2462.

61 Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981 publishes 409 of the tombs.

62 Guangxi zhuangzu zizhiqu wenwu gongzuodui and Hepu xian bowuguan 2006; Xiong 2014, 1229–1243; Guangxi wenwu baohu yu kaogu yanjiusuo and Hepu xian wenwu guanliju 2016; Guangxi wenwu baohu yu kaogu yanjiusuo 2017.

63 Janse 1947.

which included both indigenous people and immigrants from other regions of the empire.

The tomb materials also shed light on the far-flung trade networks that the southern ports were part of. Numerous finds of stone, glass, and gold beads, as well as ceramic and bronze censers, in the Han burials around Guangzhou, Hepu, and Hanoi highlight the involvement in South China Sea trade, the importation of production techniques, and possibly the presence of artisan and merchant diasporas from Southeast and South Asia. The brief thriving of glass industry in Guangxi and the discoveries of Han objects along the South China Sea littoral shed light on the activities of export merchants, who are also mentioned in the "Periplus of the South Seas," a short text included in the official history of the Former Han Empire that describes travel routes in the South China Sea and the Indian Ocean and mentions the earliest imperial diplomatic mission to South Asia.[64] Around the same time, the changing distribution of cemeteries in the Red River Delta and the appearance of Dong Son bronze drums in insular Southeast Asia point to the increasing maritime orientation of the local communities.

Despite the evidence for the emergence of a distinctive, sea-oriented urban economy at the southern edge of the Han Empire, its supporting networks remained fragile, not least because of its weak integration into the imperial markets. The decline of Hepu and Xuwen as the principal nodes of maritime trade at the end of Han era signaled the vulnerability of early urbanization in the southern maritime zone.

IV.1 Urban Consumption

The Qin conquest of Lingnan in 214 BCE was accompanied by migrations from the north. According to the latter sources, hundreds of thousands of Qin conscripts were stationed south of the Nanling Mountains.[65] According to the Han sources, the Qin commander Zhao Tuo, who would eventually become the first king of Nanyue, petitioned the First Emperor of Qin for 30,000 unmarried women from the central regions of China to be provided as wives to his soldiers.[66] This suggests that many of these troops settled in Lingnan. The Nanyue-period burials around Panyu contain numerous Central Plains-style objects imported or modeled on the Han prototypes: bronze vessels, including tripods, steamers, and distinctive Qin-style 'garlic-headed' ewers, as well as decorated mirrors, belt hooks, seals, agricultural tools, and crossbow trigger mechanisms.[67] At the same time, the early Former Han tombs in the Guangzhou and

64 *Hanshu* 28B.1671. For translations into English, see, for example, G. Wang 2003, 16–17; Borell 2011, 64.

65 *Huainan honglie jijie* 18.617.

66 *Shiji* 118.3086.

67 Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981, 23–183.

Hepu areas also reflect the continuing presence of local customs and material culture, e.g., narrow pit burials and ceramic assemblages with local pottery types and decorative motifs.[68]

The foundation of administrative towns throughout Lingnan after the Han conquest stimulated further adoption of imperial consumption habits. The spread of new, brick-chamber tomb architecture soon after it developed in the empire's capital region at the end of Former Han signals not only shared belief and ritual systems across continental East Asia but also the spread of construction techniques that, as suggested by the settlement excavations and discoveries of clay building models, was not limited to funerary architecture.[69] In their everyday lives, the populations of Hepu and Panyu enjoyed consumption opportunities similar to those available to the wealthy urban residents elsewhere in the Han Empire, including high-fired glazed ceramics of near-porcelain quality, exquisite lacquers produced in the state-managed workshops or imitated by local artisans, and a variety of new furniture and household utensils.[70] The imperial urban lifestyles did not spread at a uniform pace. In southern Lingnan, it was not until the suppression of a massive anti-Han revolt in 43 CE that "the manufacture of the decorated drums and situlae were replaced by a range of artefacts imported from China, or at least inspired by Chinese prototypes."[71] The sweeping changes in the consumption repertoire coincided with the period of vigorous imperial administration and growth of new towns in the Red River Delta, discussed in the previous section.

The adoption of imperial consumption habits among the urban populations in Lingnan was driven by their tighter integration in the imperial economic networks that enhanced technology transfers, trade, monetization, and human mobility. For example, the technology of closed-kiln firing to sustain a high temperature for a period of time long enough for pottery glazing was introduced to Lingnan during the Han period. Most of the cast-iron items, such as knives, axes, swords, vessels, and even coffin nails, were probably imported from outside the region.[72] According to an early medieval account, by Later Han times, Hepu Commandery specialized in pearl production and relied on grain imports from Jiaozhi Commandery for its food sup-

68 Fu 2018, 26–34.

69 For the spread of brick-chamber tombs in the late Former Han and in the Later Han period, see Erickson 2010, 13–81. For the adoption of this type of burial in the Han cemeteries in Lingnan at the beginning of Later Han, see Janse 1947, vol. 1, 3–20; Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981, 307–316; Guangxi wenwu baohu yu kaogu yanjiusuo and Hepu xian wenwu guanliju 2016, 86–103; Guangxi wenwu baohu yu kaogu yanjiusuo 2017, 226–241. For the clay building models from Lingnan, see, e.g., Guangxi zhuangzu zizhiqu wenwu gongzuodui and Hepu xian bowuguan 2006, 97, 110, 127; Janse 1947, vol. 1, 41–43, plates 5, 44, 45, 73, 74.

70 Sun 2008, 91–99; S. Zhao 2014, 218–222, 241–242; Korolkov 2022, 191.

71 Higham 2014, 332–333.

72 For the introduction of pottery glazing in Lingnan, see Higham 2014, 332. For iron imports, see Lin, Zhang, and Chen 2019, 122–135; Lam et al. 2020, 1–22.

plies. Jiaozhi, in turn, became the principal trade hub for pearls and other southern exotica shipped to the north.[73] The official histories list Panyu among the major emporia that attracted merchants from the empire's central regions.[74]

The growing use of Han coins in Lingnan indicates commercial expansion during this period. The earliest evidence for bronze money in the region goes back to the brief period of Qin occupation. Ten *banliang* 半兩 coins dated to the late Warring States and imperial Qin were excavated in Xiangzhou 象州 County, Guangxi, which is located on the route from the Ling Canal into the Pearl River valley. Around 300 *banliang* and *wuzhu* 五銖 coins from the Han period were discovered at the site of Nanyue royal palace, and many more in the Nanyue-period tombs in Guangzhou. It is unclear if these were brought from the Han domains in the north or cast locally. Monetization continued to pick up after the Han conquest. According to one estimate for Guangxi, the proportion of tombs that yielded coins increased from about 26 percent in the Former Han to 38 percent in the Later Han period.[75]

The Han expansion south of the Yangzi River in the latter half of the second century BCE set in motion population movements. Although scholars have demonstrated that these migrations mostly involved local people rather than colonists from the Central Plains, the foundation of county towns entailed the arrival of Han officials, who would have played an important role in disseminating metropolitan lifestyles.[76] The proportion of these individuals in the urban population is hard to estimate. With their families and retainers, and with craftsman and merchant diasporas catering to their needs, they may have formed a sizeable and influential group whose consumer choices affected those of the rest of the town dwellers.[77]

IV.2 Sea-Oriented Economy in the Southern Ports

Notwithstanding their enthusiastic endorsement of Han consumption standards, the southern ports were home to ethnolinguistically and culturally diverse communities whose long-standing contact networks were not limited to the Han Empire.[78] The indigenous 'Yue' populations of Lingnan were experienced mariners, and the discoveries

73 Korolkov 2022, 206.

74 *Shiji* 129.3268; *Hanshu* 28B.1670.

75 For the Qin coins from Xiangzhou, see C. Liao 2019, 59–61. For the coins excavated in the Nanyue palace and possible coin casting in the state of Nanyue, see G. Li 1997, 25–29; Z. Li 2019: 21–27. For the ratio of coin-yielding tombs in Former and Later Han-period Guangxi, see S. Zhang 1997, 13–24.

76 For human migrations in southern East Asia after the Han conquest, see R. Liu 2019, 365–389; Wu et al. 2019, 6751–6781; Chittick 2020, 363–370; Korolkov 2022, 183–191.

77 Leese-Messing has recently argued that low-ranked officials were an important part of the "middling" group of urban consumers; see Leese-Messing, vol. 2, ch. 15, 789–799.

78 For cultural diversity in the archaeological record of Hepu cemeteries, and its possible ethnolinguistic interpretation, see Fu 2018, 26–34.

made in the Nanyue palace and in the tomb of the Nanyue ruler Zhao Mo indicate sporadic maritime contacts over long distances.

By the turn of the common era, the South China Sea coast from central Vietnam to the Malay Peninsula was dotted with mostly small-scale settlements whose elites participated in panregional trade in stone, glass, and gold ornaments. According to Bellina, these ornaments became a form of "political currency used for legitimization, alliance-construction strategies and stabilization of authority" across the South China Sea network.[79] On the eastern shore of the Kra Isthmus, the narrow neck of land that separates the Andaman Sea from the Gulf of Thailand, a cosmopolitan port city at Khao Sam Kaeo, with an area of over 50 ha and a substantial diaspora of South Asian craftsmen, became the major manufacturing center from the fourth century BCE onward. Its artisans produced ornaments in multiple media, including carnelian, agate, amethyst, jasper, nephrite, and other stones, as well as glass and gold. Raw materials were imported from South Asia, but also from as far northeast as Taiwan. Khao Sam Kaeo's trade network covered much of the South China Sea and extended into the Indian Ocean.[80]

Khao Sam Kaeo was a top-tier settlement in the maritime exchange network. A string of communities, much smaller yet well integrated into the circulation of South China Sea-style bead jewelry, stretched along the littoral of Thailand, Cambodia, and Vietnam. One such group used the settlement and cemetery at Lai Nghi on the central Vietnam coast. Over 10,000 beads made of gold, glass, carnelian, rock crystal, and other materials were excavated from 63 jar burials dated to the first centuries CE. The finds of Han mirrors, bronze bowls, and coins reflect contacts with China.[81]

Despite the maritime contacts of the Nanyue capital Panyu in the second century BCE, there is little to indicate that communities on the shores of Guangdong, Guangxi, and northern Vietnam actively participated in the South China Sea exchanges until the final decades of the first century BCE. Then they suddenly joined in. Around Guangzhou, the number of stone and glass beads excavated from tombs surged from 111 and 144 in the early and middle Former Han periods, respectively, to 2,849 in the late Former Han and 3,502 in the early Later Han (see table 1).[82] In Hepu, about 1,200 tombs from the Han and Three Kingdoms periods have been excavated, and about 500 published, of the total of over 10,000. Francis Allard's continuing work on these materials indicates that the number of stone beads per burial peaked dramatically ca. 30 BCE–25 CE, simultaneously with the less steep rise at the average grave size and number of artifacts per burial. According to Allard, these numbers point to a rapid expansion of maritime trade during this period, when stone beads and pendants became available to the general population of Hepu.[83] In the Red River Delta, agate,

79 Bellina 2014, 345–377; Bellina, Favereau, and Dussubieux 2019, 102–120.

80 Higham 2014, 229–233; Bellina 2017.

81 Higham 2014, 211–213.

82 Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981.

83 Allard 2022.

Tab. 1: Stone and glass beads in the Han-period tombs in Guangzhou.

	Early Former Han	Mid-Former Han	Late Former Han	Early Later Han	Late Later Han
Number of tombs	182	64	32	41	90
Number of beads	111	144	2849	3502	663[84]
Tombs with beads, %	0.5	18.7	59	39	27.8
Beads per tomb	0.6	2.25	89	85.5	7.4
Materials	glass	jade, carnelian, crystal, amethyst, amber, glass	carnelian, garnet, crystal, amber, amethyst, jade, glass	carnelian, garnet, crystal, amber, amethyst, jade, glass	carnelian, garnet, crystal, amber, amethyst, quartz, glass

carnelian, and amber beads were found in the brick chamber tombs that became the dominant form of rich burials in this region after the 40s CE.[85]

It has long been pointed out that much of the stone material used in bead manufacturing was imported from South Asia (carnelian, garnet) and as far away as the Baltic Sea (amber).[86] More recently, Lauren Glover studied the evidence for drilling techniques in the stone beads from Hepu to identify distinct workshop traditions; some of these likely indicate imports from South and Southeast Asia, while others suggest production at several local workshops.[87]

The bulb-shaped gold ornaments from the royal tomb of Nanyue is early evidence of gold jewelry imports.[88] Michele Demandt pointed out a possible connection with Prohear, one of the richest burial sites in Southeast Asia located in the lower Mekong valley in southeastern Cambodia. The extraordinarily wealthy tombs from the later phase of cemetery occupation (ca. 100 BCE–100 CE) contained a variety of gold ornaments produced with an array of new techniques, including soldering, hammering, granulation, and wire-making, which may have been introduced from Graeco-Bactria

84 According to the archaeological report, these graves were heavily looted. The number of excavated beads does not represent the original number of beads in tombs. See Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981, 453.

85 Janse 1947, vol. 1, 49–52.

86 Janse 1947, vol. 1, 50–52; Guangxi zhuangzu zizhiqu wenwu gongzuodui and Hepu xian bowuguan 2006, 135; Xiong 2014, 1229–1243; F. Zhou 2019, 208.

87 Glover 2022.

88 Quan 2012, 39.

via South Asia.[89] The same cemetery yielded bronze drums of the Heger 1 type, prominent in the Red River valley, a wealth of glass- and stone-bead decorations, and a bronze bowl with a lead isotope signature suggesting manufacture in southern China. The search for the sources of ritual innovation between the earlier and later phases of Prohear, which involved new burial orientation and forms of pottery, the practice of placing the head within a bronze vessel or drum, and an enlarged range of mortuary offerings, led scholars to Guizhou Province in southwest China, and to the hypothesis of an émigré group from Yelang moving south along the Mekong River around the time of the Han conquest at the end of second century BCE.[90] In this case, it is likely that dislocations caused by the Han expansion resulted in the opening or intensification of long-distance connections across Lingnan, the Southwestern Highlands, and Southeast Asia, which facilitated the distribution of new artisanal skills and consumer tastes.

By the turn of the Common Era, gold ornaments, especially polyhedral beads decorated with granules or filigree, techniques popular in Bactria, India, and Gandhara, made an appearance in Guangzhou, Hepu, and the Red River Delta.[91] Although it remains unclear if these ornaments were imported or, at least partly, produced locally (Hepu has been proposed as a possible production center for gold beads), the communities in the South China Sea network appear to have played a central role in transferring objects and manufacturing techniques to the southern ports of the Han Empire.[92] Exchanges increased toward the end of the Former Han period, when imported gold jewelry and its local imitations became available to the wealthy populations in the Han urban centers on the South China Sea.

The increasing occurrence of bronze and ceramic censers in coastal Lingnan in the late Former Han and Later Han periods marks the spread of incense burning and concomitant imports of fragrant substances.[93] In the first century CE, more than half of the tombs excavated in the Guangzhou area contained incense burners (see table 2).[94] Around the same time, burners appear in the brick tombs in the Red River Delta.[95]

The finds of Chinese objects in mainland and island Southeast Asia shed light on the range of export goods that passed through the Han ports. At the Kra Isthmus in

89 Demandt 2015, 311.

90 Reinecke 2009, 23–52; Higham 2014, 219–222.

91 Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981, 352; Guangxi zhuangzu zizhiqu wenwu gongzuodui and Hepu xian bowuguan 2006, 135–136; Demandt 2015, 312–315; Wei 2017, 242–243.

92 For the possible local production of gold beads in Hepu, see H. Chen 2012, 133–137. For the role of gold-using communities in Cambodia and Vietnam in the transfer of ornaments and production techniques to southern China, see Reinecke and Lockhoff 2019, 446–451.

93 L. Li 2010, 164–176.

94 Guangzhou shi wenwu guanli weiyuanhui and Guangzhou shi bowuguan 1981.

95 Janse 1947, vol. 1, 40–41.

Tab. 2: Ceramic and bronze incense burners in the Han-period tombs in Guangzhou.

	Early Former Han	Mid-Former Han	Late Former Han	Early Later Han	Late Later Han
Number of tombs	182	64	32	41	90
Number of burners	16	10	14	21	43
Tombs with burners, %	8.2	15.6	40.6	51.2	46.7

southern Thailand, archaeologists excavated Han-period bronze vessels, seals, mirrors, and ceramic containers, mostly from Lingnan, but also including a distinctive group of green-glazed wares from the Lower Yangzi.[96] Finds of Hepu ceramics and Han coins were reported from Sumatra, Kalimantan, and Java.[97] Only in rare cases, however, can these contacts be dated with precision. For example, the Wang Mang-period (9–23 CE) coins excavated at Sa Huynh (central Vietnam coast) provide a *terminus post quem* of the early first century CE.[98] Overall, based on the archaeological evidence presently available, the Han Empire's interactions with Southeast Asia were considerably less intensive than those between South and Southeast Asia during the same period.[99]

One specific group of artifacts deserves mentioning here due to its relatively precise dating, association with the coastal regions, and exceptionally long-distance exportation. Distinctive glass vessels – small deep cups, stemmed-foot cups, shallow bowls, and flat-bottomed dishes – have been excavated from the Han tombs in Guangxi, mainly in the Hepu area, and from Lao Cai and Bac Ninh Provinces in northern Vietnam. Several fragments have been reported from sites in the Kra Isthmus region in Thailand. Additionally, seven artifacts are held in foreign collections. These vessels were cast in molds using translucent light-blue or light-green glass and were initially considered imports because of the unusual chemical composition of the glass. 'Guangxi glasses' were made of potash glass with a moderate level of alumina and a low lime content. This is different from both the lead-barium silicate glass prevalent in China since the Spring and Autumn period (771–453 BCE) and the potash lime silicate glass from the Yangzi Basin since the Warring States period. However, the vessel form

96 Péronnet 2013, 155–169; Borell 2017, 25.
97 G. Liao 2005, 4–8; T. Li 2011, 44.
98 Higham 2014, 213.
99 Beaujard 2019, maps II.11 and II.12.

and decorative elements clearly point to inspiration from Han pottery and bronzes, indicating local production.[100]

While the majority of Guangxi glasses were found in the tombs around Hepu, their geographic distribution makes them one of the Han exports that traveled across the longest distance. Besides the glasses from northern Vietnam, which probably traveled first by sea and then up the Red River, and the cup fragments from the Malay Peninsula, the fragment of a glass bowl with three horizontal ribs characteristic of the Guangxi glasses was excavated at Arikamedu, a major trade entrepôt on the eastern coast of southern India from the second century BCE onward, which was also an important center of glass- and stone bead-production. Brigitte Borell paid attention to the red glass and carnelian ear spools of a type popular in China yet alien to the South Asian materials that have been excavated at Arikamedu, including unfinished specimens. She suggests that these "might be interpreted as artefacts custom-made for the Chinese client's demand," another indication of trade connections between the ports of southern India and southern China during the Han times.[101]

The Guangxi glasses may be the earliest documented industry in China with a pronounced maritime-export orientation. It is probably not a coincidence that it appears to have been based at Hepu, which written sources describe as a gateway to the South Seas (South China Sea and the eastern Indian Ocean). Yet Borell reminds us that the scale and clientele of this industry were probably modest. By a recent count, only 32 vessels were discovered in Guangxi, where some 1,200 Han-period tombs were excavated in the Hepu area and another 1,200 elsewhere in the province. To these can be added two finds in northern Vietnam, one at Arikamedu, several fragments from the Kra Isthmus, and possibly, but not necessarily, the fragments of a mold-formed shallow bowl and a mold-formed cup from the site of Tissamaharama in southeastern Sri Lanka.[102] This is sufficient to indicate long-distance exchange but hardly a sustainable trade flow. Part of the explanation might lie in the relatively short flourishing of the Guangxi glass tradition, which Borell dates between ca. 30 BCE and the 70s CE, roughly the same period when stone- and glass-bead consumption peaked in Guangzhou and Hepu.[103]

Another possible marker of the maritime reorientation of Han settlements along the South China Sea rim is the appearance of Dong Son-style bronze drums in insular Southeast Asia, which, according to Imamura's study, took place in the first century BCE and first century CE. Conceivably related to the documented crackdown on

100 For the chemical composition of ancient glasses in China, see Gan 2009, 1–40. For the Guangxi glasses, the geography of their finds, and their relationship to ceramic and bronze vessels in southern China, see Borell 2009, 491–496; Borell 2010, 127–142; Borell 2011, 53–66; Borell 2012, 70–77; Borell 2013, 142–154; Borell 2016, 43–71.

101 Borell 2013, 148–149; Borell 2017, 21–44; Dwivedi, vol. 2, ch. 14, 756–757.

102 For a discussion of the Tissamaharama finds, see Borell 2022a, 33–57.

103 Borell 2013, 142–154. The dates of the Guangxi glass industry have been suggested in Borell 2022a, 50; and Borell 2022b.

the drum-using Dong Son aristocracy in the Red River Delta in the wake of the 40–43 CE rebellion, this process started earlier and may be better explained by the demand for prestige goods and symbols of authority among the emerging elites in the southern part of Southeast Asia.[104] If this was the case, the empire's direct impact on the expansion of this particular exchange network was probably minimal.

The archaeological snapshots of a sea-oriented economy in the southern coastal settlements of the Han Empire do little to reflect the role of the state. However, one written account describes state-managed maritime voyages around the time when the surge in the South China Sea trade flooded Hepu and Guangzhou with imported stone ornaments and brought Guangxi glasses to southern Thailand and Arikamedu. This well-known text, the "Periplus of the South Seas," concludes the geographical treatise in the *Hanshu*, the official history of the Former Han Empire compiled in the latter half of the first century CE. Most authors agree that the route it describes followed the South China Sea coast from the ports of Hepu and Xuwen to the Malay Peninsula. On crossing the Kra Isthmus, the travelers proceeded across the Andaman Sea and the Bay of Bengal before arriving at southern India and Sri Lanka.[105]

Importantly, the "Periplus" talks about the government agents, the palace eunuchs, who "go to the sea with the men who answer their call [for a crew] to buy bright pearls, *biliuli* ('false beryl,' thus possibly glass), rare stones and strange things, taking with them gold and various fine silks to offer in exchange."[106] It also mentions the only Han-period embassy to the polities of the southern maritime zone. The *Hanshu* makes it clear that this was an extraordinary measure undertaken by Wang Mang 王莽 (r. 9–23 CE) to legitimize his usurpation of the Han Empire. Interestingly, the primary destination of this mission was the state of Huangzhi 黃支 in south India (although it also visited other lands and might even have reached Sri Lanka), which might have included the site of Arikamedu. In other words, the geography and chronology of the boom in southern maritime trade roughly correspond to those of imperial diplomatic activity in the South Seas.

Besides giving a proof of the empire's involvement in the southern sea trade, the "Periplus" also highlights the limitations of archaeological evidence about its goods: one of the Han exports mentioned in this passage, the "various fine silks," were perishable materials with little chance of surviving in Southeast Asia's acidic soils. Another observation concerns the role of state officials in gathering and recording information about the routes, distances, and travel conditions, which is provided in the text. It is difficult to say if this information was available to private travelers. Yet the documents from the local archives of the Qin and Han empires illustrate how

104 Imamura 2010, 29–44. The Han general Ma Yuan 馬援 (14 BCE – 49 CE) confiscated the drums after crushing the Lingnan revolt and used them to cast bronze horse figurines; see *Hou Hanshu* 24.840.
105 *Hanshu* 28B.1671. For translations into English, see, for example, G. Wang 2003, 16–17; Borell 2011, 64.
106 Borell 2011, 64.

such geographical information was routinely distributed by the central government to provincial officials, who often disseminated this knowledge among the general populace.[107]

IV.3 Spatial and Temporal Dimensions of the Sea-Port Economy

By the first two centuries CE, the urban populations on the southern coast of the Han Empire developed distinctive consumption habits, such as incense burning and the use of stone-, glass-, and gold-bead jewelry, which were rooted in, and stimulated further expansion of, maritime exchanges with the trade ports of the South China Sea and the Indian Ocean. Although written sources refer to the growing trade in southern goods, such as pearls, rhinoceros horns, ivory, and fruit, archaeology suggests that the production and distribution systems of the southern port towns, as well as their specific consumption patterns, failed to make substantial inroads into the empire. The weak integration into the imperial markets may have been a factor in the volatility of the southern sea-oriented economy during the early imperial period.

Archaeology sheds light on the circulation of consumption items associated with the coastal centers such as Panyu and Hepu within the Han Empire. For example, polyhedral gold beads were discovered mainly in the coastal areas of Lingnan, particularly in Hepu and Guangzhou, but also in northern Vietnam. Outside of Lingnan, they were excavated from the tombs at Changsha (Hunan Province) and near Yangzhou (Jiangsu Province).[108] Incense burners that were so popular in coastal Lingnan throughout the Han era have also been recovered from the burials in the Changsha area. Changsha was well connected to Lingnan due to its location at the northern end of the riverine route from the Middle Yangzi to the Nanling Mountains. In Han-period northern China, incense burners were available only to the highest-ranking elites, particularly members of the imperial clan.[109] This situation contrasts with Lingnan, where ceramic and bronze censers were part of a standard funerary assemblage from the late Former Han period until the end of the Han Empire (see table 2).

Similar distribution patterns apply to other types of distinctive southern objects. For example, the peculiar three-dimensional representations of 'southern barbarians' – pottery and bronze figurines, often holding lamps – are found in tombs along the Lingnan–Yangzi corridor in Guangxi and Hunan.[110] The trade in stone beads, which shaped the culture of personal adornment and stimulated the development of local industry in the southern ports, did not make forays north of the Nanling Moun-

107 Korolkov and Lander, forthcoming.

108 H. Chen 2012, 133; Xiong 2014, 1237; Demandt 2015, 313. For the finds in northern Vietnam, see Wei 2017, 242–243.

109 L. Li 2010, 174; Z. Huang 2015, 173–176.

110 Péronnet 2013, 165–166.

tains, with the exception of Hunan. Other southern networks also appear to have been disconnected from the rest of the empire. Guangxi glass manufacturing, despite its overseas exports, seem to have failed to advance its vessels in the empire outside of Lingnan.[111]

Ongoing quantitative studies of archaeological materials from Han-period Lingnan promise to improve our understanding of the temporal dynamic of southern exchange networks. Allard's analysis of Hepu burials will provide a diachronic view of a sea-facing urban economy in the Han Empire. Its published results suggest that the consumption of stone-bead ornaments in Hepu peaked dramatically during the decades around the turn of the Common Era.[112] This conclusion tallies with the data from Guangzhou (see table 1) and with the evidence for the increase in the funerary use of censers (see table 2), which possibly reflects the peak in imports of aromatics (at least in Guangzhou, this latter trend continued into the late Later Han). Furthermore, the same decades witnessed the brief flourishing of the Guangxi glass-vessel industry with its distinctive export orientation, and the appearance of Dong Son bronze drums on the shores of insular Southeast Asia.

It is hardly possible to talk with confidence about the common factors behind these surges in economic and cultural connectivity. Nor is it certain that such factors existed at all. We may just as well be looking at concurrent, unrelated processes. For the later periods, written sources help to correlate the booms and busts in the maritime economies of Southeast Asia with the periods of economic growth and contraction in the Eurasian empires and with the changes in trade routes.[113] No such evidence exists for our period. The succinct account in the *Hanshu* may point to an isolated, economically inconsequential trade-diplomacy mission, or, alternatively, to the imperial government's durable involvement in maritime commerce. Similarly, the mention of gold as one of the Han exports may be a generic reference to valuable items. However, it can also be a token of the trade network's responsiveness to the rising demand for gold in South Asia, which was one of the key drivers of commercial expansion in the eastern part of the Indian Ocean and around the South China Sea in the early centuries CE.[114] The latter interpretation entails a much greater degree of economic integration in the southern maritime zone than the former.

The first flourishing of the sea-port economy seems to have come to an end during the second and early third century CE. This decline played out differently at different locations and likely resulted from a series of asynchronous disruptions in the maritime trade networks as well as from the troubles within the empire. Appar-

111 A very small mold-made glass bowl from a tomb in Nanyang, Henan Province, was made of potash glass and has decorations similar to those of Guangxi glasses. However, the glass has higher lime content than in Guangxi. See Borell 2010, 135.

112 Allard 2022.

113 Shaffer 1996, 18–29; Manguin 2004, 282–313; Hall 2011, 60–64.

114 Wheatley 1983, 263–269; Hall 1992, 186–187; Manguin 2004, 283–294.

ently, Guangxi-type glass vessels were no longer produced after about 70 CE, and stone-bead consumption in Hepu and Panyu shrank in the late Later Han.[115] The settlements at Caoxiecun and Erqiaocun, which probably correspond to Hepu and Xuwen, were abandoned by the end of the Later Han. In the case of Hepu, the decline was precipitated by a combination of environmental, economic, and political factors: the siltage of Hepu port in the Nanliu River delta, the relocation of sea-trade routes, and the military campaign by the state of Wu to reconquer Hainan Island in 242 CE leading to the outbreak of pestilence that devastated the southern coast of Guangxi.[116]

The urban centers in the Pearl and Red River Deltas, Panyu (known as Guangzhou after 226 CE) and Jiaozhi, did not experience a comparable decline. On the contrary, the Nanhai 南海 Commandery, of which Panyu was the capital, was the only commandery in the southern coastal zone where the registered population increased more than twofold between 2 and 156 CE.[117] The Jiaozhi Commandery had by far the largest population among the Han territories in Lingnan at the beginning of the Common Era. During the Later Han period, the population centers shifted toward the eastern part of the plain, where the delta formation made new tracts of farmland available.[118] In both cases, maritime trade may have been a factor in settlement growth, but the principal impetus was agricultural reclamation.[119] The divergent economic profiles of Hepu and Xuwen, on the one hand, and Panyu and Jiaozhi on the other, represent the two patterns of urbanization in coastal Lingnan during the early imperial era: one driven by the rising tide of sea trade and the other by a combination of farmland expansion, a long-established central position in interregional exchange and mobility networks, and new trade opportunities.

V Expansion of the Southern Maritime Network in the Post-Han Period

The disintegration of the Han Empire in the late second and early third century CE opened the floodgates to upheavals that transformed East Asia's political and economic landscapes. In the southern part of East Asia, the decline of centralized state institutions cleared the space for new actors, whose interactions were largely based on maritime exchange networks, particularly, in the South China Sea.[120] Just as the new

115 The Hepu data is presented in Allard 2022. For Panyu, see table 1.

116 Cui 2000, 34–38; Liang and Deng 2001, 86–91; Chin 2004, 217–239; Xiong 2017, 21–26. For the Wu campaign in Hainan and its impact on the coastal Guangxi, see *Sanguo zhi* 47.1145, 60.1383; Z. Wang 2000, 51–54.

117 Korolkov 2022, 232–233.

118 T. Li 2015, 199–211; Wei 2017, 208.

119 T. Li 2011, 42.

120 For the post-Han economic developments in the northwestern frontier zone, see Leese-Messing, ch. 3, this volume.

political landscape emerged across the former imperial lands south of the Yangzi River, the consolidation of coastal polities in central Vietnam, the Mekong Delta, Malay Peninsula, and in the western part of the Indonesian archipelago propelled the expansion of trade networks and further coordination of interlocked markets from the Persian Gulf to the Yangzi Delta, so much so that late antiquity is considered the heyday of trans-Eurasian trade.[121] In Chinese historiography, this time is known as the Wei, Jin, and Southern and Northern Dynasties period (220–589 CE), or the Six Dynasties, when referring to the southern empires with capital in Jiankang 建康 (present-day Nanjing) in the Lower Yangzi.[122]

V.1 The Political Landscape in the Southern Maritime Zone after the Han: New Actors

Despite their claims to the Han legacy, the Southern Dynasties established themselves on political-economic foundations different from the Qin and Han empires. These regimes proved unable to efficiently register population for labor service, military conscription, and taxation. Throughout the period, powerful landholding clans controlled the countryside and denied the central government direct access to its human and material resources.[123] As the result, the government came to depend on urban commerce for its revenues on a scale previously unseen. As private networks of patronage replaced the state as the principal vehicles for redistributing wealth and securing loyalty, the members of the imperial clan and high-ranked officials turned to the burgeoning markets, domestic as well as overseas, for economic resources to sustain their power and prestige.[124] According to Andrew Chittick, the political economy of the southern empires "resembled the trade-oriented maritime states of the South Seas more than it did the landlocked empires of the Central Plains."[125]

During the centuries after the end of the Han, incomes from overseas trade became an important component of state finances. According to the history of the Jin Dynasty (266–420 CE), the governors of Jiaozhou 交州 Province, which included Jiaozhi Commandery as its center, collected a 20–30 percent tax on imported foreign goods in the fourth century. The amounts involved were so large that it provoked indignation among the trading polities of the South China Sea and triggered a war with one of the most powerful of these polities, Linyi.[126] The official histories of the southern empires, which were mostly compiled during the subsequent Tang Dynasty (618–907)

121 Brown 2018, 96–107; Payne 2018, 227–250.

122 For English-language overviews of this period, see Lewis 2009; Dien and Knapp 2019.

123 Crowell 1990, 171–209; Chittick 2020, 182–184.

124 S. Liu 2001, 35–52; 2019, 330–354; Chittick 2020, 177–205.

125 Chittick 2020, 205.

126 *Jinshu* 97.2546.

using the official materials of the respective regimes, provide much more detailed information about the countries of the South Seas than the *Hanshu*, a reflection of the state officials' growing interest in revenue-generating maritime interactions. One of the earliest such accounts, fragments of which survived in the later sources, was the "Narrative about the Foreign States during the Times of Wu" (*Wu shi waiguo zhuan* 吳時外國傳) composed by envoys to Funan 扶南 in the Mekong Delta from the mid-third century state of Wu (220–280).[127]

During the centuries after the fall of the Han, Guangzhou replaced the former centers of maritime trade, Hepu and Xuwen, as the empire's principal gateway to the South Seas. Continuous migrations from the Yangzi basin replenished its population.[128] At the same time, large populations west of the Pearl River Delta, known to the Sinitic authors as the Li and Lao, lived outside imperial authority.[129] After the third century CE, when Guangzhou became the principal trade emporium in Lingnan, the drum-owning chiefs of Li and Lao wrested the uplands of western Guangdong and Guangxi from imperial control. Their power was fueled by the growing demand for gold, silver, slaves, and forest products in Guangzhou, Jiaozhi, and the capital region of the Southern Dynasties in the Lower Yangzi. Conflicts over access to valuable trade commodities accelerated the formation of warlike confederacies that posed serious threats to imperial administration in the South.[130]

Trade between the urban centers on the coast and the resource-rich uplands also stimulated the consolidation of political power in the Red River Delta. From the last decades of the Han Empire onward, Lingnan's most populous commandery, Jiaozhi, was governed by the local clans, who stubbornly resisted sporadic attempts by the southern imperial courts in Jiankang to establish direct control of the region.[131] Apart from the general military weakness of the southern empires and their preoccupation with defending their northern frontiers, the reconquest of former Han commanderies in northern Vietnam was hindered by the logistical problem of crossing the hilly country between Guangzhou and Hanoi that lay outside the reach of the imperial administration.[132]

Despite their diverging trajectories in the post-Han period, Guangzhou and Jiaozhi shared important characteristics as the new hubs in the southern maritime network. Besides their coastal location, both were the central settlements in the large and expanding alluvial plains and enjoyed access to the enormous food resources of their hinterlands. This set them apart from the former champions of maritime trade, Hepu and Xuwen, which did not have a solid agricultural base and were more exposed

127 Stark 1998, 179; G. Wang 2003, 33.

128 J. Xu 1979, 90–100; Q. Zhao 1994, 94–99; Chin 2004, 223. For migrations to Guangzhou during the Southern Dynasties, see Kieser 2004, 101–124; Churchman 2016, 66–67.

129 *Jinshu* 57.1560.

130 Churchman 2015, 59–77; Churchman 2016, 141–168.

131 Taylor 1983, 66–103.

132 Churchman 2016, 69.

to downturns in seaborne traffic.[133] Moreover, even though Jiaozhi was effectively independent for much of the Southern Dynasties period, it, as well as Guangzhou, preserved the essentials of administrative and fiscal organization, along with the crucial commerce-facilitating institutions such as coinage and marketplaces. Both centers extended their connections with each other and with the imperial capital in the Lower Yangzi, as the advances in shipbuilding technology and navigation skills made possible direct travel between the Red, Pearl, and Yangzi estuaries.[134] Finally, both Guangzhou and Jiaozhi controlled interfaces between the sea-trade networks and the resource-supplying inland.

The combination of coastal location, urban center, agricultural base, and access to resource-rich hinterland characterized another key actor in the southern maritime zone in late antiquity. As early as the first centuries CE, the finds of Roman and Middle Eastern intaglios as well as inscribed gems, beads, and ceramics from South Asia reflect the long-distance contacts of communities in the Mekong Delta. It was during the Oc Eo Phase II (third to sixth centuries CE) that the large urban center with regular layout that covered an area of 300–500 ha on low-lying ground crisscrossed by canals replaced the preexisting cluster of hillside settlements.[135] This hydraulic system not only enabled the construction of a city on the floodplain but was also crucial for agricultural reclamation and communication with other sites in the lower Mekong valley, such as Angkor Borei 70 km to the north. Oc Eo workshops used materials shipped from inland to manufacture a variety of export goods, including gold, tin, and bronze ornaments and stone beads. In return, the commodities obtained through maritime trade were partly redistributed back into the hinterland.[136]

The urban centers in the Mekong Delta are conventionally identified with Funan, the key diplomatic and trade partner of the southern empires described in contemporary Chinese texts. An account of an embassy to Funan by the state of Wu in the third century speaks of a large polity with walled settlements, taxes collected in gold, silver, pearls, and perfumes, and archives of documents written in a non-Sinitic script.[137] According to the Chinese sources, Funan became the dominant regional polity after it conquered other port towns on the northern rim of the Gulf of Thailand from the Mekong estuary to the Isthmus of Kra.[138]

The archaeological record is much thinner for another regional polity, Linyi 林邑, which emerged on the coast of central Vietnam at the beginning of the third century CE, around the time when the new urban center was constructed in the Mekong Delta. Its foundation story echoes that of Nanyue, with a low-ranked local official

133 S. Zhao 2014, 253.

134 Q. Li 2006, 10–17.

135 New excavations suggest that the central canal might have been constructed in the second or even first century CE (Brigitte Borell, personal communication, December 1, 2022).

136 Stark 1998, 175–203; Manguin 2004, 282–313; Higham 2014, 278–285.

137 *Jinshu* 97.2547.

138 Hall 1992, 192–196; G. Wang 2003, 31–48; Vickery 2003, 101–143; Hall 2011, 37–66.

assassinating an imperial magistrate to launch his own dynasty.[139] Like Funan, Linyi was an active participant in maritime trade, but unlike Funan, it was not based on a major river, and it is unclear if it had an urban center on the scale of Oc Eo. Chinese sources refer to the capital city of Linyi, which was raided and looted by Jiaozhi troops in the mid-fifth century. Archaeologists identified a number of large rectangular citadels with an area between 50 and more than 150 ha, none of which can be confidently pronounced the Linyi capital.[140] The degree of political centralization in Linyi is also debated. An account of the Jiaozhi campaign against Linyi in 446 reports enormous stockpiles of gold, silver, and copper in its royal treasury, suggesting a considerable amassment of wealth at one center.[141]

Previous studies connected the rise of Funan to the increase in maritime trade that conferred advantages on the ports with large agricultural hinterlands to supply growing merchant diasporas and artisan communities.[142] Larger polities also provided better security for the sea trade.[143] The emergence of larger, more robust urban centers with a strong orientation toward maritime commerce underpinned the dramatic expansion of interactions in the southern maritime zone in the post-Han period. They helped to integrate inland communities and states into the sea-based trade network. At each particular location, this process was framed by a unique combination of factors. In coastal Lingnan, these included the early experiments with a sea-oriented economy in the southern ports of the Han Empire; the commercialization of the political economy in the southern empires during the post-Han period; the weakness of these empires' central governments; the persistence of economic and human mobility networks that took shape during the early imperial period; and the ecological developments that favored settlement in the Red and Pearl River deltas.

V.2 Expansion of the Southern Maritime Network: New Practices, Routes, and Commodities

The new actors in the southern maritime zone defined new types of interaction, including diplomatic and religious networks. The post-Han economic and political landscape in the South China Sea basin offered more efficient mechanisms of transregional integration. Consequently, new communities and goods entered the network, new communication routes were opened, and new institutions developed to facilitate and encourage exchanges.

139 *Jinshu* 97.2545.

140 For the history of Linyi recounted in Chinese sources, see Taylor 1983, 69–92. For the archaeological sites possibly associated with Linyi, see Higham 2014, 320–322.

141 *Nan Qi shu* 58.1013; Higham 2014, 324–325.

142 Hall 1992, 192–193; Shaffer 1996, 21.

143 Hall 2011, 63–64.

Repeatedly frustrated in their attempts to reconquer the North and increasingly dependent on trade revenues, the southern courts turned their attention to the seas as a potential arena of military expansion, alliance building, commerce, and cultural interaction. The first southern emperor, Sun Quan 孫權 (r. 222–252) of the Three Kingdoms state of Wu, "showed considerable interest in imperial expansion, especially via maritime routes."[144] The Wu court pioneered diplomatic missions to the South China Sea polities, particularly Funan and Linyi.[145] By the beginning of the seventh century, more than 100 emissaries from the south visited the imperial courts in Jiankang, which reciprocated with their own missions.[146] This compares to just one mission, purportedly to southern India or Sri Lanka, recorded for the entire Han period.

The strengthening of mercantile urban groups and the development of flexible, peer-to-peer frameworks for negotiating trade, diplomacy, and cultural relations facilitated, and was reinforced by, the spread of new religions in the post-Han period. Buddhist and Brahmanist sanctuaries appeared in the Mekong Delta in the third century. The earliest evidence for South Asian religious architecture and Indian-style states on the central Vietnam coast and in western Indonesia dates to the period between the fifth and seventh centuries.[147] Buddhist missionaries and texts may have been reaching the Red River Delta in the early third century, and the later Vietnamese historiography celebrates Jiaozhi as the site of the earliest Buddhist shrines and translation projects.[148] In the fourth century, the center of Buddhist preaching and learning moved to Guangzhou, which saw the construction of temples and the arrival of famous Buddhist monks on merchant ships.[149] The first Buddhist missionaries in the imperial capital Jiankang in the early fifth century were members of diplomatic missions from the South Seas polities.[150] As the southern empires claimed leading positions in the Buddhist diplomatic and commercial system that spanned the South China Sea and the Indian Ocean littoral, new economic and cultural horizons opened up for the coastal trading cities.

One of the most important developments associated with the intensification of maritime traffic and the new participants joining the trade network were the new travel routes that revolutionized commerce and politics in the southern maritime zone. By the late fourth to early fifth century, the ships sailing between the Indian Ocean and the South China Sea were using the all-sea route through the Strait of Malacca, which would have improved conditions for the shipment of bulky goods, such as ceramics, compared to overland portage over the Kra Isthmus. By the end of the fourth century, Chinese sources mention ships carrying 200 crew and passengers

144 Chittick 2020, 118.
145 *Sanguo zhi* 60.1385.
146 Stark 1998, 175–203; G. Wang 2003, 31–48; Hall 2011, 42–44.
147 Manguin 2004, 293–308; Higham 2014, 320–322.
148 Nguyen 1959/60, 23–27; Taylor 1983, 63–64.
149 J. Xu 1979, 91–92; Q. Zhao 1994, 98–99.
150 Zürcher 2013, 585–607.

and 50 days' supply of food that sailed directly from the Straits of Malacca to Guangzhou.[151] The communities on both sides of the Strait eagerly joined the sea trade. In the fifth century, the earliest known regional polity in insular Southeast Asia developed in west Java.[152]

The range of goods and commodities carried by the Southern Seas vessels also expanded. The merchants based in the ports of the Sunda Straits opened the forests of the Sumatran and Javan uplands for resource extraction. They eventually succeeded in substituting local products for the commodities previously imported from much more distant locations and in much smaller volumes. This particularly concerned aromatic substances: Sumatran pine resins and benzoin came to replace frankincense and myrrh from West Asia and East Africa.[153] Another major addition to traded commodities were spices: cloves, nutmeg, and mace procured in the central and eastern parts of the Indonesian archipelago. Urban growth and the construction of religious complexes throughout the South China Sea world fueled demand for timber and metals.[154]

VI Conclusion

We know of only one archaeologically documented city in Lingnan around 300 BCE: Co Loa in the Red River Delta. By the turn of the Common Era, Lingnan's landscape was dotted with some five dozen administrative towns, many of which have recently been excavated. This growth of urban settlement occurred at the time when the Chinese empires of Qin and Han arrived at the South China Sea coast and, toward the end of the period, dispatched the first Chinese embassy to the Indian subcontinent. According to the official history of the Former Han Empire, the *Hanshu*, this embassy, as well as other travelers, used southern port towns as the base for their activities. In present-day scholarship, the early history of urbanization in the southern coastal zone is woven into the 'maritime Silk Road' narrative, the route that allegedly paralleled the cross-continental 'Silk Road' connecting China and the Mediterranean.[155]

This chapter has shown that there is much to be said for such a view. The Qin and Han provincial governments were based in towns, so the expansion of imperial administration was also the expansion of urban networks. The empires stimulated urban growth by concentrating wealth in these administrative towns, which were the principal loci of fiscal spending and the sites of official marketplaces, where the state

151 For the innovations in shipbuilding that made possible open-sea navigation, see Q. Zhao 1994, 95–96; Q. Li 2006, 14.

152 Manguin 2004, 301–305.

153 Hall 1992, 195–196; Manguin 2004, 301.

154 Shaffer 1996, 32–33; Hall 2011, 54–55.

155 See, for example, Liang and Deng 2001; J. Zhou 2002; F. Zhou 2019.

was at its most effective at providing security and legal support for commercial activities. State-managed resettlement projects targeted urban centers and their surroundings. Town-residing government officials formed the backbone of the urban elite and subelite, whose mobility and shared lifestyles underlay the adoption of metropolitan consumption habits in the early empires. Like their counterparts in other regions of the Han Empire, the prosperity of the southern coastal towns relied on the imperial infrastructures of transportation, human mobility, coinage, commercial regulation, and taxation, all of which primarily benefited urban populations.

At the same time, the 'Silk Road' story neglects the dimensions of coastal urban economies that were defined by their participation in nonimperial, non-Sinitic connectivity networks. After ca. 500 BCE, growing interactions among communities throughout the geographical continuum of southern East Asia and mainland Southeast Asia led to the emergence of larger settlements that concentrated, organized, and defended populations and material resources on a previously unattested scale. Their formation was most likely due to case-specific combinations of social and environmental factors. The former included population growth and the destabilization of the existing communities as the result of increasing long-distance exchanges and wealth inequalities. One of the important environmental factors was the emergence of new and vast tracts of agricultural land in the great river estuaries, such as the Pearl, Red, and Mekong River deltas. Located at the interface between the maritime trade routes and the resource-rich inlands, to which they were connected by navigable rivers, these regions saw the development of some of the largest urban settlements in the southern maritime zone between 300 BCE and 300 CE, such as Panyu, Co Loa, and Oc Eo. Although, certainly in the Pearl River Delta and possibly to some degree in the Red River Delta as well, this process was affected by the Sinitic state expansion, early urbanization in Lingnan cannot be reduced to the transplantation of a Chinese urban model. Rather, it should be studied in the context of urbanization in Southeast Asia and the South China Sea littoral, characterized by multiple interaction vectors and ever-shifting configurations of acephalous exchange networks.

The applicability of the concept of 'maritime Silk Road' to the early imperial period is also belied by the marginality of the southern maritime frontier in the political economy and official records of the early empires, especially when compared to the post-Han era. Outside the famous "Periplus of the South Seas" in the *Hanshu*, Hepu, which, as the newly available archaeological evidence suggests, was a major port and an important player in the South China Sea interaction sphere at the end of the Former Han period, figures exclusively as an exile destination for criminals. While Panyu's role as a trade hub is recognized, it is barely mentioned other than in the narrative about the Han conquest of Nanyue. Again, with the exception of the "Periplus," the early imperial-period authors show no interest in the southern sea trade and diplomacy. Many of them were state officials and lived in the empire's capitals Chang'an and Luoyang. Their failure to mention the South China Sea maritime commerce may, therefore, have to do with its irrelevance to state finance. We lack any

records about the taxation of southern sea imports in the Han Empire, which start to appear during the subsequent period of the Southern Dynasties.

Archaeological finds also highlight the lack of connectivity between the sea-oriented economies of coastal Lingnan and the rest of the Han Empire. Populations of the Lingnan port towns developed a distinctive consumption culture represented, e.g., by the use of South China Sea-style stone jewelry and other products circulated in the southern maritime zone, such as polyhedral gold beads and aromatics. However, the trade networks that made these commodities accessible failed to spread significantly beyond coastal Lingnan, with the possible exception of Changsha, the key transportation hub on the Middle Yangzi connected to the southern coast by water routes. In other words, maritime trade was not integrated into the imperial markets, and the southern ports during this period did not become an efficient link between the imperial economy and the littoral economies of the South China Sea.

The collapse of the Han Empire transformed the political and economic landscapes of East Asia. As its centralized economic institutions and networks were falling apart, they released new actors that were strongly oriented towards maritime exchanges. The successor regimes in the Yangzi valley, the so-called Southern Dynasties, lacked the administrative muscle to tax the countryside and consequently fashioned their political economies around access to commercial flows, including long-distance sea trade. A virtually independent polity resurfaced in the far south, centered on the Jiaozhi Commandery in the Red River Delta. It heavily relied on import revenues and was an active participant in the peer-polity network of the southern maritime zone. The growing demand for trade goods in the coastal cities – metals, timber, animal products, slaves – intensified political competition in the inland regions, leading to the formation of powerful confederations, whose leaders and elites also had stakes in long-distance trade. All these political actors, in their own ways, contributed to integrating the communities, institutions, and resources of the southern part of the defunct East Asian empire into the economic and cultural networks of the South Seas.

From the third century CE onward, the development of new routes and the expanding range of commodities circulating in the southern maritime zone, along with the surge in diplomatic, religious, and military interactions between the states in southern East Asia and the trading polities around the South China Sea, signified the emergence of the transregional economy that spanned the Asian coastal seas and became the principal driver of Old World globalization until the beginning of transatlantic and transpacific navigation in the fifteenth and sixteenth centuries.

References

Allard, F. 1997. “Growth and stability among complex societies in prehistoric Lingnan, Southeast China.” *Papers from the Institute of Archaeology* 8, 37–58.

–. 1999. “The archaeology of Dian: Trends and tradition.” *Antiquity* 279, 77–85.

–. 2004. “Lingnan and Chu during the first millennium BC: A reassessment of the core–periphery model.” In R. Ptak and T. Höllmann (eds.), *South China and Maritime Asia*. Wiesbaden: Harrassowitz. 1–21.

–. 2014. “Early complex societies in southern China.” In C. Renfrew and P. Bahn (eds.), *The Cambridge world prehistory.* Vol. 2, 807–823. Cambridge: Cambridge University Press.

–. 2017. “Globalization at the crossroads: The case of Southeast China during the pre- and early imperial period.” In T. Hodos (ed.), *The Routledge handbook of archaeology and globalization*, 454–469. London: Routledge.

–. 2022. “The Han and Three Kingdoms period burials at Hepu, China.” Paper presented at the Ninth Worldwide Conference of the Society for East Asian Archaeology, Daegu, South Korea.

Ballard, C., R. Bradley, L. Nordenborg Myhre, and M. Wilson. 2004. “The ship as symbol in the prehistory of Scandinavia and Southeast Asia.” *World Archaeology* 35.3, 385–403.

Beaujard, P. 2019. *The world of the Indian Ocean: A global history.* Vol. 1, *From the fourth millennium BCE to the sixth century CE.* Cambridge: Cambridge University Press.

Bellina, B. 2014. “Maritime Silk Roads’ ornament industries: Socio-political practices and cultural transfers in the South China Sea.” *Cambridge Archaeological Journal* 24.3, 345–377.

–, ed. 2017. *Khao Sam Kaeo: An early port-city between the Indian Ocean and the South China Sea.* Paris: École Française D’Extrême-Orient.

Bellina, B., A. Favereau, and L. Dussubieux. 2019. “Southeast Asian early maritime Silk Road trading polities’ hinterland and the sea-nomads of the Isthmus of Kra.” *Journal of Anthropological Archaeology* 54, 102–120.

Borell, B. 2009. “Han period glass vessels from the Gulf of Tonkin region: Aspects of their technology.” In D. Ignatiadou and A. Antonaras (eds.), *Annales du 18e congrès de l’Association internationale pour l’Histoire du Verre*, 491–496. Thessaloniki: Association internationale pour l’Histoire du Verre.

–. 2010. “Trade and glass vessels along the maritime Silk Road.” In B. Zorn and A. Hilgner (eds.), *Glass along the Silk Road from 200 BC to AD 1000*, 127–142. Mainz: Verlag der Römisch-Germanischen Zentralmuseums.

–. 2011. “Han period glass vessels in the early Tongking Gulf region.” In N. Cooke, Li Tana, and J. Anderson (eds.), *The Tongking Gulf through history*, 53–66. Philadelphia, PA: University of Pennsylvania Press.

–. 2012. “The Han period glass dish from Lao Cai, Northern Vietnam.” *Journal of Indo-Pacific Archaeology* 32, 70–77.

–. 2013. “The glass vessels from Guangxi and the maritime Silk Road in the Han period (206 BCE–220 CE).” In M. Klokke and V. Degroot (eds.), *Unearthing Southeast Asia’s past: Selected papers from the 12th International Conference of the European Association of Southeast Asian Archaeologists.* Vol. 1, 142–154. Singapore: National University of Singapore Press.

–. 2016. “Travels of glass vessels along the maritime Silk Road.” In F. Gan, J. Henderson, and Q. Li (eds.), *Recent progress of scientific research of ancient glass and glaze*, 43–71. Singapore: World Scientific.

–. 2017. “Gemstones in Southeast Asia and beyond: Trade along the maritime networks.” In A. Hilgner, S. Greiff, and D. Quast (eds.), *Gemstones in the first millennium AD: Mines, trade, workshops and symbolism*, 21–44. Mainz: Verlag des Römisch-Germanischen Zentralmuseums.

–. 2022a. “Exceptional potash glass artifacts excavated at Tissamaharama (Sri Lanka).” *Journal of Glass Studies* 64, 33–57.

–. 2022b. “Glass vessels in the East from about 200 BC to AD 200.” Paper presented at the International Conference “Identity and Value in Global Perspective. Dialogues on Ancient East and West,” Heidelberg University, Germany.

Brindley, E. 2015. *Ancient China and the Yue: Perceptions and identities on the southern frontier, c. 400 BCE–50 CE.* Cambridge: Cambridge University Press.

Brown, P. 2018. "'Charismatic' goods: Commerce, diplomacy, and cultural contacts along the Silk Road in late antiquity." In N. Di Cosmo and M. Maas (eds.), *Empire and exchanges in Eurasian late antiquity: Rome, China, Iran, and the Steppe, ca. 250–750*, 96–107. Cambridge: Cambridge University Press.

Carter, A. and N. Kim. 2017. "Globalization at the dawn of history: The emergence of global cultures in the Mekong and Red River deltas." In T. Hodos (ed.), *The Routledge handbook of archaeology and globalization*, 730–750. London: Routledge.

Chen Bo 陳博. 2016. *Cong zhongxin dao bianjiang: Han diguo chengshi yu chengshi tixi de kaoguxue yanjiu* 從中心到邊疆：漢帝國城市與城市體系的考古學研究 [*From the center to the frontiers: An archaeological study of cities and city systems in the Han empire*]. Beijing: Kexue.

Chen Hongbo 陳洪波. 2012. "Handai haishang sichou zhi lu chutu jinzhu shipin de kaogu yanjiu" 漢代海上絲綢之路出土金珠飾品的考古研究 [Archaeological study of golden bead ornaments excavated along the Han-period maritime Silk Road]. *Guangxi shifan daxue xuebao (zhexue shehui kexue ban)* 48.1, 133–137.

Chin, J. 2004. "Ports, merchants, chieftains and eunuchs: Reading maritime commerce of early Guangdong." In S. Müller, T. Höllmann, and Putao Gui (eds.), *Guangdong: Archaeology and early texts*, 217–239. Wiesbaden: Harrassowitz.

Chittick, A. 2020. *The Jiankang empire in Chinese and world history*. Oxford: Oxford University Press.

Churchman, C. 2015. "Where to draw the line? The Chinese southern frontier in the fifth and sixth centuries." In J. Anderson and J. Whitmore (eds.), *China's encounters on the south and southwest: Reforging the fiery frontier over the two millennia*, 59–77. Leiden: Brill.

–. 2016. *The people between the rivers: The rise and fall of a bronze drum culture, 200–750.* Lanham: Rowman and Littlefield.

Crowell, W. 1990. "Northern émigrés and the problems of census registration under the Eastern Jin and Southern Dynasties." In A. Dien (ed.), *State and Society in Early Medieval China*, 171–209. Stanford, CA: Stanford University Press.

Cui Yong 崔勇. 2000. "Xuwen Erqiaocun Handai yizhi yu Handai Xuwen gang de guanxi" 徐聞二橋村漢代遺址與漢代徐聞港的關係 [On the relationship between the Han site at Erqiaocun, Xunwen, and the Han-period port of Xuwen]. *Lingnan wenshi* 4, 34–38.

Dal Martello, R. 2020. "Agricultural trajectories in Yunnan, Southwest China: A comparative analysis of archaeological remains from the Neolithic to the Bronze Age." PhD diss., University College London.

Dal Martello, R., Xiaorui Li, and D. Fuller. 2021. "Two-season agriculture and irrigated rice during the Dian: Radiocarbon dates and archaeobotanical remains from Dayingzhuang, Yunnan, Southwest China." *Archaeological and Anthropological Sciences* 13, 1–21.

Dega, M. 1999. "Circular settlements within Eastern Cambodia." *Bulletin of the Indo-Pacific Prehistory Association* 18, 181–190.

Demandt, M. 2015. "Early gold ornaments of Southeast Asia: Production, trade, and consumption." *Asian Perspectives: The Journal of Archaeology for Asia and the Pacific* 54.2, 305–330.

Dien, A. and K. Knapp, eds. 2019. *The Cambridge History of China.* Vol. 2, *The Six Dynasties, 220–589.* Cambridge: Cambridge University Press.

Emura Haruki 江村治樹. 2011. *Shunshū Sengoku jidai seidō kahei no seisei to tenkai* 春秋戦国時代青銅貨幣の生成と展開 [*Emergence and development of bronze coinage during the Spring and Autumn and Warring States periods*]. Tokyo: Kyūko shoin.

Erickson, S. 2010. "Han dynasty tomb structures and contents." In M. Nylan and M. Loewe (eds.), *China's early empires: A re-appraisal*, 13–81. Cambridge: Cambridge University Press.

Erickson, S., Yi Song-mi, and M. Nylan. 2010. "The archaeology of the outlying lands." In M. Nylan and M. Loewe (eds.), *China's early empires: A re-appraisal*, 135–168. Cambridge: Cambridge University Press.

Falkenhausen, L. von. 2002. "The use and significance of ritual bronzes in the Lingnan region during the Eastern Zhou Period." *Journal of East Asian Archaeology* 3.1–2, 193–236.

–. 2006. *Chinese society in the age of Confucius (1000–250 BC): The archaeological evidence.* Los Angeles, CA: Cotsen Institute of Archaeology, UCLA.

–. 2018. "The economic role of cities in Eastern Zhou China." *Archaeological Research in Asia* 14, 161–169.

–. 2022. "The economy of late pre-imperial China: Archaeological perspectives." In D. Ma and R. Von Glahn (eds.), *The Cambridge Economic History of China.* Vol. 1, *To 1800*, 15–51. Cambridge: Cambridge University Press.

Fu Xia 富霞. 2018. "Guangxi Hepu Han mu zhuren zushu ji waiyu wenhua yinsu tantao" 廣西合浦漢墓主人族屬及外域文化因素探討 [On the ethnic identity of the occupants of the Han tombs at Hepu, Guangxi, and the external cultural influences]. *Zhongguo guojia bowuguan guankan* 4, 26–34.

Fujian bowuyuan 福建博物院 and Fujian Minyue wangcheng bowuguan 福建閩越王城博物館. 2004. *Wuyishanchengcun Han cheng yzhi fajue baogao* 武夷山城村漢城發掘報告 *1980–1996* [*Archaeological report on the excavation of the Han town at Wuyishan chengcun in 1980–1996*]. Fuzhou: Fujian renmin.

Gan, F. 2009. "Origin and evolution of ancient Chinese glass." In F. Gan, R. Brill, and T. Shouyun (eds.), *Ancient glass research along the Silk Road*, 1–40. Singapore: World Scientific.

Gao Chongwen 高崇文. 2017. "Shilun Guangxi diqu xian Qin zhi Handai kaoguxue wenhua bianqian – jianlun Handai Hepu de lishi diwei" 試論廣西地區先秦至漢代考古學文化變遷——兼論漢代合浦的歷史地位 [A preliminary study on the change in archaeological culture in Guangxi region from the pre-Qin to the Han period, with remarks on the historical place of Hepu during the Han period]. *Sichuan wenwu* 1, 47–51.

Glover, L. 2022. "Stone and metal ornaments at Hepu in southern China and their relationship to ornaments across Asia." Paper presented at the Ninth Worldwide Conference of the Society for East Asian Archaeology, Daegu, South Korea.

Guangxi wenwu baohu yu kaogu yanjiusuo 廣西文物保護與考古研究所. 2017. *Guangxi Hepu Wenchangta Han mu* 廣西合浦文昌塔漢墓 [*Han tombs at Wenchangta, Hepu, Guangxi*]. Beijing: Wenwu.

Guangxi wenwu baohu yu kaogu yanjiusuo 廣西文物保護與考古研究所 and Hepu xian bowuguan 合浦縣博物館. 2016. "Guangxi Hepu xian Dalang gu chengzhi de fajue" 廣西合浦縣大浪古城址的發掘 [Archaeological excavation of the ancient town at Dalang, Hepu County, Guangxi]. *Kaogu* 8: 41–49.

Guangxi wenwu baohu yu kaogu yanjiusuo 廣西文物保護與考古研究所, Xiamen daxue lishixi kaogu zhuanye 廈門大學歷史系考古專業, and Guangxi shifan daxue wenhua yu lüyou xueyuan 廣西師範大學文化與旅遊學院. 2016. "Guangxi Hepu xian Caoxiecun Handai yizhi fajue jianbao" 廣西合浦縣草鞋村漢代遺址發掘簡報 [A preliminary report on the archaeological excavation of the Han site at Caoxiecun, Hepu County, Guangxi]. *Kaogu* 8, 50–74.

Guangxi wenwu baohu yu kaogu yanjiusuo 廣西文物保護與考古研究所 and Hepu xian wenwu guanliju 合浦縣文物管理局. 2016. *2009–2013 nian Hepu Han Jin mu fajue baogao* 2009–2013年合浦漢晉墓發掘報告 [*Archaeological report on the excavation of the Han and Jin tombs at Hepu in 2009–2013*]. Vols. 1 and 2. Beijing: Wenwu.

Guangxi zhuangzu zizhiqu wenwu gongzuodui 廣西壯族自治區文物工作隊 and Xing'an xian bowuguan 興安縣博物館. 1998. "Guangxi Xing'an xian Qin cheng yizhi Qiliwei Wangcheng chengzhi de kantan yu fajue" 廣西興安縣秦城遺址七里圩王城城址的勘探與發掘 [Exploration and excavation of the remains of the Qin town at Qiliwei Wangcheng, Xiang'an County, Guangxi]. *Kaogu* 11: 34–47.

Guangxi zhuangzu zizhiqu wenwu gongzuodui 廣西壯族自治區文物工作隊 and Hepu xian bowuguan 合浦縣博物館. 2006. *Hepu Fengmenling Han mu: 2003–2005 nian fajue baogao* 合浦風門嶺漢墓——2003–2005 年發掘報告 [*Han tombs at Fengmenling, Hepu: Archaeological report on the excavations in 2003–2005*]. Beijing: Kexue.

Guangzhou shi wenwu guanli weiyuanhui 廣州市文物管理委員會 and Guangzhou shi bowuguan 廣州市博物館. 1981. *Guangzhou Han mu* 廣州漢墓 [*Han tombs at Guangzhou*]. Vols. 1, 2. Beijing: Wenwu.

Guangzhou shi wenwu kaogu yanjiusuo 廣州市文物考古研究所, Zhongguo shehui kexueyuan kaogu yanjiusuo 中國社會科學院考古研究所, and Nanyue wanggong bowuguan choujianchu

南越王宮博物館籌建處. 2006. “Guangzhou shi Nanyue guo gongshu yizhi Xi Han mujian fajue jianbao” 廣州市南越國宮署遺址西漢木簡發掘簡報 [A preliminary report on the excavation of the Western Han wooden tablets at the site of Nanyue palace in Guangzhou]. *Kaogu* 3: 3–13.

Guangzhou shi wenwu kaogu yanjiusuo 廣州市文物考古研究所, Zhongguo shehui kexueyuan kaogu yanjiusuo 中國社會科學院考古研究所, and Nanyue wanggong bowuguan choujianchu 南越王宮博物館籌建處. 2007. “Guangzhou shi Nanyue guo gongshu yizhi 2003 nian fajue jianbao” 廣州市南越國宮署遺址 2003 年發掘簡報 [A preliminary report on the excavation of the site of Nanyue palace in Guangzhou in 2003]. *Kaogu* 3: 15–31.

Guo Weichuan 郭偉川. 2009. “Gu Panyu, Nanwucheng ji Nanwuguo kao – Guangdong yu Guangzhou gushi yanjiu” 古番禺、南武城及南武國考——廣東與廣州古史研究 [A study of ancient Panyu, Nanwucheng, and the state of Nanwu: Research in the ancient history of Guangdong and Guangzhou]. *Lishi wenxian yanjiu* 28, 165–184.

Haidle, M. 2001. “Fragments of glass bangles from Krek 52/62 and their implications for the dating of the Mimotien culture.” *Asian Perspectives* 40.2: 195–208.

Hall, K. 1992. “Economic history of early Southeast Asia.” In N. Tarling (ed.), *The Cambridge History of Southeast Asia.* Vol. 1, 183–275. Cambridge: Cambridge University Press.

–. 2011. *A History of early Southeast Asia: Maritime trade and societal development, 100–1500.* Lanham: Rowman & Littlefield.

Hanshu 漢書 [*Documents of the Han*]. 2002. Composed by Ban Gu 班固 (32–92 CE). 12 vols. Beijing: Zhonghua shuju.

Herman, J. 2009. “The Kingdom of Nanzhong: China’s southwest border region prior to the eighth century.” *T’oung Pao* 95.4/5: 241–286.

Higham, C. 2014. *Early mainland Southeast Asia: From first humans to Angkor.* Bangkok: River Books.

–. 2021. “The later prehistory of Southeast Asia and Southern China: The impact of exchange, farming and metallurgy.” *Asian Archaeology* 4: 63–93.

Höllmann, T. 1999. “Panyu: Die südliche Pforte nach China während der Han-Zeit.” In Prüch (1999), 109–113.

Hou Hanshu 後漢書 [*Documents of the Later Han*]. 1965. Composed by Fan Ye 范曄 (398–445/6 CE). 12 vols. Beijing: Zhonghua shuju.

Huainan honglie jijie 淮南鴻烈集解 [*Collected commentaries to the Huainanzi*]. 1989. Liu Wen 劉文 (ed.). 2 vols. Beijing: Zhonghua shuju.

Huang Xiaofen 黃曉芬. 2018. “Kan teikoku nantan no Kōshi gunji wo horu” 漢帝国南端の交趾郡治を掘る [Excavating the Jiaozhi Commandery seat at the southern fringe of the Han empire]. In Huang Xiaofen and Tsuruma Kazuyuki 鶴間和幸 (eds.), *Tō Ajia kodai toshi no nettowaku wo saguru – Ni, Etsu, Chyū no kōkogaku saizensen* 東アジア古代都市のネットワークを探る——日・越・中の考古学最前線 [*Discovering the ancient city network in East Asia: The frontline of Japan-Vietnam-China joint archaeological research*], 11–29. Tokyo: Kyūko shoin.

Huang Zhanyue 黃展岳. 2015. *Nanyue kaoguxue yanjiu* 南越考古學研究 [*An archaeological study of Nanyue*]. Beijing: Zhongguo shehui kexue.

Imamura Keiji. 2010. “The distribution of bronze drums of the Heger I and pre-I types: Temporal changes and historical background.” *Tōkyō daigaku kōkogaku kenkyūshitsu kenkyū kiyō* 24, 29–44.

Institute of Archaeology, CASS, and Guangzhou Municipal Institute of Antiquity and Archaeology. 2003. “Palace and government office site of the Nanyue state in Guangzhou in 2000.” *Chinese Archaeology* 3, 110–115.

Janse, O. 1947. *Archaeological research in Indo-China.* Vols. 1 and 2. Cambridge, MA: Harvard University Press.

Jinshu 晉書 [*Documents of the Jin*]. 1974. Composed by Fang Xuanling 房玄齡 (579–648 CE). 10 vols. Beijing: Zhonghua shuju.

Kieser, A. 2004. " 'Nur Guangzhou ist ruhig und friedlich.' Grabkult und Migration während der Sechs Dynastien im heutigen Guangdong." In S. Müller, T. Höllmann, and P. Gui (eds.), *Guangdong: Archaeology and early texts*, 101–124. Wiesbaden: Harrassowitz.

Kim, N. 2015. *The origins of ancient Vietnam*. Oxford: Oxford University Press.

Kim, N., V. T. Lai, and H. H. Trinh. 2010. "Co Loa: An Investigation of Vietnam's Ancient Capital." *Antiquity* 84, 1011–1027.

Korolkov, M. 2022. *The imperial network in ancient China: The foundation of Sinitic empire in Southern East Asia.* London: Routledge.

Korolkov, M. and B. Lander. Forthcoming. "Knowledge production in China's early empires: How Qin and Han officials gathered information." *Journal of the American Oriental Society* 143/4.

Lam, W., Q. Zhang, J. Chen, and S. Y. Wu. 2020. "Provision of iron objects in the southern borderlands of the Han Empire: A metallurgical study of iron objects from Han tombs in Guangzhou." *Archaeological and Anthropological Series* 12, 1–22.

Laptev, S. 2011. "The origins and development of the Wucheng Culture (in the context of intercultural contacts between Bronze Age inhabitants of the Lower Yangtze Valley and Indochina Peninsula)." *Archaeology, Ethnology and Anthropology of Eurasia* 38/4, 93–102.

Lewis, M. 2009. *China between empires: The Northern and Southern dynasties*. Cambridge, MA: Harvard University Press.

Li Guangjun 李光軍. 1997. "Guangxi gudai huobi he huobi jingji de jige wenti" 廣西古代貨幣和貨幣經濟的幾個問題 [Some issues in the ancient money and monetary economy of Guangxi]. In Guangxi qianbi xuehui 廣西錢幣學會 (ed.), *Guangxi qianbi xuehui shinian wenzhang xuanpian: 1985–1995 nian* 廣西錢幣學會十年文章選篇：1985–1995 年 [Selected papers to the tenth anniversary of the Guangxi numismatic society: 1985–1995], 25–29. Nanning: Guangxi meishu.

Li Longzhang 李龍章. 2010. "Lingnan diqu chutu de Handai xunlu ji xunxiang xisu qiyuan qianyi" 嶺南地區出土的漢代熏爐及熏香習俗起源淺議 [Some remarks on the Han-period censers excavated in the Lingnan region and the custom of incense burning]. In Zhongguo shehui kexueyuan kaogu yanjiusuo 中国社会科学院考古研究所 and Guangzhou shi wenwu kaogu yanjiusuo 广州市文物考古研究所 (eds.), *Xi Han Nanyue guo kaogu yu Han wenhua* 西汉南越国考古与汉文化 [*Archaeology of the Western Han state of Nanyue and the Han culture*], 164–176. Beijing: Kexue.

Li, M. 2018. *Social memory and state formation in early China*. Cambridge: Cambridge University Press.

Li Qingxin 李慶新. 2006. "Cong kaogu faxian kan Qin Han Liuchao shiqi de Lingnan yu Nanhai jiaotong" 從考古發現看秦漢六朝時期的嶺南與南海交通 [Archaeological perspective on Lingnan and South China Sea communications during the Qin, Han, and Six Dynasties periods]. *Shixue yuekan* 10: 10–17.

Li, T. 2011. "Jiaozhi (Giao Chi) in the Han Period Tongking Gulf." In N. Cooke, T. Li, and J. Anderson (eds.). *The Tongking Gulf through history*, 39–52. Philadelphia, PA: University of Pennsylvania Press.

–. 2015. "Swamps, lakes, rivers and elephants: A preliminary attempt towards an environmental history of the Red River Delta, c. 600–1400." *Water History* 7, 199–211.

Li Zaoxin 李灶新. 2019. "Guangzhou Nanyue guo gongshu yizhi chutu de qianbi ji xiangguan wenti yanjiu" 廣州南越國宮署遺址出土的錢幣及相關問題研究 [A study of coins excavated at the site of the Nanyue palace in Guangzhou and some related problems]. *Zhongguo qianbi* 6, 21–27.

Li Zhen 李珍, Qin Jie 秦婕, and Wang Xing 王星. 2019. "Guangxi Xing'an Qin cheng yanjiu" 廣西興安秦城研究 [A study of the Qin town at Xing'an, Guangxi]. In Zhongguo shehui kexueyuan kaogu yanjiusuo 中國社會科學院考古研究所 et al. (eds.), *Handai haishang sichou zhi lu kaogu yu Han wenhua* 漢代海上絲綢之路考古與漢文化 [*Archaeology of the Han-period maritime Silk Road and the Han culture*]. Beijing: Kexue. 210–218.

Liang Xuda 梁旭達, and Deng Lan 鄧蘭. 2001. "Handai Hepu jun yu haishang sichou zhi lu" 漢代合浦郡與海上絲綢之路 [Hepu Commandery and the maritime Silk Road during the Han period]. *Guangxi minzu yanjiu* 3, 86–91.

Liao Caixing 廖才興. 2019. "Guangxi Xiangzhou chutu Qin banlinag qianbi" 廣西象州出土秦半兩錢幣 [Qin *banliang* coins excavated in Xiangzhou, Guangxi]. *Wenshi chunqiu* 1, 59–61.

Liao Guoyi 廖國一. 2005. “Handai Hepu jun yu Dongnanya deng di de “haishang sichou zhi lu” jiqi gu qianbi zhengju” 漢代合浦郡與東南亞等地的“海上絲綢之路”及其古錢幣證據 [Numismatic evidence for the Hepu Commandery and the ‘Maritime Silk Road’ in Southeast Asia and other regions during the Han period]. *Guangxi jinrong yanjiu* special issue 2, 4–8.

Lin Yongchang 林永昌, Zhang Qianglu 張強祿, and Chen Jianli 陳建立. 2019. “Handai Lingnan tieqi de chuanbo yu yunshu fangshi: yi muzang suizang tieqi de kongjian fenxi wei shijiao” 漢代嶺南鐵器的傳播與運輸方式：以墓葬隨葬鐵器的空間分析為視角 [The spread of iron utensils in Lingnan during the Han period and their modes of transportation: From the perspective of the spatial distribution of tombs containing iron utensils]. *Nanfang wenwu* 3, 122–135.

Liu Rui 劉瑞. 2019. *Qin Han diguo nanyuan de mianxiang: yi kaogu shijiao de shenshi* 秦漢帝國南緣的面相——以考古視角的審視 [*The southern fringes of the Qin and Han empires: An archaeological investigation*]. Beijing: Zhongguo shehui.

Liu, S. 2001. “Jiankang and the commercial empire of the Southern Dynasties: Change and continuity in medieval Chinese economic history.” In S. Pearce, A. Spiro, and P. Ebrey (eds.), *Culture and power in the reconstruction of the Chinese realm, 200–600*, 35–52. Cambridge, MA: Harvard University Asia Center.

–. 2019. “The southern economy.” In A. Dien and K. Knapp (eds.), *The Cambridge History of China.* Vol. 2, 330–354. Cambridge: Cambridge University Press.

Manguin, P.-Y. 2004. “The archaeology of early maritime polities of Southeast Asia.” In I. Glover and P. Bellwood (eds.), *Southeast Asia from prehistory to history*, 282–313. London: Routledge.

Milburn, O. 2010. *The glory of the Yue: An annotated translation of the* Yuejue shu. Leiden and Boston: Brill.

Miyamoto Kazuo 宮本一夫. 2018. “Betonamu Kanbo kara mita Shi Kei seiken” ベトナム漢墓から見士燮政権 [The Shi Xie regime as seen from Han tomb evidence in Vietnam]. In Huang Xiaofen 黄暁芬 and Tsuruma Kazuyuki 鶴間和幸, eds. *Tō Ajia kodai toshi no nettowaku wo saguru – Ni, Etsu, Chyū no kōkogaku saizensen* 東アジア古代都市のネットワークを探る——日・越・中の考古学最前線, 83–95. Tokyo: Kyūko shoin.

Müller, S. 2004. “Gräber in Guangdong während der Zhanguo-Zeit.” In S. Müller, T. Höllmann, and P. Gui, eds. *Guangdong: Archaeology and early texts*, 23–49. Wiesbaden: Harrassowitz.

Murowchick, R. 2001. “The political and ritual significance of bronze production and use in ancient Yunnan.” *Journal of East Asian Archaeology* 3.1–2, 133–192.

Nan Qi shu 南齊書. 1972. Composed by Xiao Zixian 蕭子顯 (487–537). 3 vols. Beijing: Zhonghua shuju.

Nguyen, K. K. 1959/60. “Contribution of Indian civilization to Vietnamese culture.” *Indian Literature* 3.1, 23–27.

Payne, R. 2018. “The Silk Road and the Iranian political economy in late antiquity: Iran, the Silk Road, and the problem of aristocratic empire.” *Bulletin of SOAS* 81.2, 227–250.

Péronnet, S. 2013. “Overview of Han artefacts in Southeast Asia with special reference to the recently excavated materials from Khao Sam Kaeo in southern Thailand.” In M. Klokke and V. Degroot (eds.), *Unearthing Southeast Asia’s past: Selected papers from the 12th International Conference of the European Association of Southeast Asian Archaeologists*, 155–169. Vol. 1. Singapore: National University of Singapore Press.

Pigott, V. and R. Ciarla. 2007. “On the origins of metallurgy in prehistoric Southeast Asia: The view from Thailand.” In S. La Niece, D. Hook, and P. Craddock (eds.), *Metals and mines: Studies in archaeometallurgy*, 76–88. London: Archetype Publications.

Prüch, M., ed. 1999. *Schätze für Zhao Mo. Das Grab von Nan Yue.* Heidelberg: Braus.

Qu Yingjie 曲英傑. 2003. *Gudai chengshi* 古代城市 [*Ancient cities*]. Beijing: Wenwu.

Quan, H. 2012. “Archaeological discoveries relating to the maritime trade of the kingdom of Nanyue.” In J. Lin (ed.), *The search for immortality: Tomb treasures of Han Dynasty*, 37–41. Cambridge: Cambridge University Press.

Reinecke, A. 2009. “Early cultures (first millennium BC to second century AD).” In N. Tingley (ed.), *Arts of ancient Viet Nam: From river plain to open sea*, 23–52. Houston, TX: Museum of Finer Art.

Reinecke, A. and N. Lockhoff. 2019. “Yuenan nanbu chutu Xi Han shiqi jinqi de zuixin yanjiu” 越南南部出土西漢時期金器的最新研究. In Zhongguo shehui kexueyuan kaogu yanjiusuo 中國社會科學院考古研究所 et al. (eds.), *Handai haishang sichou zhi lu kaogu yu Han wenhua* 漢代海上絲綢之路考古與漢文化, 446–451. Beijing: Kexue.

Rolett, B., Zhuo Zheng, and Yuanfu Yue. 2011. “Holocene sea-level change and the emergence of Neolithic seafaring in the Fuzhou Basin (Fujian, China).” *Quaternary Science Reviews* 30, 788–797.

Sage, S. 1993. *Ancient Sichuan and the unification of China.* Albany, NY: State University of New York Press.

Sanguo zhi 三國志 [*Treatises on the Three Kingdoms*]. 2006. Composed by Chen Shou 陳壽 (233–ca. 297 CE). 5 vols. Beijing: Zhonghua shuju.

Shaffer, L. 1996. *Maritime Southeast Asia to 1500.* Armonk and London: M. E. Sharpe.

Shiji 史記 [*The Scribe’s Records*]. 2006. Composed by Sima Qian 司馬遷 (145 or 135–ca. 87 BCE). 10 vols. Beijing: Zhonghua shuju.

Stark, M. 1998. “The transition to history in the Mekong Delta: A view from Cambodia.” *International Journal of Historical Archaeology* 2.3, 175–203.

Stevens, C. and D. Fuller. 2017. “The spread of agriculture in eastern Asia: Archaeological bases for hypothetical farmer/language dispersal.” *Language Dynamics and Change* 7, 152–186.

Suishu 隋書 [*Documents of the Sui*]. 1973. Composed by Wei Zheng 魏徵 (580–643 CE). 6 vols. Beijing: Zhonghua shuju.

Sun Ji 孫機. 2008. *Handai wuzhi wenhua ziliao tushuo* 漢代物質文化資料圖說 [*Images and a discussion of the material culture of the Han period*]. Shanghai: Shanghai guji.

Swadling, P. 2019. *Plumes from paradise: Trade cycles in outer Southeast Asia and their impact on New Guinea and nearby islands until 1920.* Sydney: Sydney University Press.

Tan Zhuyuan 覃主元. 2012. “Xian Qin shiqi Lingnan Yueren de hanghai huodong yu duiwai jiaotong” 先秦時期嶺南越人的航海活動與對外交通 [Seafaring activities and external contacts of the Yue people of Lingnan in the pre-Qin period]. *Hainan shifan daxue xuebao (shehui kexue ban)* 3, 96–101.

Tanabe, S., K. Hori, Y. Saito, S. Haruyama, V. P. Vu, and A. Kitamura. 2003. “Song Hong (Red River) Delta evolution related to millennium-scale Holocene sea-level changes.” *Quarterly Science Reviews* 22, 2345–2361.

Taylor, K. 1983. *The birth of Vietnam.* Berkeley CA: University of California Press.

Vickery, M. 2003. “Funan reviewed: Deconstructing the ancients.” *Bulletin de l’École Française d’Extrême Orient* 90–91,101–143.

Wang, G. 2003. *The Nanhai Trade: Early Chinese Trade in the South China Sea.* Singapore: Eastern Universities Press.

Wang Zengquan 王增權. 2000. “Dui Xuwen Erqiaocun Han xianzhi yizhi de yixie zhiyi” 對徐聞二橋村漢縣治遺址的一些質疑 [Some questions about the remains of the Han-period county town at Erqiaocun, Xuwen]. *Lingnan wenshi* 4: 51–54.

Wei Weiyan 韋偉燕. 2017. “Yuenan jingnei Han mu de kaoguxue yanjiu” 越南境內漢墓的考古學研究 [Archaeological study of the Han tombs in Vietnam]. PhD diss., Jilin University.

Wei, W. and C.-C. Shiung. 2014. “Viet Khe Burial 2: Identifying the exotic bronze wares and assessing cultural contact between the Dong Son and Yue cultures.” *Asian Archaeology* 2, 77–92.

Weng, Q. 2007. “A historical perspective of river basin management in the Pearl River Delta of China.” *Journal of Environmental Management* 85, 1048–1062.

Wheatley, P. 1983. *Nagara and commandery: Origins of the Southeast Asian urban traditions*. Chicago, IL: Department of Geography, University of Chicago.

Wu, C. 2019. “A synthetic analysis of the Neolithic origins of Eastern and Southeastern Asia’s maritime Silk Road.” In C. Wu and B. Rolett (eds.), *Prehistoric maritime cultures and seafaring in East Asia*, 3–40. Singapore: Springer.

Wu, X., A. Hein, X. Zhang, Z. Jin, D. Wei, F. Huang, and X. Yin. 2019. “Resettlement strategies and Han imperial expansion into Southwest China: A multimethod approach to colonialism and migration.” *Archaeological and Anthropological Sciences* 11, 6751–6781.

Xiong Zhaoming 熊昭明. 2014. “The Hepu Han tombs and the maritime Silk Road of the Han Dynasty.” *Antiquity* 88, 1229–1243.

–. 2017. “Hepu faxian de Handai chengzhi ji gangcheng guanxi” 合浦發現的漢代城址及港城關係 [On the relationship between the Han town site discovered at Hepu and the port town]. *Zhongguo gangkou bowuguan kann zhuanji* 1: 21–26.

Xu Junming 徐俊鳴. 1979. “Woguo gudai haiwai jiaotong he maoyi duiyu Guangzhou chengshi fazhan de yingxiang” 我國古代海外交通和貿易對於廣州城市發展的影響 [The influence of China’s maritime communications and trade on the development of the city of Guangzhou]. *Zhongshan daxue xuebao* 4: 90–100.

Xu Longguo 徐龍國. 2010. “Nanyue guo shiqi Panyu cheng xiangguan wenti de tantao.” 南越国时期番禺城相关问题的探讨 [A discussion of issues related to the city of Panyu during the Nanyue period]. In Zhongguo shehui kexueyuan kaogu yanjiusuo 中国社会科学院考古研究所 and Guangzhou shi wenwu kaogu yanjiusuo 广州市文物考古研究所, eds., *Xi Han Nanyue guo kaogu yu Han wenhua* 西汉南越国考古与汉文化. Beijing: Kexue. 63–74.

–. 2013. *Qin Han chengyi kaoguxue yanjiu* 秦漢城邑考古學研究 [*Archaeological study of the Qin and Han cities*]. Beijing: Zhongguo shehui kexue.

Yang Kuan 楊寬. 2003. *Zhanguo shi* 戰國史 [*History of the Warring States*]. Shanghai: Shanghai renmin.

Yao, A. 2016. *The ancient highlands of Southwest China: From the Bronze Age to the Han Empire.* Oxford: Oxford University Press.

Zhang Rongfang 張榮芳, Zhou Yongwei 周永衛, and Wu Lingyun 吳凌雲. 2015. *Xi Han Nanyue wang mu duoyuan wenhua yanjiu* 西漢南越王墓多元文化研究 [*A study of the cosmopolitan culture reflected by the Western Han tomb of the king of Nanyue*]. Guangzhou: Zhongshan daxue.

Zhang Shiquan 張世銓. 1997. “Cong kaogu cailiao kan Guangxi gudai huobi jingji de fazhan” 從考古材料看廣西古代貨幣經濟的發展 [The development of the ancient monetary economy in Guangxi from archaeological perspective]. In Guangxi qianbi xuehui 廣西錢幣學會 (ed.), *Guangxi qianbi xuehui shinian wenzhang xuanpian: 1985–1995 nian* 廣西錢幣學會十年文章選篇：1985–1995年, 13–24. Nanning: Guangxi meishu.

Zhao Qingwei 趙慶偉. 1994. “Liuchao shiqi Guangzhou haiwai maoyi de jueqi yu gangshi de fanrong” 六朝時期廣州海外貿易的崛起與港市的繁榮 [The rise of maritime trade and flourishing of the port town in Guangzhou during the Six Dynasties period]. *Zhongnan minzu xueyuan xuabao (zhexue shehui kexue ban)* 2, 94–99.

Zhao Shande 趙善德. 2014. *Xian Qin Qin Han shiqi Lingnan shehui yu wenhua kaosuo – yi kaoguxue wei shijiao* 先秦秦漢時期嶺南社會與文化考索——以考古學為視角 [*A study of Lingnan society and culture during the pre-Qin, Qin, and Han periods: An archaeological perspective*]. Guangzhou: Jinan daxue.

Zhou Fanwen 周繁文. 2019. “Qin Han Panyu cheng yu “haishang sichou zhi lu” guanxi kao” 秦漢番禺城與“海上絲綢之路”關係考 [A study of the relationship between the city of Panyu and the ‘maritime Silk Road’ during the Qin and Han periods]. In Chen Xiaolu 陳曉露 (ed.), *Fanglin xinye: lishi kaogu qingnian lunji (di er ji)* 芳林新葉：歷史考古青年論集（第二輯） [*Fresh leaves in the spring forest: Collected papers on history and archaeology by the young scholars (second issue)*], 171–216. Shanghai: Shanghai guji.

Zhou Jiagan 周家幹. 2002. “Hepu ganti gugang zuo wei “haishang sichou zhi lu” shifagang tanyuan” 合浦乾體古港作為“海上絲綢之路”始發港探源 [The ancient dry dock at Hepu as the possible starting point of the ‘maritime Silk Road’]. *Guangxi difangzhi* 5, 71–73.

Zürcher, E. 2013. “Tidings from the south: Chinese court Buddhism and overseas relations in the fifth century.” In J. Silk (ed.), *Buddhism in China: Collected papers of Erik Zürcher*, 585–603. Leiden: Brill.

Mamta Dwivedi

7 Liminalities and Centralities of Early Historic Ports: The Gulf of Khambhat in Perspective

I Introduction: (Re)framing the frontier

The ports of the Gulf of Khambhat at the physical edge of the Indian subcontinent, where the land meets the sea, constitute the region discussed in this chapter. By virtue of being a physical edge, the coast and its ports are both an ecotone and a political, economic, and social frontier. Like other frontiers, the coast was also crossed, and ties to various commercial, religious, and diplomatic networks beyond the coast's physical edges were established. Such networks were not stagnant but dynamic, as can be seen in changes in technology, consumption habits, and also rituals. In this chapter, I examine the economic processes of the region by considering three broad variables: physical affordances and settlement scenarios, economic actors, and craft-specific networks of knowledge. Before I delve into a discussion of these variables, I will situate this research in its historiographical background.

I.1 Long-Distance Trade and Indian Ports

For more than a century, the long-distance trade networks in the Indian subcontinent have been presented in two narrative structures: in the context of Indo-Roman trade and as part of the Silk Road network between China and Rome. The theory that the Romans established Indo-Roman trade for the first time depended on the mistaken belief that the use of the monsoon wind for navigation was first discovered by a Greek sailor. This understanding has rightly been criticized for ignoring that the Arabs, Indians, and Phoenicians had been using the monsoon for navigation for centuries.[1] The Silk Road narrative, in contrast, placed Indian ports as the transit zone in the grand trade between China and Rome. This approach explained the steady growth of maritime trade between India and Rome as the result of the Romans trying to divert the land-based trade to the sea when it suffered from the hostilities of the Parthians that prohibited foreign trade through their realm.[2] The efforts of the Roman traders to establish trade contacts with the Indian littoral was highlighted as the main reason for the spread of urban character to the subcontinent. Barbarikon and Barygaza, as they are called in the Graeco-Roman literary tradition, were understood as the

1 Salles 1995. See also Krishnamurthy 2000, 85–90.

2 For example, Suresh (2007, 13–16) follows and explains this theoretical model.

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most important ports along the final leg of the Silk Road across the northwestern part of the Indian subcontinent.

The call to 'provincialize' Rome and look into economic processes in other parts of the Indian Ocean world has brought forth more adequate understandings of trade-related networks across the ocean.[3] The Roman impetus is no longer considered the dominant reason for the emergence of trade and urbanism in the subcontinent.[4] Moreover, since the important research in the 1980s and 1990s by Vimala Begley, who studied the port site of Arikamedu in its regional context, the Roman presence in Indian ports has been understood as only one part in the history of their development.[5] Following from this particular case, scholars have started studying ports and nearby spaces in their regional historical contexts. As the importance of regional factors came more strongly into focus, the economic development of the hinterland of a port came to be identified as the most important factor for their urban development. To mark this change of perspective, port cities came to be called 'forelands.'[6]

I.2 Ports in the Hinterland–Foreland Structure

Theories of long-distance connectivity at a global scale tend to rely on the idea of trickle-down effects of urban development as the explanation for an increase in trade. The understanding of ports in trade networks is an example in point. Owing to the *polis–chora* (city–hinterland) model of urban history in the Mediterranean, South Asian ports were understood as the *emporia* in a hierarchical relationship with their rural hinterland. Since much of the scholarship in recent years has moved away from Roman influence as the urbanizing factor of South Asian port cities, greater attention has been paid to preexisting networks in the hinterland. Yet the size and expanse of hinterlands affecting the development of port towns remains difficult to determine. Even those scholars who attempt to steer away from Romano-centric perspectives continue to rely on the Graeco-Roman *Periplus Maris Erythraei* (*PME*) for determining

3 For a stance on the former point, see Fitzpatrick 2011. For stances on the latter, see Salles 1995; Tchernia 1997.

4 For a short discussion on the historiographical survey on the role of trade in economic-history writing, see Dwivedi, vol. 1, ch. 15, 655–661.

5 Begley 1983; 1993.

6 The foreland–hinterland dichotomy, where every port has a defined hinterland, borrows a lot from our present-day understanding of the relationship between a commercial port and its surroundings. The 2005 report by Economic and Social Commission for Asia and the Pacific (UN) defines the port hinterland via various characteristics: as the area where a port has a monopolistic position; as the origin and destination area of a port; as the land-space where the port has clients and sells its services; as the market area for the port from where it sells and draws its cargo (Free trade zone and port hinterland development 2005).

the extent of hinterland connections.[7] Archaeologically, however, items traded through Barygaza and Muziris can be traced as far as the Ganga valley. Yet can such distant places be regarded as part of the 'hinterland' of the ports on the coast? Clearly this approach overlooks the role of various intermediaries – cities, monasteries, corporate bodies – that participated in the movement and distribution of goods in between distant economic centers.[8] Such intermediary organizations functioned because of multiple weak and strong network ties that facilitated the movement of goods between the two nodes. The foreland–hinterland approach has also been criticized for creating artificial distinctions between centers and peripheries.[9]

In light of these issues, this chapter positions itself in a scholarly context that investigates regional institutional and network structures as the background to economic changes in a port environment. It is in their regional contexts that the coastal sites of India grew as economic, political, and religious centers participating in long-distance maritime and inland networks of exchange. The two important ports of Barygaza and Astakapra, modern-day Bharuch and Hathab respectively, in the region around the Gulf of Khambhat have been chosen as the geographical focus for an approach that should be regarded as more generally valid.

While the regional development of the Gulf of Khambhat lies at the center of the present chapter, the larger networks connecting it to the sea and to other port cities need to be acknowledged. I do not propose a strict compartmentalization of the region's local and long-distance connections, which of course were intertwined, but I wish to pay due attention to regional developments as the preconditions for the development of the port cities. Although the temporal bracket of my analysis is focused on the period between ca. 300 BCE–300 CE. I have in some instances considered sources from outside the period under study in this volume. Some practices, such as the seasonal mobility of agropastoral groups, participation of forest dwellers in supplying forest products, textile production, and many religious practices, had long traditions going back even to the Bronze Age. The question of how these long-term traditions contributed to the accelerated urban development in the early centuries of the Common Era need to be kept in mind.

7 E.g., De Romanis 2012; S. Ghosh 2014; Chakravarti 2017. Ghosh classifies different kinds of hinterlands. Moreover, she distinguishes ports that have their own sustained supply of goods, of which Bharuch/Barygaza is an example, and those that seem to have served as ports of transit for the goods of the hinterland (e.g., Barbarikon). In addition, for a discussion on structures of political geographies of the port regions in the *PME*, see Seland 2010, 83–85.

8 Smith 2002, 139.

9 Bauer 2016; see also Brosseder and Miller, ch. 5, I; and von Reden, ch. 8, I, both this volume, with Granovetter 2005, esp. 33.

Map 1: Early historic sites around the Gulf of Khambhat. © Peter Palm.

II The Gulf of Khambhat: Topography and the Complexity of Port Sites

I start with a description of the physical features of the region and its navigational connections. A more analytical approach is taken in the later part of the section, where coastal sites are discussed in their regional context. With a more specialized microstudy of the settlements in two port regions, namely Hathab and Bharuch, I examine the intertwined possibilities of connections within the settlements in the respective urban clusters. Finally, I examine the viability of such case studies for better understanding the movement of goods and people in local contexts, the nature of change in consumption patterns, and the multidirectional movement of goods, whether locally produced or imported from elsewhere.

II.1 Topography of the Gulf of Khambhat

The Gulf of Khambhat, as a divider between the Saurashtra and Lāta regions in the present-day state of Gujarat, lies in the transitional zone between the tropical wet-littoral climate of Maharashtra in the south and the arid Rajasthan in the north. It has three types of physiographic formations that influenced how humans interacted with the landscape: the coastal lowlands, the plateaus, and the hilly regions.[10] Cutting through the coastal lowlands and the plateaus are various rivers and rivulets that form stretches of fertile alluvial zones.

The coastline in southern Gujarat is irregular, and the width of the coast varies between 5 and 30 km inland. The coastline areas also form geological creeks that provide natural habitats for a wide variety of reef flora and fauna, including finfish and shellfish.[11] It is characterized by fringes of saline wastes, mangrove swamps, tidal flats, and sand dunes at places in the north. The tidal flats also consist of coastal alluvia formed by the accumulation of fluvial silts at the mouth of rivers. The plateaued area of Saurashtra is the most extensive one, covering two-thirds of the peninsula. It includes areas with elevations between 150 and 500 m above mean sea level (msl).[12] Toward the center, the plateaus form hilly regions that are covered with timber-producing forest. The highest point at 1,117 m above msl is the Goraknath peak of the Girnar hills.

The soil profile varies according to three types of geological rock formations: (a) the fluviomarine deposits consisting of mainly brown soil, sand, and alluvium; (b) those

10 Pappu and Marathe 1982, 160.

11 For a detailed account of creeks in Saurashtra, their geological compositions, and their importance in fishery industry, see Kizhakudan et al. 2003.

12 Saha 2012, 65. Earlier writings, like Pappu and Marathe 1982, categorize plateaus as areas with elevation between 75 and 300 m.

from the Tertiary Period consisting of miliolite limestone and laterite; and (c) the Deccan lava traps from the Mesozoic Period. Even though the average annual rainfall of the Saurashtra region is 700 mm, which categorizes it as a semiarid climate, the geological constitution of the region created good aquifers and thus opportunities for shallow groundwater collection.[13] Aquifer-facilitated groundwater levels depend on the rainfall, especially the copious rainfall from the southwest monsoon that reaches the region. This geological feature allows us to contextualize the water-use strategies of the people of early historic Saurashtra in terms of their choices of crops they cultivated and their pastoral practice. It also explains their merit-based socioreligious practices around the funding of water reservoirs in this area, which will be discussed below.

II.2 Navigation in the Gulf

A long history of involvement in maritime activity is attested archaeologically in the region. The hydrodynamics of the gulf are greatly influenced by various river systems, forming an estuary along the coast, both perennial and seasonal.[14] At the mouth of these rivers, the gulf makes conditions favorable for various natural harbors on both its western and eastern coasts. In the Bronze Age (the Harappan period), the gulf harbored a commercial port town, Lothal, situated in the northern part of the gulf and upstream on the Bhogawo River. Various Bronze Age port sites have been identified along the rivers that drained into the gulf, some of which acquired the reputation of being important trade centers even later and most notably in the *PME*.

The presence of ports and their mooring points in long-term history has been established on the basis of stone anchors found in the waters around the Saurashtra region. For the early historic phase as well, stone anchors around multiperiod port sites in the Dwarka region, the Somnath-Prabhas area, and the Gulf of Khambhat indicate mooring sites that supported the traffic of sea-going vessels.[15] More than 150 surviving stone anchors have been discovered in waters around the Saurashtra region.[16] Underwater explorations have also yielded stone anchors off the sites of Miyani and Visawada located ca. 40 to 50 km away from Dwarka. The stone anchors can be divided into three types: composite, Indo-Arabian, and ring-stone. Although

13 Nair 2014. The rainfall in Saurashtra, however, is very erratic and ranges between 300 mm to approximately 1,200 mm annually (Hirapara et al. 2020, 165).

14 Bhatti et al. 2018, 2554. Of the most notable navigable rivers, the Shetrunji, Sabarmati, Mahi, Narmada, and Tapi will be mentioned most frequently.

15 Gaur, Sundaresh, and Tripati 2007, 428. These are the single-hole stone anchors that have also been reported from areas near other port sites in other states of the subcontinent, such as Tamil Nadu, Andhra Pradesh, and Odisha. See Athiyaman and Jayakumar 2004; Tripati and Patnaik 2008; Tripati et al. 2014; Tripati, Prabhaharan, and Behera 2020.

16 Sundaresh, Gaur, and Tripati 2011.

exact dating is difficult, the material of the anchors and comparative analysis have made at least a relative chronology possible.[17] The composite stone anchors, produced from local limestone, have been dated to the early historic period, while the Indo-Arabian style anchors, generally made of sandstone and basalt, have been dated to a later period.[18]

In the absence of evidence for any elaborate port structure, especially as wood and other organic material decayed and washed away, the stone anchors give us a tangible idea of anchorage points and their distance. Offshore mooring of sea-going vessels is also mentioned in the *PME*, which actually gives an astonishingly accurate description of the situation:

> [The] gulf which leads to Barygaza, since it is narrow, is hard for the vessels coming from seaward to manage ... On the right-hand side, at the very mouth of the gulf, there extends a rough and rock-strewn reef called Herone, near the village of Kammoni. Opposite it, on the left-hand side, is the promontory in front of the Astrakapra called Papike; mooring here is difficult because of the current around it and because the bottom, being rough and rocky, cuts the anchor cables. And, even if you manage the gulf itself, the very mouth of the river on which Barygaza stands is hard to find because the land is low and nothing is clearly visible even from nearby. And, even if you find the mouth, it is hard to negotiate because of the shoals in the river around it.
> For this reason local fishermen in the king's service come out with crews and long ships, the kind called *trappaga* and *kotymba*, to the entrance as far as Syrastrene to meet vessels and guide them up to Barygaza...[19]

In fact, elaborate port structures were often neither necessary nor sustainable at most of the natural harbors along the northwestern coast. As most the port towns were situated at estuaries, sedimentation and frequent flooding made large infrastructural work difficult to maintain. In addition, changes in the water level and the submerging of coastal areas are common phenomena in the littoral spaces.[20] As the majority of stone anchors have been found in the areas with a water depth of 5 to 15 m, offshore mooring of large vessels and then transfers in smaller boats were probably the most typical practice for landing on the coast for most of the early history of the Khambhat Gulf region.[21]

II.3 Settlements in Clusters

There is still no proper agreement on how to define an urban site in the archaeology of the subcontinent.[22] Identification of urban sites was long based on adaptations of

17 Sundaresh, Gaur, and Tripati 2011, 69.
18 Gaur, Sundaresh, and Tripati 2007, 438.
19 *PME* 44, trans. Casson 1989.
20 Gaur, Vora, and Sundaresh 2007.
21 Gaur, Sundaresh, and Tripati 2007, 429, 438. For a discussion on the use of smaller crafts for both sea and riverine navigation, see H. P. Ray 1995, 98.
22 Dwivedi, vol. 1, ch. 15, 653–655.

Childe's ten-point model, which was used as some sort of a checklist.[23] This approach may have helped to identify ports and political centers, as well as nodes of particular economic activity, such as centers of production, consumption, and distribution. But the typology fails to capture overlapping functions, or transformation over time, which do not surface in a typology. For example, Varma in one of her studies declared Kathiawar (Saurashtra) as one that had not gone through urbanization in the early historic phase.[24] She uses the convenient checklist, where she notes that the absence of a state-like structure there means the absence of secondary-state formation, which therefore is taken as a sign of lack of development of urban centers. She also states that the restricted craft specializations indicate very limited urban processes in this region. Her arguments at first seem clear and direct; however, this has a tendency to create bias against the study of this region. This approach neglects the region's role in various networks, e.g., religious and ceramic, that also act as knowledge networks supporting the mercantile movement. In a more recent study, in fact, Varma, along with Menon and Nair, has herself written against the labels 'rural' and 'urban' and argued for inclusion of social and archaeological aspects formerly considered invisible.[25]

In order to understand the economic processes in a region, it is more fruitful to identify ties of connectivity within and outside the region. Connections within a region can be imagined to have been maintained by local merchants, religious networks, or self-governing political bodies that were not necessarily integrated into an overarching administrative system or state, but which often shared the institutional structures. Such relatively resilient local networks likely operated between settlements in a region. In the archaeological profile, as will be discussed below, the radius of such local networks seems to have spanned about 50 km. Thus, the connected settlements may be understood as clusters.

Clustering of settlements is one of the noticeable phenomena in the region under study, and will be invoked by placing sites in their "settlement locality."[26] By the early historic period, most of the important cities had well-connected satellite settlements. An urban center was not marked only by a productive hinterland, but by being a part of well-connected clusters of sites as well. For example, within the modern-day district of Kanpur in Uttar Pradesh, 141 sites were identified as having experienced the early historic phase.[27] Similarly, in Bengal too complexes have been identified as

23 For the ten-point model, see Childe 1936. The adapted list of criteria for Indian contexts included markers such as fortification, varied crafts, luxury items of precious and semiprecious stones, the presence of script and forms of writing, sites falling on long-distance overseas trade routes, and coinage.

24 Varma 2008.

25 Varma, Menon, and Nair 2021.

26 This phenomenon was first explicitly observed by Chattopadhyaya 2003, 66–93.

27 Lal 1984.

settlement localities with a series of sites forming a composite urban microregion.[28] Other examples such as Sanchi, Anuradhapura, Tirunelveli, and Arikamedu also exhibit connected satellite settlements that formed urban clusters.[29] Arguably, this clustering of sites and their connectivity allowed the emergence and sustenance of villages with specialized craftsmen and servicemen. Villages specializing in one type of craft are also known from literary sources.[30] Below, I have examined the phenomenon of clustering in the area around the Gulf of Khambhat by considering the case of two port cities in the context of their neighboring settlements.

II.3.1 The Shetrunji River and Narmada River Settlement Clusters

Settlements used to be investigated in relation to their role within a political system, administrative hierarchy, or long-distance trade, or as agents of urban expansion and institutional change within state-formation processes.[31] Focused settlement studies, including those on the Gujarat region, are a more recent development. The scarcity of such studies is not just caused by particular disciplinary preoccupations, but also the fact that relevant sites are often beneath areas of continuous habitation. The size of modern cities is the result of gradual expansion and the incorporation of multiple neighboring settlements in their outskirts. So, for example, the modern city of Bharuch occupies 1,256 sq. km, with some parts under continued occupation for a long time in history.[32] Such expansions and incorporations in more recent times skew our understanding of settlement sizes, distances between them, and their relationship with each other.

Yet scholarship has taken a more positive turn in recent years. Ashit B. Paul, for example, has examined settlement data of surveyed and excavated sites in the Saurashtra region.[33] Atusha Bharucha has collated a list of early historic sites in different regions of Gujarat and studied settlement patterns in relation to material culture.[34] Bharucha observes that settlement sizes in Gujarat increased from west to east as one moves toward the Gulf of Khambhat. She associates this with the amount of annual rainfall and the presence of alluvial soils suitable for agriculture around the

28 Chattopadhyaya 2003, 68–69.

29 Rea 1904; Coningham 1999, fig. 120; Shaw and Sutcliffe 2003a; Chakrabarti 2010, 107, map 7; Basant 2012, 122, map 5.2.

30 For a short discussion, see Dwivedi, vol. 2, ch. 5, 225.

31 See, e.g., Seneviratne 1981. These ideas continue to influence the understanding of early historic studies: see, e.g., Basu Majumdar 2017.

32 A team of archaeologists planned to survey the occupied area of the city for signs of archaeological vestiges and laid trial trenches in the season of 2012–13. Indian Archaeology – A Review (IAR) covering years 2013–2014, 44.

33 Paul 2017.

34 Bharucha 2022.

river basins.[35] In comparison to other regions of Gujarat, the gulf region had a higher concentration of alluvial deposits allowing for more organized permanent settlement structures, whereas farther inland, the semiarid zones supported only less permanent structures.[36] Following on from these works, I examine two port sites that were part of riverine settlement clusters around the Gulf of Khambhat. One was located along the River Shetrunji on the eastern coast of the gulf near the city Hathab (known as Astakapra in the *PME* or Hastakavapra in Indic sources), the other clustered on the eastern bank of the gulf along the River Narmada around the city of Bharuch (Bharukaccha and Bhṛigukaccha in Indic sources).

Paul's detailed survey of early historic settlement in the lower Shertrunji River is a promising endeavor toward a better understanding of connections between settlements at a micro level.[37] The data indicate a clustering of sites that functioned as a unit of sites with varied specializations. The diffused form of different types of production, consumption, transportation, and other types of services suggests higher resilience to change in the face of changing political situations and transformation.

Two phenomena are worth noting: (a) the specialized single-craft industry per settlement, i.e., one or more settlements in the cluster seem to have specialized in one particular craft; and (b) their linear settlement pattern, i.e., most of the settlements and manufacturing sites were within easy reach along the river. Taken together, the settlements seem to have been part of networks fulfilling each other's needs and sustaining a network of economic activity facilitated by riverine travel.

The majority of the 22 settlements in the lower Shertrunji were located either in a linear pattern along the banks of the river or in the delta.[38] The most common type of settlement, nine in number, was a small agricultural site with an occupational area of 1–2 ha each. The settlements closer to the coast occupied a minimum of 6 ha each. The largest settlement in this cluster was Hathab, a port city, located on the coast with ca. 40 ha of occupied area and a possible population of ca. 8,000 residents.[39] Although much smaller in number, the five largest sites occupied 71 percent of the inhabited area with a total of about 22,800 residents, compared to an estimated 32,000 residents in the entire settlement cluster.

A typical urban center of the early historic period occupied between 50 and 300 ha.[40] The total area occupied by the Shetrunji River cluster extended over 160 ha. The maximum distance between the sites in the east–west orientation was ca. 45 km as the crow flies, and ca. 20 km in the north–south direction. The sites at the ends of

35 Bharucha 2022, 11.

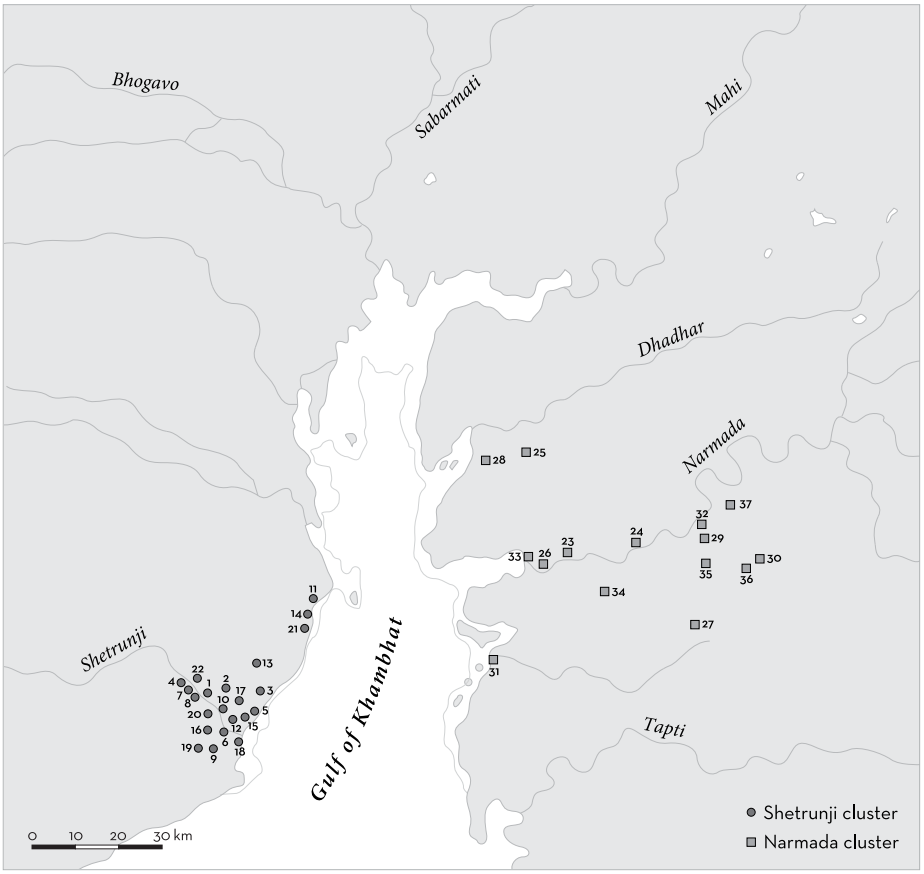
36 Bharucha 2022 has identified many semipermanent settlements that may have been used by mobile pastoralists practicing seasonal agriculture in northern Saurashtra and Kachchh.

37 Paul 2017. The Shetrunji inundates the Saurashtra peninsular, flowing 180 km in south-east orientation before discharging into the Gulf of Khambhat.

38 Paul 2017, 169–171. See also fig. 11 and table 13 in Paul 2017.

39 Paul 2017, 175–177 for the population estimates.

40 Smith 2006, 119.



Map 2: Sites in settlement clusters on the Shetrunji and Narmada rivers. In Shetrunji cluster: 1. Bandi Rohli, 2. Bhalar, 3. Bharapara, 4. Bhegali, 5. Chopara, 6. Dakana, 7. Dantrad, 8. Devila, 9. Phulsar, 10. Gorkhi, 11. Hathab, 12. Isora, 13. Katva, 14. Khadsaliya, 15. Padri, 16. Pavti, 17. Piparla, 18. Sartanpur, 19. Shevaldar, 20. Talaja, 21. Thalsar, 22. Timana. In Narmada cluster: 23. Bhadbhut, 24. Bharuch, 25. Chanchvel, 26. Chawaneshwar, 27. Dungri, 28. Gandhar, 29. Jhagadia, 30. Kadia Dungar, 31. Kantiyajal, 32. Limodara, 33. Mehgam, 34. Nagal, 35. Selod, 36. Shiyali, 37. Vanakpore, 38. Vejalpur. (For references, see n. 38 and n. 47). © Peter Palm.

the zone in east–west orientation were located along the coast, and those in north–south direction along the river. Their location near navigable waters must have reduced the travel time between them considerably. There were also settlements located in between, facilitating contact even further. Moreover, the economic zones of the settlements were not just limited to the physically occupied areas.[41] The settlements

41 Arguments in favor of links between spaces beyond the settlements and lifestyle of the settlers was already suggested in the 1990s (Ingold 1993; Roberts 1996, 12–13). This approach of integration of settlements in their respective landscape has been developed further in more specialized studies of

used the landscapes around them, such as fields, pastures, water bodies, forests, mountains, and so on. The residential areas, therefore, were part of larger economic zones with various types and rhythms of interaction. Considering different types of interactions, the distances between the settlements were much shorter in practice than seen in the surveys.

Hathab and Talaja are two settlements that seem to have filled specialized roles in the Shetrunji river system. Hathab, a port site, is not directly located at the bank of the Shetrunji, but its position at the coast connects it with other settlements.[42] Various seals with the city's name were found at the site, suggesting the presence of an organized port and/or storage space.[43] Talaja, by contrast, on the west bank of the Shetrunji, is famous for its rock-cut caves on a singular hill, which were associated with Buddhism. The caves are a cluster of 36 excavated chambers at different levels of the hill with various water reservoirs, of which about 20 have survived.[44] Possibly a pilgrim center, or habitation sites for Buddhist monks and followers, the site served a specialized religious role in the settlement cluster. The broader socioeconomic roles of these institutions have been discussed in volume 2 of this Handbook.[45]

About 70 km away from Hathab, ca. 30 km across the gulf and a further 40 km upstream on the Narmada River, lies Bharuch. The Narmada is the longest westward river of the subcontinent, flowing through the uneven terrain of the central Indian plateau until it reaches the south of Gujarat (the Lāṭa region). It is navigable only in certain sections, one of them being the last 150 km before flowing into the Gulf of Khambhat. The lower Narmada Basin has been of archaeological interest mostly due to the nearby location of pre- and protohistoric sites of the Harappan period.[46] However, for the early historic period the currently published data on the lower Narmada Basin are not comparable to those of the Shetrunji Basin. Nevertheless, based on previous surveys the profile of sites in this area also suggests the phenomenon of settlement clustering. Nineteen sites have been reported from the lower Narmada Basin/present-day Bharuch district since the 1950s, of which 15 are identifiable on the ground (map 2).[47] However, there may have been other early historic settlements located under the currently occupied areas, as in the case of the city of Bharuch.

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landscape, more prominently in the archaeology of rural settlements. This was also reemphasized in the South Asian context by Varma, Menon, and Nair 2021, 284–285.

42 Pramanik 2004, 134.

43 Pramanik 2005.

44 Fergusson and Burgess 1880. For images of the context and details of the Talaja caves, see in David S. Efurd's collection: https://www.jstor.org/stable/community.13410599.

45 Dwivedi, vol. 2, ch. 5, 228–232; ch. 10, 517–519.

46 Gaur 2000.

47 The 15 sites identifiable at present are Bharbhut/Bhadbhut, Bharuch, Chanehvel, Chavaneshwar, Gandhar, Jhagadiya, Kadiya Dungar, Kantiyajala, Limodra/Limbodra, Mehgam, Nagal/Nangal, Selot/Selod, Shiyali, Vanakpur/Vanakpore, and Vejalpur. Indian Archaeology – A Review (IAR) covering years 1957–1958; 1958–1959; 1959–1960; 1965–1966; 1966–1967; 1967–1968; 1968–1969; 2012–2013; 2013–2014. See also A. Ghosh 1990; Varma 1990; Gaur and Sundaresh 2016.

Of the 15 sites in the lower Narmada cluster, eight are on the bank of the river, three are at a distance from the main river, but on or closer to the coast, and four are further inland. Aligned along the river, they form a linear-patterned settlement cluster in which the maximum distance between the sites at the two extreme ends is approximately 50 km as the crow flies. At present, the limitations in our data do not allow us to satisfactorily discuss the functions of each settlement in this cluster. However, two of them allow us to attribute at least one functional specialty. One is Bharuch, one of the eight sites situated on the banks of the Narmada. Apart from Bharuch's mention in the *PME* as an important port of trade, we also get hints in Indic literature about merchants arriving at Bharukaccha for their journeys onward by sea. Sailors and captains originating from Bharukaccha also recorded their presence in inscriptions on the island of Socotra, close to the Horn of Africa.[48] In addition, the town has a long tradition of coinage, and this was likely a site of dynamic interactions and exchanges (for which see further below).

The other site in this cluster, Kadiya Dungar, is situated farther inland, 40 km southeast of Bharuch, and is known for a rock-cut cave complex with seven excavated chambers dating between the first and second centuries CE (fig. 1).[49] The rock surface above the entrance of one of the rock-cut chambers bears a carving of an apsidal top, with a seemingly similar structure reminiscent of a *stūpa* (fig. 2). In addition, one of the caves bears a donative inscription in Brāhmī by a Kṣatrapa named Vīradāman that has now weathered in parts.[50] It is possible, therefore, that the cave complex was a rendition of a Buddhist monastic complex with *vihāra* (residential spaces), *caitya* (prayer hall), and *stūpa* (resting place for relics). Such styles, at times on a bigger scale, are found at other rock-cut complexes at other sites in Gujarat and more frequently in the Deccan. With some caution, and the hope for additional research in the area, we may suggest that Kadiya Dungar was functionally a specialized site in its cluster as Talaja was in the Shetrunji settlement cluster.

The functional specialties of a port and a religious center, as discussed in the two examples in each cluster, make them points of convergence in their own clusters and beyond. The two clusters also have other settlements with other craft and functional specialization that determined the nature of social and exchange networks they participated in, both within the cluster and outside. For example, in the Shetrunji cluster, Padri has been noted for its salt manufacturing since the Harappan period.[51] The site also had one of the earliest reported shrines of a fertility goddess, Lajjā Gaurī, possibly associated with healthcare for women.[52] Another interesting example is of Jhagadiya in the Narmada cluster, which was the only place where agate was processed into

48 See Strauch 2012, 11:12, 11:17, 11:25, 14.02, 16:19, 17:01.

49 IAR covering years 1966–1967, 65.

50 Bharucha 2022, 111.

51 Shinde, Shirvalkar, and Rajaguru 2008.

52 See section III.2 for details.

Fig. 1: Rock-cut caves on the hill at Kadiya Dungar. Photo: © B. K. Venkatesha.

carnelian with a rich uniform color.[53] Therefore, the relationship between any two or more settlements was determined by their functional specialties and textured by the frequency of mobility as well as the types of actors involved. In that case, should these settlements within a cluster be organized in a fixed hierarchical order?

Scholars have abandoned the practice of arranging settlements within unchanging unidimensional hierarchical relationships. This is also applicable to the role(s) of various settlements in a cluster.[54] The rank of a settlement specializing in a certain function is not constant over time, but flavored by various specificities. The functional specificities, in particular, often strengthen and, at times, weaken the types of ties between and within two settlements. Furthermore, within these relationships of different scales there could be a power imbalance.[55] The networks, thus, cannot be explained and understood in pure, uniformly hierarchical and never-changing ties.[56]

One way to observe this is to take an example of certain commodities that circulated in these clusters. Various sites in the settlement clusters discussed in this section have yielded amphorae and other rare foreign-origin goods (sec. III.4.3). They have therefore been explained as intermediaries between the larger centers to which the commodities were moved.[57] However, this approach overlooks the consumption potential of the clustered sites themselves. Their consumption, though smaller in scale

53 Bharucha 2022, 111.

54 Crumley 1995, 2015 was the first to argue in favor of multi-point ranking potentiality. Since then, scholarship has furthered away from the 'central place' theory.

55 The term power, here, refers to the variety of social powers that have been discussed by Mann (1986).

56 Cumming (2016) explains the dynamic nature of social relations and how hierarchical and heterarchical relations are neither absolute nor constant.

57 Bharucha 2022, 128.

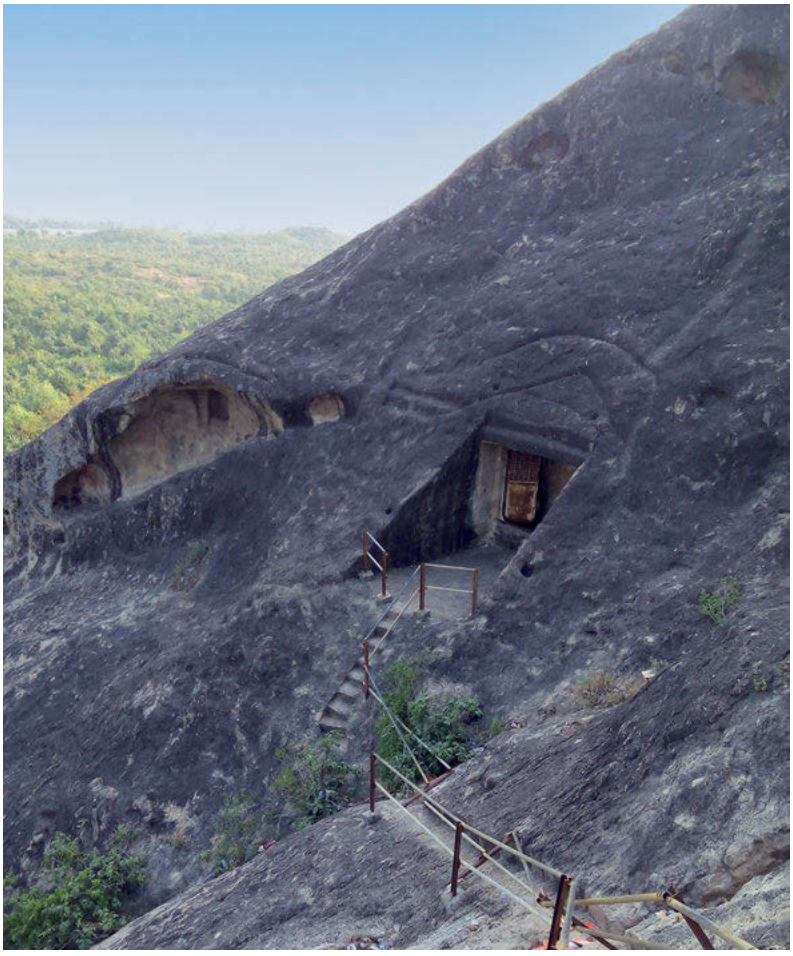


Fig. 2: Carving of an apsidal structure above the entrance of a rock-cut chamber at Kadiya Dungar. Photo: © B. K. Venkatesha.

in comparison to the demands in larger cities, was not negligible in sustaining the channels of demand and supply. It is likely that through their location they had privileged access to foreign and prestige goods, which improved their status in an urban hierarchy. The role of the smaller settlements and their close connection to larger settlements in the coastal clusters together may have determined the economic position of the cluster in the region.

While no more can be said with the current state of knowledge, dispersed consumption and production potentials in clustered settlements were probably typical for the economic structures of early South Asia more generally and should be taken as an economic factor especially in those regions where state-like institutions were not the primary players in economic processes.

III Actors and Their Networks of Connectivity

Zooming out from the microanalysis of two coastal settlement clusters, this section is dedicated to identifying various actors maintaining regional and long-distance networks. Here, I argue that these agents of connectivity, along with various strategies of connectivity, developed institutions that shaped ports as points of convergence.

III.1 Political Actors

Our knowledge of the polities in the early historic Saurashtra region is rudimentary. Saurashtra had come to be a part of the western province under the Mauryas (ca. 315–180 BCE).[58] After the Mauryas, the region may have been within the sphere of numismatic influence of the Indo-Greeks. The presence of local coins (sec. IV.4), however, indicates a degree of political autonomy until the Indo-Scythians or Śakas took over the region. Also called the Western Kṣatrapa, they ruled over the western and central parts of the subcontinent between the first and fourth centuries CE. It is likely that Bharuch was an independent city until it was captured by the Nahapāna from the Kṣaharata family of the Indo-Scythians. Regional Jaina texts refer to the capture of Bharukaccha by Nahapāna (Manbanos in Greek), one of the Kṣatrapa rulers who expanded into the south during the first century CE. From the Jaina texts too, it appears that the town was captured because of its status as a wealthy port.[59] Scholars also believe that Nahapāna's control over Bharuch led the Sātavāhanas to control the traffic at the mouth of the Gulf, diverting trade into Surat and other coastal ports nearby.[60]

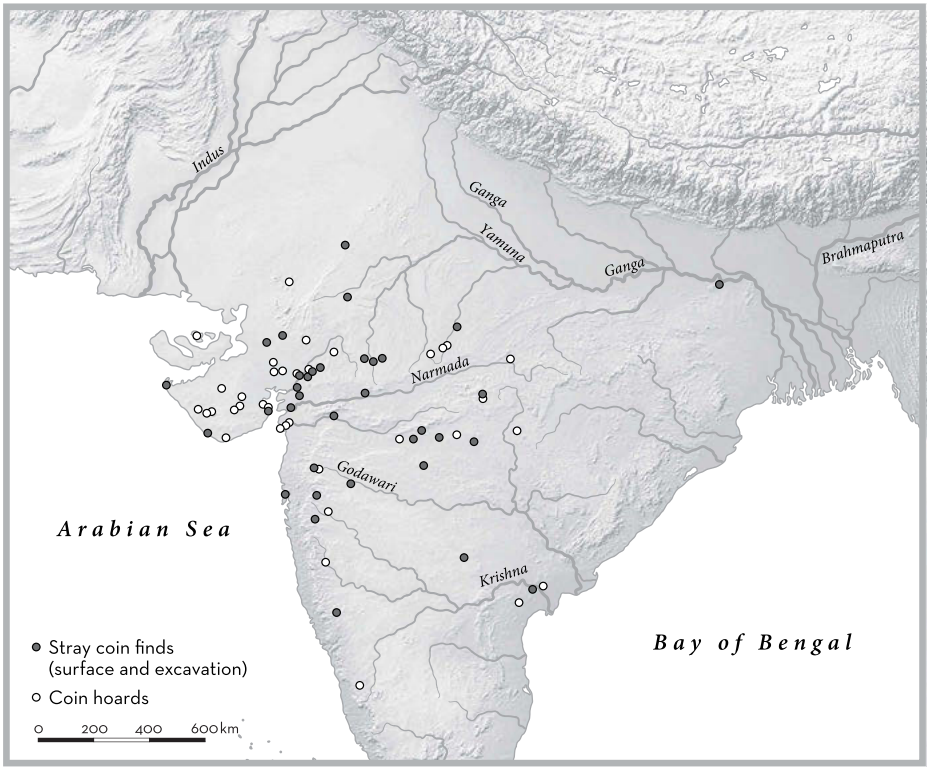
The power of the Kṣatrapas reached into the modern states of Rajasthan, Madhya Pradesh, and Maharashtra up to the northern Konkan region. However, the distribution of their coin finds shows that they were dominant above all in the region between Saurashtra and Ujjaini (map 3), while in areas south of Saurashtra, their coins are found along with those of the Sātavāhanas. Apart from the epigraphic evidence attesting political rivalry between the Kṣatrapas and the Sātavāhanas,[61] the victory of the latter is also expressed in the coins of the Sātavāhana king Gautamīputra Śātkarṇi (late first to early second century CE). Said coins were overstrikes on issues of Nahā-

58 Mauryan presence, or at least contact, is attested by the Aśokan rock edict at Junagarh from the second century BCE. In addition, a later inscription dated ca. 150 CE at the same location also bears a recollection of dam repairs by the respective governors under both Candragupta and Aśoka. Mirashi 1981, no. 51.

59 For the bibliography and references to the Jaina texts, see Bhandare 1999, 13.

60 Seland 2010, 54–55.

61 In addition to the Śātkarṇi–Nahapāna battle, the two dynasties clashed even later. Mirashi 1981, 35–36.



Map 3: Distribution of Kṣatrapa coins (after Jha and Rajgor 1994; IAR, various volumes from 1990 onward). © Peter Palm.

pana. An example here shows the *ujjaini* symbol overstruck on one side, and six arched hills with a crescent moon over the ruler's portrait on the other (fig. 3). It has often been suggested that the conflicts between the two powers raged over the port of Bharuch. However, even after the reported victory of the Sātavāhanas over the Kṣatrapa, the Sātavāhana either did not capture or could not retain the Saurashtran coast for long. Other than Śātkarṇi's overstruck issues, no other Sātavāhana issues have been reported from the Gujarat region so far.[62] More likely, the control of the Sātavāhanas continued to be concentrated along the west coast of Maharashtra and the central and eastern Deccan. This meant control over the routes in central India, for which the Sātavāhana king adopted the titles *dakṣiṇāpathapati* and *dakṣiṇāpatheśvara* (lord of the southward road).[63] The lack of integration of the Gulf of Khambhat into this wider sphere of connectivity under Sātavāhana control confirms regional

62 No undisputed and satisfactorily identified coinages of the Sātavāhanas have yet been found in the coastal parts of Saurashtra; see Dutta 1990; Bhandare 1999.

63 See the second-century CE cave inscription from Naneghat: Mirashi 1981, no. 3.

Fig. 3: Nahapāna coin overstruck by Gautamīputra Śātkarṇi, 119–126 CE (not to scale). ANS 1944.100.55902. © American Numismatic Society.

economic structures and networks influencing the gulf region.[64] Rulers were interested in the fiscal advantages of trade, but neither controlled nor initiated trade journeys.[65] Fiscal advantage from trade was also related to how the ports were administered.

III.1.1 Intraport Administration and Interport Relations

Despite the long history of Gujarat's participation in maritime networks, the absence of urban structures comparable to those of Mediterranean ports has made the archaeological identification of material infrastructure at ports rather difficult. Even though the creeks of the gulf made favorable conditions for natural harbors, they were affected by heavy silting at river mouths, rocky outcrops, and higher tidal range around creeks.[66] In such conditions, how could a port of Bharuch's reputation function?

In this section, I make some informed speculations about the possible functioning of the ports of the Gulf of Khambhat. I also point to certain collective choices and compulsions that were relevant in defining the institutional role of ports. To achieve that, first, I describe how the normative texts conceive the internal functioning and administration of a port. Second, by bringing into consideration the presence of multiple port sites within the relatively small area of the gulf,[67] I discuss the interport relationships in the gulf.

In the absence of specific evidence from this region, the instructions of the *Kauṭilīya Arthaśāstra* (*KA*) are useful for understanding the possible infrastructural and logistical functions at a port. Such functions were to be carried out by specific offi-

64 Ray 2019a.
65 Ray 2019a, 100.
66 Gaur, Sundaresh, and Tripati 2007, 429, 438. The authors point out that the tidal range in the gulf region is the highest in India and second highest in the world (Gaur and Sundaresh 2014).
67 The north–south indentation of the Gulf of Khambhat is ca. 140 km; Bhavsar et al. 2014, 1000.

cials, called superintendents of the port (*pattanādhyakṣa*), who levied fixed custom duties with a mention of different rates for the merchants sailing to the ports, were in charge of repairs, docking, and scheduling the arrivals and departures of ships, and assigned captains and crew to the ships protecting the waters against enemies and possibly pirates.[68] Noteworthy is the role of the superintendent of shipping (*nāvadhaykṣa*), who was in charge of managing the operations of seafaring vessels (*samudra samyāna*) as well as ferries at the mouths of rivers and other bodies of water further inland.[69] This situation described in the *KA*, regarding the operation of royal ferries and duties paid by the ferries to operate, is somewhat similar to what the *PME* describes: vessels had to wait for the fishermen with their boats to lead their way to Barygaza.[70] Likely, large seafaring vessels, which moored offshore, had to use the ferry services to alight both sailors and cargo. This kind of mediation by local ferry systems was perhaps also useful for keeping track of the goods and taxes, as unstamped cargo and cargo with excess load were to be confiscated.[71]

Seals (*mudrā*) could be used to stamp the cargo. Various terracotta seals found at Hathab help us to conjecture the administrative functioning of the port towns better by suggesting the presence of an official, ruler, or even a guild leader. Dated to the first century CE, one seal bears a name and identifies him as an official of Hathab.[72] However, a much larger number has been reported from the period between the third and fourth centuries. About 300 in number, these sealings bear remnants of personal names and sometimes city names (*hastakavapra*) inscribed in Brāhmī.[73] The usage of seals by cities, monasteries, and professional corporate bodies is mentioned quite commonly in literary sources, alongside which various sites in the region have yielded a number of terracotta seals and sealings bearing the names of cities that perhaps had the status of city-states or *naigama*, corporate bodies involved in administration, operating in the early centuries CE.[74]

Apart from the internal regulations of a port, the relationship between neighboring ports, situated closely together, is worth mentioning. These ports may have been commercially complementary, auxiliary, or competitive to each other at different points in time. Some archaeologists suggest that auxiliary ports in the Saurashtra region may have served as buffer trading zones when the main ports had suffered from seasonal silting.[75] Accordingly, offshore mooring might have allowed contact and exchange with more than one port at a time. Considering the locations of the ports,

68 *Kauṭilīya Arthaśāstra* (*KA*) 2. 28. 8–13.

69 *KA* 2. 28. 26.

70 *PME* 44.

71 *KA* 2. 28. 25.

72 She dates the seal in Pramanik 2004, 134. In a later publication, Pramanik (2005, 107) rereads the seal as "*swāmi sanghadamana hastapradhikari rajnīya.*"

73 Pramanik 2005.

74 For a discussion on cities as corporate entities, see Dwivedi, vol. 2, ch. 5, 226–228.

75 Gaur, Sundaresh, and Tripati 2013.

Hathab in the western coast of the gulf, Bharuch on the east, and Khambhat and Nagara on the north, mooring offshore provided an opportunity to access any of the four ports. Also, the fact that the approximate distance between any two of these ports is no more than ca. 75 km (as the crow flies) makes their relationship with each other more important.

Nagara is a good example of a relatively smaller port or perhaps even a feeder port. Though not mentioned in the *PME*, Nagara was also an important commercial center and the largest site in the Mahi and Sabarmati basin. The archaeological remains indicate that it may have been a manufacturing center for crafts related to lapidary skills, shell working, glass smelting, and even textile production.[76] The presence of amphorae sherds in the archaeological assemblage also indicate its connectivity with neighboring ports, with Nagara being the gateway to the inland northern route to Rajasthan via Vadnagar and Shamalji.[77] Similarly, within the Narmada cluster, Gandhar and Kantiyajal as the northern- and the southernmost coastal sites, respectively, may have also acted as smaller fishing settlements and feeder ports to Bharuch.

Alternatively, the prevailing practice of piracy that was still observed in more recent periods suggests the possibility of rivalry and competition between the ports. Remnants of fortifications of the port sites, especially Hathab and Bharuch, also attest to the possibility of precautionary measures adopted by the port cities.[78] Sātavāhana and Śakas are noted to have competed for trade by blockading passes, and they perhaps also solicited the cooperation of fishing communities to direct the ships toward their respective ports in present Maharashtra and Gujarat regions, respectively.[79] The adoption of such strategies indicates that not all ports were always complementing each other.

III.2 Mobile Pastoralists and Forest Communities

Gujarat neighbors the arid area of present-day Rajasthan in the north and shares its eastern border with forested areas of Madhya Pradesh and Maharashtra. The plateaus, though not very fertile, provide for a vast foraging ground, and the higher altitude areas, especially around the Narmada, support forested areas. From both these areas, frequent movement of people and goods to coastal settlements sustained regular channels of intraregional connectivity.[80] Both these groups – mobile pastoralists and forest dwellers – sustained different patterns of long-term interactions be-

76 Bharucha 2022, 120–121. Hawkes (2021) associates the presence spindle whorls with textile production.

77 Bharucha 2022, 118–121.

78 For evidence of defensive fortification at Hathab, see Pramanik 2004, 137; for Bharuch, see IAR covering years 1959–1960, 19 and Keller 2015, respectively.

79 Seland 2010, 54–55.

80 Stiles 1993; Agrawal 1999.

tween coastal settlements and inland areas. The actual literary and material evidence for understanding the role of actors involved in the process of production, procurement, and supply is scarce. Therefore, the following is based on the fuzzy evidence of our sources and interdisciplinary studies of long-term practices in these regions.

Anthropological studies show that after the monsoon rain in Gujarat, the agropastoral groups from Rajasthan move every year to the replenished pastures in Gujarat, especially in years of drought and crop failure.[81] Unlike the irrigated agriculture in Ganga and the Indus valleys, agriculture in the Gujarat region was dry farming, with pearl millet (*bajra*) and sorghum (*jowar*) as the subsistence crops in the region. These drought-resistant plants, which mature within a short period of 85–90 days and provide abundant fodder, were adopted as the main type of food grain in the region.[82] Animal rearing and herding was also practiced by the sedentary agrarian community. However, it is not unlikely that a large number of those tending animals were semi-sedentary pastoralists who were mobile only seasonally.

A study of the movement patterns of agropastoralist shepherds in this region has shown that they migrate seasonally from Rajasthan to the greener pastures of Gujarat and other neighboring states. Their migration period lasts for 7–10 months on average and covers between 750 and 1,500 km.[83] In modern ethnographic studies, these agropastoral mobile groups of Gujarat/Rajasthan have been found to be market agents. The mobile groups were familiar and up to date with changes in technology as a result of constant interaction with sedentary settlements. Even in modern times, their organizing principles of movement continue to be kinship based. During their movement, they would engage with settled communities by providing animal products, labor, and at times transport facility.[84] Even in the early historic phase, it was likely that the mobile pastoral groups acted as mediators of knowledge and technology transfer through their repeated patterns of movement. The close interaction between settled communities and the mobile agropastoralists can also be ascertained from the pottery remains found at the temporary dwelling sites, where the pottery culture was found to be similar to those used by the settled community for storage and transport purposes.[85] It would not be wrong to suggest that the mobile agropastoral groups were important actors in maintaining steady and repetitive exchange and transport networks in this region.

Forest products are most commonly cited as goods being exported from the west-coast ports. The relationship between forest-dwelling communities (*aṭavika*) and the state, for the acquisition of forest produce by the latter, was based on a long-term

81 Agrawal 1999, 82–84.

82 Sonawane 2000, 138.

83 The observations on these seasonally mobile herding groups are based mainly on the socioeconomic practices of the Raikas and Rabaris of Rajasthan and Gujarat, respectively; Casimir 1996, 155–156.

84 Agrawal 1999.

85 Bharucha 2022, 87–88.

and constant interference by state representatives through both conflict and cooperation.[86] South Gujarat, especially the Narmada-Tapti valley, is known for its forest cover in ancient sources. Identified as the *saurāṣṭraka vana*, this forest was one of the eight elephant forests of the subcontinent.[87] These forests were the local source of timber, arecanut, and ivory besides other plant and animal products.[88] The *vana* type of forest is a relatively tamed or cultivated form in comparison to *araṇya*, which is the wild form. Active intervention in forest areas for commercial production has already been explained well by Morrison and Lycett in the context of the Western Ghat forests.[89] They have also shown that acquisition of commercial forest products was a result of active intervention by foragers and gatherers, who practiced selective cultivation within the forest. They suggest that the forest-dwelling communities practiced unconventional methods of cultivation and plant care throughout the production process. Forest dwellers were involved in multiseasonal cycles of growing, caring, harvesting, drying, and finally shaping plant-based commodities in transport-friendly form. In addition, forests were zones for the capture of live wild animals as well as for their hides and fur.[90] Stiles also proposed that the hunting-gathering communities brought commodities to the city markets and traded them for grain, salt, metal tools, cloths, etc. River transport may also have allowed easy transport of forest products. For example, timber running on the Narmada was a viable method of transport from forest regions further inland. In the nineteenth century, vessels of up to 40 tons plied the last 100 km stretch of the Narmada River down to Bharuch, allowing for the possibility of substantial riverine transport in the early historic period too.[91]

III.3 Religious Networks

The region connects to the other parts of the subcontinent through its multireligion heritage. Buddhism, Jainism, Shaivism, and mother-goddess cults have been attested in archaeological assemblages during the early centuries CE.[92] It is not improbable that the sacred spaces in areas around the gulf were shared. Shared ritual sites and sacred spaces also relate to the sharing of resources, especially hydraulic infrastructure. In the early historic phase, when almost all of the surviving architectural remains of the subcontinent are of a religious nature, religions and their material ex-

86 See Parasher-Sen 1998 for a discussion on normative strategies of negotiation and interference by the state in forested regions.

87 Trautmann 2009. See also Stiles 1993 for the possible extent of the catchment area of the forest.

88 The floral profile of the region involves teak, *babul*, *semal*, and a variety of other semideciduous trees, and nearer the coast, coconut, arecanut, and others, see Paul 2017, 10.

89 Morrison and Lycett 2013. See also Morrison 2002.

90 Stiles (1993, 161) lists the wild animals in demand in the Mediterranean region.

91 Deloche 1996, 36.

92 Ray 2019a; Mishra and Ray 2019.

pressions were important vehicles of knowledge networks as well as material transfer. As will be discussed in detail below, the worship of some of these deities is associated with seafaring activities, and others with religious organizations, acting perhaps as trustees if not controllers of artificial water reservoirs.[93] But before we discuss religion as a network, I will briefly outline the religious milieu of the areas around the Gulf of Khambhat in the early historic period, which connects the region to larger networks of knowledge and ritual.

The coastal regions of Gujarat had a strong religious influence. While Buddhist, Jaina, and other elements of the compound Hindu traditions were very clear threads of interregional belief systems in the region, folk deities also had an important place in the material milieu. One example of a folk religion is that of fertility-goddess worship. The worship of Lajjā Gaurī, the goddess depicted in the squatting position of giving birth, has its roots in the protohistoric culture that spread within the subcontinent by the early medieval period.[94] Her worship may have been related to folk traditions of fertility medicines, maternal care for women at various stages of pregnancy, and childbirth assistance. A type of punch-marked coin with representations of the squatting goddess had circulated in this region between 200 and 50 BCE.[95] Also, one of the earliest known shrines (first century BCE) dedicated to her has been found at Padri, one of the sites in the Shetrunji cluster (map 2).[96] By the sixth century CE, 12 more sites in the southern part of Gujarat show evidence of her shrines.[97] A second example of the extra-local network of goddess worship is associated with the seafaring communities. At various sites around the coasts of Khambhat, shrines of a mother goddess for the seafaring community have been reported, and she is identified as Vahāṇvaṭī Mātā or Śīkotarī Mātā.[98] The fishing communities, such as Khavas and Kolis of the modern period, paid homage at the temple during the fishery season. This sea-goddess cult has also been associated with the cult on the island of Socotra in the western Arabian Sea.[99]

The sixth-century text *Skandapurāṇa*, which mentions the worship of the goddess in the area of the Gulf of Khambhat, also recalls that the sage named Bhṛgu, one of

93 For example, the networking role of Buddhism and Buddhist monasteries has been mentioned in Dwivedi, vol. 2, ch. 14, 749–751.

94 For the regional renditions of the cult and its expanse known from archaeological contexts, see Korisettar et al. 2010.

95 The coin type depicting the squatting goddess has been previously identified as Lakṣmī, see van't Haaff 2004, 24, 33–34. However, based on the region's close association with Lajjā Gaurī, I propose that the goddess depicted in squatting position could be Lajjā Gaurī.

96 Shinde 1994.

97 Shinde 1994, 484. See also Mishra and Ray 2019, table 3.3.

98 Gaur and Sundaresh 2016.

99 Strauch 2012, 390–403. One of the possible early dates for the textual record of the deity comes from the *Skandapurāṇa*, dated approximately between the sixth and seventh century CE. For the text's date, see Cecil 2020.

the seven primal sages in the Hindu tradition, had migrated to and settled on the banks of the Narmada. It is for this reason that the city was called Bhṛgukaccha, the coast (*kaccha*) being named after Bhṛgu.[100] Within the excavated area of Bharuch, a religious site dedicated to the sage Bhṛgu has been found. In addition, at Hathab, a spiral stepwell with the walls descending like the 'coil of a snake' is identified with the early worship of Viṣṇu.[101] At Prabhas Patan, the coastal site at the extreme west coast of the Saurashtra region, the Shaivite culture is attested in the archaeological remains. One of the Kṣatrapa inscriptions also identifies the city as a *tirtha*, a city of religious pilgrimage.[102]

Even though the presence of Buddhism and Jainism in the area is well attested in the early historic period, full-fledged *stūpa* structures have not been found within a 70-km radius of the coast so far. Instead, five rock-cut complexes have been found in the Saurashtra and Lāṭa areas (map 1). The identification of Jaina architecture and rock-cut caves has been difficult for the early historic period; however, the sculptural and textual traditions have shown the presence of Jainism.[103] Buddhist caves, however, have been identified more easily. These cave complexes were part of the larger Buddhist religious and route network that was shared with traveling mercantile groups. Established and maintained mostly by religious donations for merit, the rock-cut cave shelters in the plateaued areas were the result of both royal and private donations to the Buddhist *samghas*. These practices connect the Saurashtra region to the larger circuits of *dāna* (religious donation) in various parts of the subcontinent, which have been discussed in previous volumes of this Handbook.[104] The closest counterparts to these structures are the cave complexes in the western Deccan, for example, Kanheri, Junnar, Nashik, and the famed Ajanta-Elora cave complexes in Maharashtra.[105]

As discussed above (section II.3), the closest rock-cut cave shelters to the Gulf of Khambhat are located at Talaja and Kadia Dungar. Apart from functioning as a religious center, a special node of convergence, they may have also acted as anchor points for travelers, not only pilgrims, but traveling monks and merchants alike. Talaja is situated on the bank of the River Shetrunji, about 10 km inland on the western coast of the gulf.[106] Kadia Dungar, on the other hand, is situated on the land route between Kamrej and Bharuch, which went further eastward to Ujjain. A partially weathered inscription in one of the excavated chambers of the cave reads that the cave was

100 Desai 1993. For the date of the text, see Cecil 2020.

101 Pramanik 2004, 137.

102 See Ṛiṣabhadatta's Nashik cave inscription in Mirashi 1981, no. 43.

103 For a detailed discussion on the religious landscape of Gujarat, see Mishra and Ray 2019, 53, 102–157.

104 Dwivedi, vol. 1, ch. 10.A, 444–445; vol. 2, ch. 14, 749–751.

105 Ray in her various writings (e.g., 1986, 1994a) has discussed the importance of these cave complexes in the early historic networks of transportation for both goods and humans.

106 IAR covering years 1954–1955.

excavated for the good of humans and animals alike.[107] Therefore, like other rock-cut complexes of the Western Ghats, Kadia Dunger must have worked as a location marker for a resting place, water station, and mountain pass, helping those traversing the forested hilly regions.

The multiplicity of ancient shrines around Barygaza is also noted in the *PME*.[108] In addition, the author of the *PME* also mentions large wells as a notable feature of this region. The construction of cisterns and wells was a significant element in water-storage tradition in most of the early historic period. Also, the direct involvement of the religious organizations in the hydraulic landscaping of early historic South Asia has already been established by scholars.[109] In Gujarat too, the connection between monastic structures and water-storage methods is noted, even in the contexts of the rock-cut complexes. One example is that of Junagarh, which has the much-discussed Sudarshan Lake, constructed during Candragupta Maurya's reign and repaired once during his grandson Aśoka's reign and again under Rudradāman, a Kṣatrapa ruler.[110] This lake is situated at the foot of the Girnar hill, which has one of the most elaborate rock-cut structures bearing elaborate inscriptions in Gujarat. On the hill, the excavated chambers were found to be connected by water channels, which led to cisterns cut into rocks for water storage.[111]

Apart from epigraphic records of the involvement of monastic organizations in water-storage practices, archaeoanthropological studies have shown relationships between local fertility cults and cisterns and wells. An example of an early historic spiral stepwell from Hathab has already been mentioned above. Mishra and Ray draw from the longer tradition of practices that associate stepwells as subterranean centers of worship and respite.[112] These also served as landmarks and shelter for travelers during the scorching heat of the summer. Beside Lajjā Gaurī, terracotta images of other mother goddesses (*mātṛkā*) have also been reported. The votive tanks reported from excavations at Shamalji and Vallabhi from the third to fourth century CE were also related to water rituals.[113]

III.4 Travelers across the Ocean

As the movement across the Indian Ocean and through the subcontinent is ascertained, here I discuss the available evidence for visitors and nonlocal settlers, known

107 Bharucha 2022, 111.

108 *PME* 41.

109 For example at Sanchi, see Shaw and Sutcliffe 2003a; 2003b; Shaw 2013; 2018. For the Punjab region, see Ray 2010, 203–209.

110 This was recorded in Rudradāman's inscription dated ca. mid-second century CE.

111 Shaw and Sutcliffe 2003, 93–95.

112 Mishra and Ray 2019, 130–131.

113 Mishra and Ray 2019, 134. Also Patel 2007, 1386–1387.

to have been moving in and out of the western coast of South Asia. The sources for this assessment are both epigraphic and archaeological in nature. The section also contains a commentary on what identifying something as 'foreign,' be it a person or an artifact, means in the current understanding of long-distance networks.

III.4.1 Addressing the Yavanas

Two terms, *mleccha* and *yavana*,[114] were commonly used to denote the 'foreignness' of individuals or communities. Both terms denote linguistic and cultural differences. Semantically, the term *mleccha* refers to any 'non-Vedic' and 'non-*ārya*' group of people, who could be outcast or even foreigners. However, the terms *yona* and *yavana* were more specific and may have been the Sanskritized versions of the Old Persian term *yauna*, denoting the Ionian Greeks.[115] The commonly accepted understanding is that the term *yavana* in earlier texts denotes the Indo-Greeks or at least the Greek-speaking people of the northwest and of the western Deccan. From the fourth century onward, Indic religious texts mythologized the Indic origins and genealogies of the Yavanas as an ethnic group.[116] Their presence in the subcontinent and their involvement in the political space and social practices are well attested in the epigraphic records from the third century BCE onward. In terms of political presence, rulers in the West such as Antiochos of Syria, Ptolemy of Egypt, Antigonos of Macedonia, Megas of Cyrene, and Alexander of Epiros are mentioned as *yona-lāja* (Yona kings) in Aśokan rock edicts (RE II and XIII) of the third century BCE. In addition, the presence of the *yavanas* as subjects of the Mauryas in the northwest is also mentioned in Aśokan RE V and XIII. The post-Aśokan second-century BCE eulogical inscription of Khāravela from Odisha also mentions the presence of a certain *yavana* ruler in the Ganga-Yamuna region.[117] We also find references to the *yavana* as officials. An example comes from Besnagar, near Vidisha, where a *yona-dūta* (Greek ambassador), Helidoros, a resident of Taxila and a worshiper of Viṣṇu, raised a pillar in honor of Viṣṇu in 113 BCE.[118] Apart from being mentioned as political figures, the *yavanas* are also mentioned as lay donors at the Buddhist *stūpa* remains at Sanchi in central India and in rock-cut caves at Karle and Junnar in the western Deccan.[119] In the south as well,

114 When associated with an ethnic community, I write the term *yavana* as Yavana following the modern orthographic practice.

115 Ray 1988, 312; Selby 2008, 82.

116 For the mythical genealogies and lineages discussing origin of the Yavanas, see Karttunen 2015, 338–344.

117 Kant (2000) challenges the reading of the term as *yavana* and suggests that it should be read as *yamuna*, denoting the Yamuna River.

118 Karttunen 2015, 210; see also Lüders 1912, no. 669.

119 For a summarized collection of epigraphic evidence with the term *yavana* and related references, see Karttunen 2015, 213–216.

early historic Tamil texts have repeated mentions of the term *yavanar*, which is used to note the nonlocal merchants. The term *yavanar*, therefore, was triply imported, borrowed from Sanskrit *yavana*, which had been borrowed from the Old Persian term *yauna.*[120]

References to *yavanas* from Saurashtra are no different from those found in other regions. The epigraphic evidence records the presence of the *yavanas*, not just as visitors but also as inhabitants. Rūdradāman, a Western Kṣatrapa king ruling in the second century CE, records a historical incident in his inscription, in which Aśoka's governor Tuṣāspha, a *yavana-rāja* (Yavana king) had repaired and expanded the Sudarshana Lake near Mount Girnar.[121] It is noticeable that the region was inhabited by Greek/Greek-speaking people from Aśokan times. In fact, by the first and second centuries CE, communities of Greek origin may have settled and assimilated with the local population.[122] This is attested by the Sanskritic names of donors and travelers from different cities within the subcontinent identifying themselves with the title "*yavana*" in their epigraphic records, both within the subcontinent as well as across the Indian Ocean.[123] An example of the latter, i.e., an Indian resident, Candrabhūtimukha, identifying himself as a "*yavana*," comes from one of the various successfully deciphered inscriptions at Socotra Island in the Persian Gulf.[124] It is generally accepted that the *yavanas* as a linguistic- and ethnic-identity group were not just the Graeco-Roman communities and those of distant origins, but perhaps any community with Greek-speaking ancestors residing in the western or northwestern region of the subcontinent.[125]

III.4.2 Mobile Artifacts as Identifiers of Movers

Mobile artifacts are representations of the mobility of people. The notion of nonlocal artifacts refers here to items both of Indic origin or style found outside the of Indian subcontinent and those of Mediterranean origin or style found in the Gujarat region. There is no singular explanation for why nonlocal artifacts show up in distant regions. The possibilities include, but are not limited to, the presence of a steady trade, the

120 Ray 1988, 312.

121 Mirashi 1981, no. 51. It is interesting to note that this inscription, dated ca. 150 CE, was issued on the boulder that already bore the Aśokan edict. This boulder at Junagarh, which contains the third-century edicts of Aśoka in Prakrit, also bears a third inscription, attributed to the Gupta ruler Skandagupta and dated ca. the mid-fifth century CE.

122 Ray 1988, 315.

123 For a study of the use of the title of Yavana in donative records in the western Deccan, see Ray 1988; Karttunen 2015.

124 See case 14:17 in Strauch 2012, 183.

125 On the issue of 'Greek' and 'Greekness' in the northwestern part of the subcontinent, see Bhandare 2018.

settling of diasporic communities leading to transfer and adaptations of crafting knowledge, personal items lost or gifted by travelers, and/or local production as imitation of foreign artifacts. Coins, moreover, circulate and may end up in contexts very different from the original purpose of their arrival. Volume, frequency, and contexts of the finds are some important factors to consider when items are studied in their nonlocal context. Below, I discuss three types of nonlocal, or seemingly nonlocal, artifacts: singular objects of art, ceramics, and coins.

Finds of singular foreign-looking objects, such as terracotta plaques and remains of ornate bronze handles, from different parts of the subcontinent have often sparked debates about how these can be understood in broader discussions about Indic trade relations with the Mediterranean. For example, Suresh argues in favor of such items being gifts and dismisses the idea of a large-scale market for Roman art-based artifacts in India.[126] He explains that such finds are very small in number and are often found in Buddhist monastic contexts as part of special lavish donations, especially in the Gujarat-Maharashtra context. On the other hand, Cobb and Mitchell present an interesting discussion arguing in favor of local demand for such items.[127] They use the example of an alabaster piece found near Junnar (Maharashtra), which is identified as a representation of the god Eros in an egg. Rather than considering it as a possession of a nonlocal merchant staying temporarily, they propose its ownership by a local resident. Suggesting that such pieces should be understood in larger contexts, they argue in favor of Indian demand for Mediterranean goods. In either case, familiarity with and use of Mediterranean products are important pieces of evidence of connectivity.

Another commonly cited representation of Eros on a bronze handle comes from Gujarat. Most likely part of a wine pitcher, the remaining handle was reported from Akota, ca. 70 km north from Bharuch.[128] From the same site, two terracotta seals with depictions of prancing horses have also been reported, which are considered to be inspired by a Mediterranean style.[129] From inland Gujarat too, Roman or at least seemingly Roman items were reported. Another interesting case is that of a sealing found at a Buddhist monastic complex in Vadnagar (Gujarat).[130] The sealing bears an impression of a Roman coin issued under Valentinian I (321–375 CE) and has a Brāhmī legend on the opposite side. It was found along with an imitation of a Graeco-Roman terracotta plaque and an amphora-like handled jar and a torpedo jar. Such local imitations are also indicative of local demands.

Among the different types of material remains, ceramics are one of the most durable. Their importance in the study of the past is also critical, as they may be used

126 Suresh 2004, 131–132.
127 Cobb and Mitchell 2019.
128 Subbarao 1953, 6.
129 Subbarao 1953, 87.
130 Rawat 2018, 34.

to understand the patterns of production, transportation, and consumption of their users. Many archaeological excavations have yielded Mediterranean-style pottery. Roman amphorae are the most easily identified among the nonlocal pottery. Even though these have been reported in higher volumes more commonly from coastal sites in the Konkan and the Malabar coasts, amphora sherds, unsurprisingly, are by no means absent in Gujarat.[131] Amphora sherds were found not only around the famous port regions, Bharuch and Hathab, but their presence is also noted further inland. Of the 55 sites where fragments of Roman Dressel 2–4 amphorae have been found, 25 are in Gujarat, and 13 of these are clustered around Junagarh.[132] Their presence at sites such as Nagara, Amerli, Vadnagar, Akota, and others[133] also indicates their spread in a system of local connectivity. While it is possible that these sites saw consumption of imported Mediterranean goods, especially olive oil and wine, recycling and reuse of storage jars for transport of local products is also a possibility.[134] It should be emphasized, however, that absolute figures tell us little about their role in the circulation of goods and people more generally. In comparison to regional pottery, the numbers and extent of non-Indic pottery are very small. For example, in Gujarat at large, only 25 sites have yielded amphora remains, while more than 400 sites have been reported with the regional deluxe red polished ware.[135]

Roman coins are another noteworthy type of artifact defining our understanding of Indo-Mediterranean relations. Whether as valuable trinkets, ornaments, or as widely accepted currency, their role as valuable nonlocal items in Indic society has been a subject of discussion.[136] Roman coins have also been reported from Gujarat.[137] Their gold and copper versions are more common in comparison to silver issues. In fact, two of the largest hoards of Roman gold coins were reported from Gujarat, one of more than 2,000 coins found at Ahmedabad, and the other of 500 from Kera in the Kachchh district.

As in other regions of the subcontinent, modifications to the coins in the form of piercings and attachments of loops for ornamental purposes have also been reported from Gujarat.[138] Irrespective of the monetary or ornamental uses of Roman coins, these coins had their own market in the Indian subcontinent. The author of the *PME* mentions a profitable exchange of Roman gold and silver coins against local currency at Barygaza (*PME* 49). Such demands were also supplied by imitations. For example, molds found at Palanpur (Gujarat) were used to produce imitations of Roman coins

131 For the ongoing study of Roman pottery in India, see Tomber 2008; 2009; 2017.
132 Ray 2019a, 106.
133 Patel 2007, 1387–1388; Paul 2017, 181.
134 For a discussion on the reuse of amphorae, see Pecci et al. 2017.
135 Suresh 2004, 101. For the red polished ware, see sec. IV.3.
136 For foreign coins as money or just objects, see Dwivedi, vol. 1, ch. 10.A, 456–458. See sec. IV.4 for more on the monetary systems.
137 Rajgor 1997.
138 Rajgor 1997. A list of find sites has also been provided by Suresh 2004, 173–175.

as medals or pendants.[139] The Roman issues and their imitations can be best understood as evidence of local monetary practices as well as intraregional Indic monetary traditions (sec. IV.4).

IV Networks of Knowledge

The *PME* lists an array of items that were traded from Bharuch/Barygaza, which were either procured from distant areas or produced and crafted nearby. Archaeological and anthropological studies from the Saurashtra region are also not incompatible to the information of the literary texts. Activities that were directly related to the production of commodities exported to other regions included shell working, timber production, glass making, bead making from both glass and precious stones, metal working, cotton cultivation and textile production, specialized pottery, especially the red polished ware (RPW), and last but not least, owing to the region's coastal heritage and long-standing tradition of maritime activity, the craft of boatbuilding. Although all these craft activities were significant in shaping the long-distance trade of this region, I discuss in detail only those crafts that reveal the local character of production and distribution around the Gulf of Khambhat. The institutions and practices of production in return assumed an important cultural role in how the craftsmen defined and represented themselves. Certain crafts had ritual importance, and some became carriers of specialized knowledge that shaped their distribution and consumption. The crafts discussed here are boat construction, the cotton textile industry, and the special RPW of Gujarat region. In addition, the coinage system of this region also exhibits its own relation to different knowledge traditions that is worth exploring. All these crafts had various links in the networks of knowledge sharing on both vertical and horizontal axes, i.e., temporal and spatial, respectively.

IV.1 Boatbuilding

The material evidence for navigation and port development in the Gujarat region goes back to the Bronze Age, if not earlier.[140] Fair-weather sailing is mentioned as one of the characteristic features of Indian seafaring.[141] Seasonal winds were used

139 Suresh 2004, 79.

140 The excavation at Lothal, situated at the northern end of the Gulf of Khambhat, revealed a settlement of ca. 6.47 ha. A dockyard of 37 × 21.8 sq. m was also discovered during the excavation (Rao 1985). For terracotta seals depicting sea vessels and clay models of boats, see Rao 1965.

141 Observations on different kinds of tides and winds expressed in similes and metaphors in literary texts from 1500 BCE onward have been used to understand sailing knowledge in the subcontinent (Tripati 2017).

for both coastal and transoceanic voyages, and boats were hauled ashore for drying and repairs at the end of the sailing season.[142] One of the most commonly observed features of Indian seafaring vessels is that they drew little water and could enter into the estuaries of rivers. There are many references to dugouts, boats carved out from logs that plied the riverine streams. However, large seafaring vessels operated by merchants of Barygaza (Bharuch) are also known. They supplied bulk items, such as copper and timber, including saplings and logs of Indian sissoo, ebony, and teakwood, to the ports on the Arabian coast.[143]

Sailing habits therefore are to be seen in the context of vessel technology. Yet, although attested in a number of sources, actual material remains are limited. The only surviving boat discovered so far is a wooden dugout canoe preserved in a wharf at Pattanam.[144] However, visual representations of ships and boats give an idea of the construction and appearance of Indic boats.[145] Ethnographic studies, moreover, have revealed crafting traditions in terms of techniques and tools that were passed down across generations and still continue today.[146]

The vessels represented in Indian art have two or three main masts with no grid-pattern reinforcement, which was a common feature in Mediterranean-style vessels.[147] Most commonly discussed are representations of ship types on Sātavāhana coins in the first and second centuries CE.[148] Different coin types show different numbers of masts ranging between two and four. Fig. 4 is an example of a lead issue showing a double-masted ship. Apart from offering insights into the designs of ships, representations of ships on coins show the importance attached to the political and cultural self-representation of the Sātavāhanas, who may have aimed to declare their participation in maritime activities. Bhandare suggests that the ship-type coins of the Sātavāhanas were issued for circulation in particular regions focusing on maritime networks, most notably the eastern coast of the subcontinent.[149]

Also noticeable are the graffiti of ships in different contexts, including pottery sherds and cave walls even beyond the subcontinent. From Khor Rori, Sumhuran, a graffito of a double-mast ship dated to the pre-Islamic period seems identical to the ships represented on the Sātavāhana coins.[150] At Myos Hormos too, there are six rock

142 Ray 1995, 98.

143 *PME* 36 with Casson 1989, 73.

144 Although in decayed condition, paleobotanical studies show that the boat was made of a single log of Anjili (*Artocaprus hirsutus* Lamk.) dated to ca. 100 BCE. See Cherian et al. 2009.

145 Apart from representations of sea vessels on coins, they can be found on Buddhist relief sculptures, as well as graffiti on potsherds and cave walls. See Deloche 1996; Tripati 2011.

146 Varadarajan 1995, 168. See also Ray 2003, 59–63.

147 F. C. Wild and J. P. Wild 2001, 218.

148 The ship-type coins were issued by Vāsiṣṭhīputra Puḷumāvi (88–116 CE) and then continued by two later kings, Vāsiṣṭhīputra Śātkarṇi (116–145 CE) and Gautamtīputra Yajñaśrī Śātkarṇi (165–194 CE). See Reddy 2014, 69.

149 Bhandare 1999, 126–128.

150 See fig. 4 in Avanzini 2008.

Fig. 4: A Sātavāhana coin representing a double-masted ship (not to scale). BM 1905,1007.61.

engravings depicting ships. These carvings are found along with engravings of religious symbols, animals, human figurines, and a Greek inscription. While five of the representations are of single-mast ships, the sixth representation has three equidistant masts.[151] In the Hoq cave on the island of Socotra, inscriptions mention the arrivals of sailors and merchants from India from the first century CE onward.[152] Next to some of the Brāhmī inscriptions dating to the early centuries CE, there are three ship graffiti engraved on the cave walls along with other Indic symbols like *stūpas*, *triśūla* (trident), *cakra* (wheels), and lotus.[153] The only ship representation that is relatively clear shows three masts.[154] Similar representations of ships on cave walls are also present within the subcontinent. However, they have been dated to the sixth and the twelfth century CE from the Ajanta caves in Maharashtra and from a cave at Charmadi in Gujarat, respectively.[155]

Another special feature of Indian shipping was the sewn-boat tradition, instead of the use of nails for joining the planks. Though the *PME* mentions the sewn-boat-making technique, it is silent on whether this was practiced in India.[156] However, ethnographic study and evidence from a later period have been used to suggest that the sewn tradition was also followed in the Indian subcontinent.

Boatbuilding practices in the Indian subcontinent during the early centuries of the Common Era were mainly influenced by three technological traditions, though not entirely mutually exclusive. They are the coir-sewn tradition of the Arabian Sea including the east African coast, which is followed on the western coast of India; the

151 Whitewright 2011.
152 See also sec. II.3.1.
153 Strauch 2012, 100, 364.
154 Strauch 2012, 364.
155 Schlingloff 1976; Sonawane 2011.
156 For a discussion on the sewn-boat tradition and comparisons, see Pomey 2011.

jong tradition of Southeast Asia that had its bearing on the seafaring traditions of Bengal and Orissa; and outrigger-style boats of the Austronesian/Indonesian tradition that influence seafaring practices on the islands of Lakshadweep, where wooden-plank joinery approximates the coir-sewn tradition.[157] On the western coast of the subcontinent, plank joinery is divided into two sets of technique in the early medieval and medieval period, depending on the size of the boat: (a) coir stitching and (b) *vadhera*.[158]

The western Deccan was a producer and exporter of both timber and coir used in ship construction. The commercial farming of coconut trees – the most important source of coir for ropes, which are important for the construction of sail boats – can be noted from the epigraphic records.[159] These resources were used for manufacturing boats on the western coast but also were important export items across the Indian Ocean. Export of timber and cotton from the Indian subcontinent is also mentioned in the Graeco-Roman texts.[160] At Quseri al-Qadim, a port on the Red Sea coast in Egypt, wooden brail rings of the Mediterranean style have been found that are made of Indian teak and east African blackwood.[161] In addition, some sailcloth fragments datable to the late first or early second century CE from Myos Hormos and another Red Sea port, Berenike, were found to have been made of Indian cotton.[162] The use of Indian cotton in Mediterranean-style ships suggests two possibilities: either that the sails were made from imported cloth brought from India to Egypt or that the ships were repaired in India with Indian material.[163]

While boatbuilding technologies were a result of influences from different traditions, the craft also had regional characteristics. Representations of boats in local art, and art from across the sea – for example on the island of Socotra, at Khor Rori and at Myos Hormos – have been found, along with other religious symbols. Ray argues that sailing communities and religious organizations were connected at various levels.[164] The presence of shrines in coastal regions not only acted as points of orientation for sailing vessels but also were places where both inland and coastal communities came together. Places of cult and ritual thus became centers of knowledge sharing, about both markets and technologies such as boatbuilding. Over time, boat-making techniques developed through knowledge acquired from contacts across the sea. From the representation of sea-going vessels in the Charmadi cave in south Gujarat, we learn that seafaring communities were aware of an external rudder system. The

157 Varadarajan 1995, 168–173.

158 For boatbuilding techniques in the later period, see Varadarajan 1995.

159 Chakravarti 2017, 324–325.

160 *PME* 36; 48; Pliny *NH* 16. 80. 221.

161 The site has been identified as ancient port of Myos Hormos. Strabo (*Geography* 2. 5. 12) wrote that 120 ships sailed from Myos Hormos to India. For the evidence of ship remains, see Blue, Whitewright, and Thomas 2011, 196.

162 Blue, Whitewright, and Thomas 2011, 196. See also Whitewright 2018, 153–155.

163 F. C. Wild and J. P. Wild 2001, 217–218.

164 Ray 2019b.

image itself cannot be dated due to a lack of archaeological context, but the external rudder was developed in China in the second century CE.[165] The craft of boat making, therefore, did not remain unchanged. Special crafts were adopted and shaped the identities of groups who in return added to existing knowledge systems. The boat-making tradition is a particularly good example of this.

IV.2 The Cotton Industry

Cultivation of cotton in the Indian subcontinent has been traced back to the sixth millennium BCE. However, evidence of spun and woven cotton fabrics in archaeological contexts are known only from the third millennium BCE, during the Indus Valley Civilization and Chalcolithic Period.[166] By the fifth century CE, trade in cotton cloth across the seas was recognizably prominent, and as a result, Brancaccio suggests the presence of the 'Cotton Road' analogous to the 'Silk Road.'[167] With this, she highlights the development of a production and trade network in association with the Buddhist monastic-mercantile network that developed in the western Deccan, clearly visible in the presence of the rock-cut-cave circuits.[168] These rock-cut monastic caves are situated in the lava-trap land formations of the Deccan, recognized by the predominance of black or *regur*-type soil. Derivatives of trap lava and thus moisture retentive, the black soil is considered most suitable for the cultivation of cotton.[169] The modern state of Gujarat, along with parts of Maharashtra, Rajasthan, Madhya Pradesh, Andhra Pradesh, and Karnataka, falls in the black-soil belt of the subcontinent. Saurashtra and Lāṭa, therefore, emerged as an important center of cotton-textile production and experienced a long history and living tradition of cotton-cloth production, trade, and cultural identity. In this section, I discuss the production of the textile and its export and finally focus on how the presence of spindle whorls helps us understand the widespread nature of the weaving industry in the Saurashtra region.

Weaving and textile manufacturing was not only an economic activity, it also had social and cultural importance attached to it. In the Indic poetic imagination, cosmic

165 See Sonawane (2011) for the representation of the ship with an external rudder, and Cai et al. (2011) for the Chinese origin of the external rudder.

166 Fuller 2008, 3–6.

167 Brancaccio 2018.

168 The connection between the Buddhist monastic and mercantile networks in the western Deccan has also been often emphasized by Ray. See Ray 1986; 1994b; 1994a. For the relationship between Buddhist networks and trade routes in the northern part of the subcontinent, Neelis 2011.

169 However, black soil is not the only type of soil that supports cotton production. Various alluvial regions in southern and eastern parts of the subcontinent also produced cotton. Cotton from Madhurā, the Aparāntas, the Kalingas, Kāśī, the Vangas, the Vatsas, and the Mahiṣas are suggested to be the best in the *KA* (2. 11. 115). *PME* (62, 63) also mentions the production of fine cotton garments in the Ganga valley and in southwestern and southern India, which were exported from Muziris.

and celestial events have been explained with analogies of spinning and weaving. The *Atharvaveda* (ca. 1000–800 BCE) compares the day and night spreading light and darkness over the earth to the weaver throwing a shuttle over the loom.[170] At a more functional level, a treatise of statecraft recommended that government workshops employ destitute women in weaving workshops as a way to provide economic sustenance to them.[171] The list of destitute women included widows, abandoned women, crippled women, retired prostitutes, old servants of the king, and so on. The fourth-century CE treatise on *kāma* (desires), the *Kāmasūtra* of Vātsyāyana, also recommends spinning, dyeing, and tailoring as crafts that a woman can learn to sustain herself in times of adversity.[172] Apart from the state-owned weaving workshops and household-based independent weavers, weaving was also carried out by private professional associations, the *śreṇis*.

The presence of organized professional associations and corporate groups, *śreṇis*, that specialized in weaving is known from the epigraphic evidence from Mathura in Uttar Pradesh and Nashik in Maharashtra dated between ca. 100 BCE and 100 CE.[173] The weaver *śreṇis* were quite likely commercially successful. On multiple occasions, the *śreṇis* received a special kind of donations called "perpetual endowment" or "inexhaustible investment" (*akṣayanīvī*) on behalf of a religious organization. These endowments were donations of money, as capital, to be invested in the craft activities of a *śreṇi*. In return, a fixed part of the profit was to be paid as interest to the monastery for its expenses or maintenance.[174] The *śreṇis* were perhaps in an economic arrangement with the religious organizations, and the practice of special endowments as a strategy of mutual dependence may have ensured their sustenance even through the rise and fall of different polities. Professional associations indeed provided more security to both clients and members. The liability in the case of any monetary deposit and commission for a job taken as a member of a guild was to be borne by the guild.[175]

Even though there is no direct reference to weaver *śreṇi* in the region around the Gulf of Khambhat, a fifth-century inscription records the migration of a weaver's guild, specialized in the craft (*śilpa*) of silk weaving, from Lāṭa (the region around Bharuch) to the city of Daśapaura (Mandasor in Madhya Pradesh).[176] The members

170 *Atharvaveda* 10. 7. 42. See also Ramaswamy 2008, 2113; Verman 2013, 12–15.

171 *KA* 2. 23. 2, 11.

172 *Kāmasūtra* of Vātsyāyana (*KS*) 1. 3. 20.

173 Mirashi 1981, no. 38; Thakur 1987, 73.

174 From the epigraphic records that have survived, we find records of *akṣayanīvī*-type donations from Mathura, Kanheri, and Nashik in the early historic period and from the early medieval period at sites in Andhrapradesh. For further discussion and references, see Dwivedi, vol. 1, ch. 10.A, 445. For *śreṇis* as economic actors, see Dwivedi, vol. 2, ch. 5, 222–225.

175 *KA* 4. 1. 2–7.

176 The two Mandasor inscriptions by Kumāragupta I and Bandhuvarman dated to 493 and 530 CE, respectively. The first inscription talks about the weavers' guild moving to Mandasor and commission-

of this *śreṇi* are mentioned to have amassed stores of wealth with their craft; they commissioned a Sun temple and after a couple of decades also funded a renovation. It is not unlikely that Gujarat had other similar *śrenis* that were equally affluent.

Although clear textual references to the export of Indian cotton to both the Mediterranean and Southeast Asian regions become abundant only from the fifth and sixth century CE onward, steady commercial production of cotton in India and its export to the Mediterranean region is already known from archaeological and textual references in the early centuries BCE and CE.[177] Some of the earliest references are found in the writings of Greek historians, who refer to cotton as wool growing on trees that was used as cloth for various purposes.[178] Philological studies have suggested that cotton was introduced to the Mediterranean via Indian connections. The term for cotton in the Mediterranean languages was borrowed from the Sanskrit word *karpāsa*, adopted as *kárpasos* in Greek and *carbasus* in Latin.[179]

Apart from the familiarity of Indian cotton and the etymological link, Graeco-Roman texts also mention import of cotton from India. Arrian, a Roman historian, testifies about exported dyed cloth from various cities in South India and admires the fineness and the white color of the linen from India.[180] The *PME* also mentions the export of muslin and coarser cotton to Egypt from the port of Barygaza/Bharuch.[181] The admiration for Indian cotton is seen also in the archaeological finds across the Indian Ocean. Out of the surviving 400 textile fragments found during the excavations at Berenike, half of the textile remains were cotton.[182] Coarse cotton sailcloth of Indian origin was also found in the archaeological contexts at Berenike and Myos Hormos.[183]

Gujarat was a producer and exporter of cotton textiles. Although little can be said about the production process and workshops, terracotta spindle whorls help us to understand local textile production. Spindle whorls were part of the spinning process, one of the various multistage processes of textile productions, before the threads could be woven, dyed, and tailored. The spindle whorls could be made of bone, clay, faience, shell, or wood and were of varied sizes and shapes.[184] Of relevance here are

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ing the temple, while the second inscription mentions the funding of the restoration. See Chhabra and Gai 1981, no. 35.

177 For discussions on the cotton trade from the early medieval period and later, see Brancaccio 2018; Varadarajan 2018.

178 Herodotos (Hdt. 3. 106) writes about Indian cotton as wool that is grown that surpasses the beauty and excellence of that from sheep. Strabo (Strab. 15. 1. 20–21) cites Nearchos on the wool-bearing trees that had fiber combed like wool, which was used for mattress filling and padding of saddles.

179 Läw 1915, 247.

180 Arrian *Indica* 16. 1.

181 *PME* 48, 49, 41.

182 J. P. Wild and F. Wild 2005. Later, by the end of the excavations in 2001, 3,400 fragments of textile were discovered. Indian cotton in this lot has been identified based on its spinning technique, different from that in Egypt and Ethiopia. For details, see F. Wild and J. P. Wild 2018.

183 Blue, Whitewright, and Thomas 2011, 196.

184 Hawkes 2021, 274.

Fig. 5: Terracotta specimens from Nagara. MSU, Baroda, Gujarat. Photo: Author.

the terracotta spindle whorls of two types, the flat disc and globular arecanut or truncated-bicorn types (fig. 5).[185] Based on a study of around 100 whorls found at the site of Nagara, a site of just 8 ha, Hawkes suggests that the production of the whorls was itself a specialized industry. The manufacturing of whorls required clay products to be turned on a lathe and then fired in the kiln.[186] As Hawkes argues, the terracotta whorls indicate not only the presence of textile manufacturing in the Gulf of Khambhat but also a degree of specialization in other allied crafts that were required to sustain textile production. The region emerged as a hub of commercial cotton-cloth production both for local distribution and use, and for export across the Indian Ocean.

185 For identification of these mini-terracotta items as spindle whorls, see Hawkes 2021. However, the identification of terracotta arecanut beads as spindle whorls has been criticized by Sushmita Sen (MSU, Baroda). She suggests, the flatter terracotta discs are spindle whorls, but those that are globular (the arecanut types) were just ornamental beads. Sen, personal communication, May 2022.
186 Hawkes 2021, 287.

IV.3 Regional Ceramics: The Case of Red Polished Ware

The area around the Gulf of Khambhat has yielded a variety of foreign pottery types that show connections across the ocean. In addition, regional pottery types throw light on exchange practices and consumption. They include black and red ware (BRW) and red ware (RW) that date back to the Chalcolithic period in the Saurashtra region and beyond. Most significant, however, is the red polished ware (RPW) that is prevalent across the Gujarat region. There is an astonishing degree of uniformity in its shapes and styles without any identifiable indications of a centrally controlled, regulated production process or center of manufacture. The globular type of this pottery, *loṭā*, shows how regular-use, utilitarian-type storage and transport vessels become used in widespread contexts through regular mundane exchanges. The globular RPW, therefore, is a tangible sign of decentralized forms of knowledge-sharing and transfer networks.

RPW received its name because of its evenly fired and smooth-slipped surface. It holds a dominant place in the ceramic culture of the western Deccan but is concentrated in the Saurashtra region. It first appears in the first century BCE and continues until the fifth century CE. RPW was long considered an imitation of Roman pottery, thereby sustaining arguments of the cultural impact of the Romans on the region. Yet, as in the case of rouletted ware with the comparative study of the (northern) black polished ware, it was concluded that the technique and types were indigenous in nature and pre-Roman. There are nearly 400 sites that yield RPW from the modern state of Gujarat alone. Even though this type of ware has been reported from coastal and inland sites alike, Pinto-Orton points out that the quality of RPW deteriorates upon moving inland.[187] However, at this point, an argument for the coastal origins of RPW would be highly speculative.

Regardless of the question of the point of origin, RPW indicates multilateral movement of goods through multiple networks of weak ties, especially of everyday-use items. The pots may have been manufactured in the interior villages and used for the transport of agricultural and forestry goods to other areas by land or water via ports for shipment within and beyond Gujarat. As the finds indicate multiloci manufacturing sites of RPW, the structure of the networks within the Saurashtra region seems decentralized, in that it had a multidirectional exchange and transport system. As suggested by Pinto-Orton, a large entrepôt was perhaps not a prerequisite for a thriving export of items such as *ghee* (clarified butter), oil, rice, or other raw materials such as herbs or iron. The use of RPW in long-distance transport is ascertained by its discovery at various excavated sites along the Red Sea and the Arabian Sea.[188] The multiloci manufacturing and usage for storage and transport, therefore, may have

187 Pinto-Orton 1992, 46–47.

188 For further bibliographic details on the excavated sites, see Pinto-Orton 2013, 198.

been facilitated by the presence of various ports within a short distance, as discussed above.[189]

IV.4 Monetary System(s)

In this section, I suggest that the monetary profile of the Saurashtra region should also be considered as a system of knowledge. This system of knowledge was the result of varied practices of coin issuing and coin usage converging together. Such converging practices allowed monetary systems to maintain a certain regionality and autonomy while still being part of larger network standards.[190] The monetary profile of the region shows its participation in visual and weight standards of multiple monetary traditions, namely (a) punch-marked coins, (b) (semi)autonomous-city coins, and (c) monarchical coin issues under Kṣatrapas with Hellenistic influence. These coin types also had syncretic influences on each other, which are seen in the shared iconographies of some issues, but often these may have also circulated together even when their minting stopped. Below is a brief introduction to these coins, followed by a discussion of certain continuities – for example, iconography – as well as changes such as in the usage of script.

The use of coined money in Gujarat goes back to as early as the fifth century BCE.[191] Consistent with Indic monetary traditions in general, the first coin types were the punch-marked coins in both silver and copper issues. These coins are uninscribed and had multiple auspicious symbols and icons of animals and deities individually struck on to them. The coins followed the *kārṣāpaṇa* weight standard of 3.5 g, where most coins are found to be of multiple denomination issues, i.e., $^1/_4$th, $^1/_8$th, and $^1/_{16}$th of *kārṣāpaṇa*.[192] The Saurashtran finds have been reported to be minutely heavier than the Magadhan issues, perhaps because of regional causes, such as the availability of silver or a minting fee. The punch-marked coins continued to be issued until ca. 50 BCE,[193] perhaps until the Kṣatrapas captured Saurashtra and started issuing their own coins. However, the usage of punch-marked coins continued even in the early centuries CE. It is likely that imitations may have also kept them in circulation.

Other than the uninscribed coins, (semi)autonomous-city coins also may have also added to the monetary system of the region. From Bharuch, a coin with the city name *bharukachha* in Brāhmī has been reported.[194] Although this is a singular find,

189 See section III.1.1 for a discussion of the relationship between different port sites within the region.

190 Dwivedi, vol. 2, ch. 10, 501–505.

191 Van't Haaff 2004.

192 Van't Haaff 2004, 7–8.

193 Van't Haaff 2004, 22.

194 The singular Bharukaccha coin is in the collection of the Hinduja Foundation, India. https://www.facebook.com/watch/?v=366875811429108.

the neighboring areas are famous for their city issues. Ujjain and Eran, ca. 500 and 700 km east from Bharuch, respectively, are known for their coin issues with city names.[195] The cities were likely self-administering corporate bodies.[196] The seals with the city name at Hathab are also an indication of the similar corporate nature of the city.

The Saurashtra region was also under the numismatic influence of the Indo-Greek communities of the Indo-Yamuna divide. Their coins, like the punch-marked coins, also exhibit a long tradition of monetary circulation. The continued use of much older coins was also observed in the *PME*, which mentions the continued use of the coins of older Indo-Greek rulers, Apollodotos and Menander.[197] The composition of the coin hoard from Ghogha, 20 km north of Hathab, is also suggestive of the same phenomena.[198] It consisted of worn-out issues of Apollodotos II (ca. 80–75 BCE) and Dionysios (ca. 65–55 BCE) and seemingly less worn-out issues of Nahapāna (ca. 50 CE). Although Apollodotos II and Nahapāna reigned more than a century apart, Deyell considered that this hoard represents the circulation of their coins in parallel.[199] The discovery of a coin mold of Apollodotos II,[200] whose coins were otherwise die struck, also indicates imitation of his coins.

The rule of Indo-Greek kingdoms in the northwest of the subcontinent was brought to an end by the Indo-Scythians,[201] and perhaps also by the local polities identified as issuing the *janapada* coins commemorating their victory.[202] The Indo-Scythians, who expanded over Saurashtra, seem to have adopted the hybrid coinage style also visible in later Indo-Greek issues from the Indo-Yamuna divide. The Kṣatrapa coins exhibit regional adaptations over time, both in their appearance and their weight standards. In terms of appearance, they had remnants of Hellenistic coinage practices influenced by the Indo-Greek and Indo-Bactrian styles, such as the use of portrait of the kings and biscriptual inscriptions, namely Greek and Kharoṣṭhī. While the portrait style was maintained, Jha and Rajgor notice that the use of Greek and Kharoṣṭhī declined and was eventually replaced by Brāhmī.[203] By the time Rudradāman I ruled, ca. 150 CE, and after him, the use of Greek on coins had been reduced to a nominal ornamental function. On his silver issues, the Greek inscription was meaningless, and the use of Kharoshti was stopped. In addition, the patronymic device found on his grandfather Chaṣṭana's coin were now reintroduced in Brāhmī.

195 Allan 1936, cxxx, cxl.
196 Thakur 1987.
197 *PME* 47.
198 Deyell 1984.
199 Deyell 1984, 119.
200 'Pottery links Vadnagar to Gangetic plains.' *Times of India*, June 7, 2018 (accessed December 1, 2022): https://toi.in/py2uqb/a24gk.
201 Cribb 2020.
202 Bhandare 2020, 529–534.
203 Jha and Rajgor 1994, 31–33.

Regarding changes in their weight standards, the Kṣatrapas no longer used the original Attic-weight *drachm*. Their weight exhibits the use of a readjusted versions that matched the *kārṣāpaṇa* weight standards. This readjustment of the *drachm* weight was already used by the later Indo-Greeks and early Indo-Scythians.[204] The adjusted silver *drachm* standards were continued as *dramma* and *damma* in India up to the fifth and, in some regions, seventh centuries CE. Possibly, it was the readjusted weight that made the exchange of Kṣatrapa and Sātavāhana coins possible. Likely, the overstriking of the Kṣatrapa (Nahapāna) coins by the Sātavāhanas (Gautamīputa Śātkarṇi) in the first century CE declared the latter's victory without necessarily interrupting the monetary situation in Bharuch and its surroundings.[205]

In fact, Nahapāna's coins were neither the first nor the last to have been counterstruck. The pre-Kṣatrapa punch-marked coins also exhibit a practice of restriking, often of the same symbol. It is suggested that these restrikes were marks of control exercised by a coin examiner, who could have been a state agent, guild member, or moneylender.[206] Later, some of the Kṣatrapas are also known to have counterstruck the coins of their predecessors. An example is that of Rudradāman I (ca. 150 CE) overstriking his grandfather Caṣṭana's coins.[207]

Counterstriking may have been a cost-effective way of keeping older coins in circulation. In addition, imitations also supplemented the early monetary profile of Gujarat. Contrary to modern monetary systems, imitations and forgeries in the early historic period did not imply a failure of state systems to maintain a monopoly on coin issues.[208] Decentralized systems of coin production were present in the early historic period, where with a fixed fee coins could be issued by private bodies.[209] Many coins continued to be in circulation even after the decline of the issuing polities. The supply of such issues was maintained by imitations, which sustained the demand and the functioning of a monetary economy.

Often, the decentralization and forgeries also affected the quality of coins. One example is of the coins of Dāmasena (ca. 230 CE), whose coins show mistakes in Brāhmī letters. Jha and Rajgor explain this by suggesting the die cutters possibly lacked knowledge of Brāhmī, which led them to issue variously misspelled versions of the ruler's name when copying the legend from other coins. In addition, one of Dāmasena's silver issues went through a reduction in purity (from ca. 94 percent to ca. 58 percent purity). This abrupt reduction was perhaps a result of contemporary forgery.[210]

204 Cribb 2020, 667.

205 Bhandare (1999, 39, 74–76, 134–136) has explained Śātkarṇi's overstrikes as the fastest way of announcing political change to a money user, circumventing multiple time-consuming steps such as melting down, refining, and refabricating coins.

206 Van't Haaff 2004, 21–22.

207 Jha and Rajgor 1994, 30.

208 Ray 1986, 153–154.

209 See Dwivedi, vol. 2, ch. 10, 504–506.

210 The mistakes include the name Dāmasena misspelled to Damana, Sadaman, Madamanasa, and so on. Jha and Rajgor 1994, 35.

Although riddled with the complexities of imitations and forgeries, the monetary profile of Saurashtra in general depicts a system that was the result of different types of monies converging and cocirculating. Eventually, monarchical coins became dominant in the region. Yet even those coins had to adopt icons, scripts, and weight patterns that were compatible with the locally acceptable coinage practices.

V Conclusion

The selected variables discussed here are intended to serve as windows opening onto the early historic Gulf of Khambhat.[211] These variables allow us to catch glimpses of different economic processes. My emphasis here is on movement: of people, goods, and standards in the form of ideas and knowledge. These movements can be patterned on certain specific networks, which operated on different geographies (land and sea), at different scales (smaller quantities of nonlocal precious items and bulk utility goods), over different distances (intersettlement and intercontinental) and were maintained by different actors, both individuals and organizations. Generally, ports were the common convergence points for such networks. Very likely, it was the same for the ports around the Gulf of Khambhat. As discussed in section II.3, these ports were well situated in their locality. The ports were a part of settlement clusters, in which other settlements often had specialized craft, service, or religious functions. In addition, being a part of riverine-coastal clusters, these ports also had interactive relationships (both supportive and competitive) with other nearby ports. These localized relationships within clusters facilitated the majority, if not all, of the transport of travelers and commodities. The nonlocal items also moved along these locally familiar, existing channels.

Some actors also influenced and connected areas beyond the ca. 50-km radius of a particular settlement cluster. Political actors with expansive ambitions, agropastoral groups during their seasonal migrations, extraregional religious organizations, and merchants often acted as agents who maintained connections across wider parts of the subcontinent and even across the seas. In this process, knowledge and ideas, also visible in material culture, could be transferred over long distances. Two examples worth recalling here are red polished ware (RPW) and coinage. RPW was produced in a more dispersed and localized manner with a certain uniformity in pottery style. Such uniformity was perhaps the result of a knowledge network between potters residing and working in different places. It is not unlikely that such knowledge and skill transfers were common among the members of a *śreṇi* (bodies with professional specialization).[212] In this case, they were possibly a potter's guild, which are known

211 I am thankful to the BaSaR team, especially Lara Fabian, whose analogy of opening windows to the past has been useful here.

212 For *śreṇīs* as transterritorial actors, see Dwivedi, vol. 2. ch. 5, 222–223.

to have functioned across spaces. The second example is of coins, which show the continuity of certain resilient monetary practices. However, these long-term practices were not stagnant, and they also show changes as a result of Graeco-Bactrian influence over a period of time. A shift toward localized renditions of broader monetary systems reflects both autonomy and connectivity in this region, for our period as well as later.

An emphasis on regional economies, which indicate a degree of autonomy hand in hand with long-distance connectivity, is an important ingredient of global studies. Ports, as anchors of connectivity, can be useful in such case studies for connecting the local to the distant. In the context of early historic India, a degree of regional autonomy enabled ports to continue to function even through the rise and fall of different political dynasties. The autonomy and resiliencies of ports could be a result of their position in settlement clusters. However, with the present state of data availability, this argument is only an informed speculation. To confidently call the settlement clusters shock absorbers for their respective prominent cities, more detailed studies of intersettlement connections are required.

References

Agrawal, A. 1999. *Greener pastures: Politics, markets, and community among a migrant pastoral people*. Durham, NC: Duke University Press.

Allan, J. 1936. *British Museum catalogue of coins of ancient India*. London: British Museum.

Athiyaman, N. and P. Jayakumar. 2004. "Ancient anchors off Tamil Nadu coast and ship tonnage analysis." *Current Science* 86.9, 1261–1267.

Avanzini, A. 2008. "Notes for a history of Sumhuram and a new inscription of Yashhur'il." In A. Avanzini (ed.), *A port in Arabia between Rome and the Indian Ocean (3rd Century BCE– 5th Century CE): Khor Rori Report 2*, 609–641. Rome: 'L'Erma' di Bretschneider.

Basant, P. K. 2012. *The city and the country in Early India: A study of Malwa*. New Delhi: Primus Books.

Basu Majumdar, S. 2017. "State formation and religious processes in the north-south corridor of Chhattisgarh (from first century BC to eighth century AD)." *Studies in People's History* 4.2, 119–129.

Bauer, A. M. 2016. "Provincializing the littoral in Indian Ocean heritage: Coastal connections and interior contexts of the southern Deccan." In H. P. Ray (ed.), *Bridging the Gulf: Maritime cultural heritage of the western Indian Ocean*, 101–119. New Delhi: Manohar.

Begley, V. 1983. "Arikamedu reconsidered." *American Journal of Archaeology* 87.4, 461–468.

–. 1993. "New investigations at the port of Arikamedu." *Journal of Roman Archaeology* 6, 93–108.

Bhandare, S. 1999. "Historical analysis of the Satavahana era: A study of coins." PhD dissertation. Mumbai: University of Mumbai.

–. 2018. "Numismatics of 'the other': Investigating coinage and 'Greekness' at Taxila." In H. P. Ray (ed.), *Buddhism and Gandhara: An archaeology of museum collections*, 70–103. New Delhi: Routledge.

–. 2020. "The last phase of the Indo-Greeks: Methods, interpretation and new insights in reconstructing the past." In R. Mairs (ed.), *The Graeco-Bactrian and Indo-Greek world*. London: Routledge.

Bharucha, A. 2022. *The archaeological geography of early historical Gujarat*. Delhi: Primus Books.

Bhatti, H., R. Ramakrishnan, A. K. Sharma, and A. S. Rajawat. 2018. "Incessant erosion of high tida mudflats in the northern Gulf of Khambhat." *Current Science* 114.12, 2554.

Bhavsar, D. O., Y. T. Jasraj, H. A. Pandya, V. Singh, A. Patel, and M. Kalubarme. 2014. "Monitoring mangrove status using remote sensing and geo-informatics in Piram Island, Gulf of Khambhat, Gujarat State, India." *International Journal of Scientific and Engineering Research* 5.6, 999–1005.

Blue, L., J. Whitewright, and R. Thomas. 2011. "Ships and ship's fitting." In D. P. S. Peacock and L. Blue (eds.), *Myos Hormos-Quseir Al-Qadim: Roman and Islamic ports on the Red Sea*. Vol. 2. *Finds from the excavations 1999–2003*, 179–209. Oxford: Oxbow Books.

Brancaccio, P. 2018. "The Silk Road and the Cotton Road: Buddhist art and practice between Central Asia and the Western Deccan." In B. Gentino and L. Caterina (eds.), *Via della Seta: Percorsi, immahini e cultura materiale*. Vol. 2, 59–73. Roma: Scienza e Lettera Editore.

Cai, W., N. Si, W. Wu, and L. Xi. 2011. "The stern rudder: A Chinese invention circa 200 CE." In L. Varadarajan (ed.), *Gujarat and the sea*, 147–155. Ahmedabad: Darshak Itihas Nidhi.

Casimir, M. J. 1996. "Some recent publications on pastoralism in the arid lands of western India (Rajasthan and Gujarat): A review." *Nomadic Peoples* 39, 155–162.

Casson, L. 1989. *The Periplus maris Erythraei*. Princeton, NJ: Princeton University Press.

Cecil, E. A. 2020. *Mapping the Pāśupata landscape: Narrative, place, and the Śaiva imaginary in early medieval north India.* Leiden: Brill.

Chakrabarti, D. K. 2010. *The ancient routes of the Deccan and the southern peninsula*. New Delhi: Aryan Books International.

Chakravarti, R. 2017. "Examining the hinterland and foreland of the port of Muziris in the wider perspective of the subcontinent's long-distance networks." In K. S. Mathew (ed.), *Imperial Rome, Indian Ocean regions and Muziris: New perspectives on maritime trade*, 307–338. London: Routledge.

Chattopadhyaya, B. D. 2003. *Studying early India: Archaeology, texts, and historical issues*. New Delhi: Permanent Black.

Cherian, P. J., G. V. R. Prasad, K. Dutta, D. K. Ray, V. Selvakumar, and K. P. Shajan. 2009. "Chronology of Pattanam: A multi-cultural port site on the Malabar coast." *Current Science* 97.2, 236–240.

Chhabra, B. C. and G. S. Gai, eds. 1981. *Inscriptions of the early Gupta kings*. Corpus Inscriptionum Indicarum. Vol. 3 (revised). New Delhi: Archaeological Survey of India.

Childe, V. G. 1936. *Man makes himself*. London: Watts and Co.

Cobb, M. A. and F. Mitchell. 2019. "Eros at Junnar: Reconsidering a piece of Mediterranean art." *Greece & Rome* 66.2, 203–226.

Coningham, R. 1999. "Conclusions." In R. Coningham (ed.), *Anuradhapura: The British-Sri Lankan excavations at Anuradhapura Salagha Watta 2.* Vol. 1, 135–148. Oxford: Archaeopress.

Cribb, J. 2020. "Greekness after the end of the Bactrian and Indo-Greek kingdoms." In R. Mairs (ed.), *The Graeco-Bactrian and Indo-Greek world*. London: Routledge.

Crumley, C. L. 1995. "Heterarchy and the analysis of complex societies." *Archaeological Papers of the American Anthropological Association* 6.1, 1–5.

–. 2015. "Heterarchy." In R. A. Scott and S. M. Kosslyn (eds.), *Emerging trends in the social and behavioral sciences*, 1–14. https://doi.org/10.1002/9781118900772.etrds0158.

Cumming, G. S. 2016. "Heterarchies: Reconciling networks and hierarchies." *Trends in Ecology & Evolution* 31.8, 622–632.

De Romanis, F. 2012. "On Dachinabades and Limyrike in the *Periplus Maris Erythraei*." *Topoi* 11, 329–340.

Deloche, J. 1996. "Iconographic evidence on the development of boat and ship structures in India (2nd c. BC– 15th c. AD" In H. P. Ray and J.-F. Salles (eds.), *Tradition and archaeology. Early maritime contacts in the Indian Ocean. Proceedings of the International Seminar: Techno-archaeological perspectives of seafaring in the Indian Ocean 4th cent. BC–15th century AD New Delhi, February 28–March 4, 1994*, 183–224. New Delhi: Manohar.

Desai, R. 1993. "The religious geography of an ancient town – Bharuch." *South Asia: Journal of South Asian Studies* 16, 61–77.

Deyell, J. S. 1984. "Indo-Greek and Ksaharata coins from the Gujarat seacoast." *The Numismatic Chronicle* 144, 115–127.

Dutta, M. 1990. *A study of the Sātavāhana coinage*. New Delhi: Harman Pub. House.
Fergusson, J. and J. Burgess. 1880. *The cave temples of India*. London: Trübner and Co.
Fitzpatrick, M. P. 2011. "Provincializing Rome: The Indian Ocean trade network and Roman imperialism." *Journal of World History* 22.1, 27–54.
Free trade zone and port hinterland development. 2005. New York, NY: United Nations.
Fuller, D. Q. 2008. "The spread of textile production and textile crops in India beyond the Harappan zone: An aspect of the emergence of craft specialization and systemic trade." In T. Osada and A. Uesugi (eds.), *Occasional Papers 3: Linguistics, archaeology and the human past*, 1–26. Kyoto: Research Institute for Humanity and Nature.
Gaur, A. S. 2000. *Harappan maritime legacies of Gujarat*. New Delhi: Asian Publication Services.
Gaur, A. S. and Sundaresh. 2014. "Palaeo-coastline of Saurashtra, Gujarat: A study based on archaeological proxies." *Indian Journal of Marine Sciences* 43.7, 1224–1229.
–. 2016. "A maritime archaeological exploration in Narmada estuary, west coast of India." *Man and Environment* 41.1, 82–87.
Gaur, A. S., Sundaresh, and S. Tripati. 2007. "Remains of the ancient ports and anchorage points at Miyani and Visawada, on the west coast of India: A study based on underwater investigations." *The Mariner's Mirror* 93.4, 428–440.
–. 2013. "Ancient coastal transportation system along the Western Saurashtra coast: Evidence from Navibandar." *Current Science* 104.2, 190–193.
Gaur, A. S., K. H. Vora, and Sundaresh. 2007. "Shoreline changes during the last 2000 years on the Saurashtra coast of India: Study based on archaeological evidences." *Current Science* 92.1, 103–110.
Ghosh, A. 1990. *An encyclopaedia of Indian archaeology.* Vol. 2, *A gazetteer of explored and excavated sites in India*. Leiden: Brill.
Ghosh, S. 2014. "Barbarikon in the maritime trade network of early India." In R. Mukherjee (ed.), *Vanguards of globalization: Port cities from the classical to the modern*, 59–74. New Delhi: Primus Books.
Granovetter, M. 2005. "The impact of social structure on economic outcomes." *Journal of Economic Perspectives* 19.1, 33–50. https://doi.org/10.1257/0895330053147958.
Hawkes, J. 2021. "An immaterial problem: Toward an archaeology of textiles and textile production in historic South Asia." *Asian Perspectives* 60.2, 272–305.
Hirapara, J. G., P. K. Singh, M. Singh, and C. D. Patel. 2020. "Analysis of rainfall characteristics for crop planning in north and south Saurashtra region of Gujarat." *Journal of Agricultural Engineering* 57.2, 162–171.
Indian Archaeology: A Review (IAR), various volumes. New Delhi: Archaeological Survey of India.
Ingold, T. 1993. "The temporality of the landscape." *World Archaeology* 25.2, 152–174.
Jha, A. and D. Rajgor. 1994. *Studies in the coinage of the Western Ksatrapas*. Nashik: Indian Institute of Research in Numismatic Studies.
Kant, S. 2000. *The Hathīgumphā inscription of Khāravela and the Bhabru edict of Aśoka: A critical study*. 2nd ed. New Delhi: D. K. Printworld.
Karttunen, K. 2015. *Yonas and Yavana in Indian literature*. Helsinki: Finnish Oriental Society.
Keller, S. 2015. "Bharuch Fort during the pre-Sultanate Period." In M.-F. Boussac, J.-F. Salles, and J.-B. Yon (eds.), *Ports of ancient Indian Ocean*, 217–234. Delhi: Primus Books.
Kizhakudan, S. J., J. K. Kizhakudan, H. M. Bhint, D. T. Vaghela, and K. N. Fofandi. 2003. "Investigations on the creeks of Saurashtra." In M. R. Boopendranath, R. Badonia, T. V. Sankar, P. Pravin, and S. N. Thomas (eds.), *Sustainable fisheries development: Focus on Gujarat*, 87–92. Cochin: Society of Fishery Technologists.
Korisettar, R., S. M. Vastrad, Lokesha, and S. K. Aruni. 2010. "The origin and genesis of a fertility deity: Prehistoric antecedents of the Lajjagauri cult and new discoveries in South Asia." *Karnataka University Journal of Social Sciences* 34, 99–123.
Krishnamurthy, R. 2000. *Non-Roman ancient foreign coins from Karur in India*. Chennai: Garnet Publishers.

Lal, M. 1984. *Settlement history and rise of civilization in Ganga-Yamuna doab (from 1500 BC to 300 AD)*. Delhi: B. R. Publishing.

Läw, I. 1915. "Karpas." *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 29.3–4, 247–264.

Lüders, H. 1912. *A list of Brahmi inscriptions from the earliest times to about AD 400 with the exception of those of Asoka*. Calcutta: Superintendent Government Printing.

Mann, M. 1986. *The sources of social power.* Vol. 1. Cambridge: Cambridge University Press.

Mirashi, V. V. 1981. *The history and inscriptions of the Sātavāhanas and the Western Kshatrapas*. Bombay: Maharashtra State Board for Literature and Culture.

Mishra, S. V. and H. P. Ray. 2019. *The archaeology of sacred spaces: The temple in western India, 2nd century BCE–8th century CE*. London: Routledge India.

Morrison, K. D. 2002. "Pepper in the hills: Upland–lowland exchange and the intensification of the spice trade." In K. D. Morrison and L. L. Junker (eds.), *Forager-traders in South and Southeast Asia: Long-term histories*, 122–158. Cambridge: Cambridge University Press.

Morrison, K. D. and M. T. Lycett. 2013. "Forest products in a wider world: Early historic connections across Southern India." In S. A. Abraham, P. Gullapalli, T. P. Raczek, and U. Z. Rizvi (eds.), *Connections and complexity: New approaches to the archaeology of South Asia*, 127–142. Walnut Creek, CA: Left Coast Press.

Nair, B. 2014. "District groundwater brochure: Junagarh district, Gujarat." Technical Report Series. Ahmedabad: Central Ground Water Board, Government of India.

Neelis, J. E. 2011. *Early Buddhist transmission and trade networks: Mobility and exchange within and beyond the northwestern borderlands of South Asia*. Leiden: Brill.

Pappu, R. S. and A. R. Marathe. 1982. "Geomorphology and early man in Saurashtra." In S. S. Merh (ed.), *First National Seminar on Quaternary Environments, Baroda, November, 1977*, 159–169. Delhi: Hindustan Publishing Corporation.

Parasher-Sen, A. 1998. "Of tribes, hunters and barbarians: Forest dwellers in the Mauryan period." *Studies in History* 14.2, 173–191.

Patel, A. 2007. "Material culture and technology of early historic Gujarat, western India." *Proceedings of the Indian History Congress* 68, 1377–1400.

Paul, A. B. 2017. *Early historic settlements at Shetrunji River in India*. Delhi: Agam Kala Prakashan.

Pecci, A., J. Clarke, M. Thomas, J. Muslin, I. Graaff, L. Toniolo, D. Miriello, G. M. Crisci, M. Buonincontri, and G. Di Pasquale. 2017. "Use and reuse of amphorae: Wine residues in Dressel 2–4 amphorae from Oplontis Villa B (Torre Annunziata, Italy)." *Journal of Archaeological Science: Reports* 12, 515–521.

Pinto-Orton, N. 1992. "Red polished ware in Gujarat: A catalogue of twelve sites." In V. Begley and R. D. de Puma (eds.), *Rome and India: The ancient sea trade*, 46–81. Delhi: Oxford University Press.

–. 2013. "Red polished ware in Gujarat: Surface collections from inland sites." In S. A. Abraham, P. Gullapalli, T. P. Raczek, and U. Z. Rizvi (eds.), *Connections and complexity: New approaches to the archaeology of South Asia*, 195–222. Walnut Creek, CA: Left Coast Press.

Pomey, P. 2011. "A comparative study of sewn boats from the Mediterranean, the Red Sea and the Indian Ocean: The question of Gujarat." In L. Varadarajan (ed.), *Gujarat and the sea*, 133–146. Ahmedabad: Darshak Itihas Nidhi.

Pramanik, S. 2004. "Hathab: An early historic port on the Gulf of Khambhat." *Journal of Indian Ocean Archaeology* 1, 133–140.

–. 2005. "Navigational sealings of early historic Vanij (merchants) at Hathab, Gujarat." *Journal of Indian Ocean Archaeology* 2, 107–109.

Rajgor, D. 1997. "Roman currency in Gujarat." In R. N. Mehta (ed.), *New dimensions of Indology (Dr. Praveen Chandra Parikh Felicitation volume)*, 197–203. Delhi: Bhartiya Vidya Prakashan.

Ramaswamy, V. 2008. "Textiles in India." In H. Selin (ed.), *Encyclopaedia of the history of science, technology, and medicine in non-Western cultures*, 2113–2115. Dordrecht: Springer Netherlands.

Rao, S. R. 1965. "Shipping and maritime trade of the Indus people." *Expedition* 7.3, 30–37.

–. 1985. *Lothal*. New Delhi: Archaeological Survey of India.

Rawat, Y. S. 2018. “Buddhist remains of Vadnagar, District Mehsana (Gujarat).” In B. Shelat and T. Parmar (eds.), *New horizons of Indology: Prof. Dr. H. H. Shastri Commemoration Volume*, 27–34. Ahmedabad: Shri Nandan H. Shastri.

Ray, H. P. 1986. *Monastery and guild: Commerce under the Sātavāhanas*. Delhi: Oxford University Press.

–. 1988. “Yavana presence in ancient India.” *Journal of the Economic and Social History of the Orient* 31.3, 311–325.

–. 1994a. “Kanheri: The archaeology of an early Buddhist pilgrimage centre in western India.” *World Archaeology* 26.1, 35–46.

–. 1994b. *The winds of change: Buddhism and the maritime links of early South Asia*. Delhi: Oxford University Press.

–. 1995. “A resurvey of ‘Roman’ contacts with the East.” In M.-F. Boussac and J.-F. Salles (eds.), *Athens, Aden, Arikamedu: Essays on the interrelations between India, Arabia, and the Eastern Mediterranean*, 97–114. Delhi: Manohar.

–. 2003. *The archaeology of seafaring in ancient South Asia*. Cambridge: Cambridge University Press.

–. 2010. “Water management and archaeology of the Haryana-Punjab plains.” In H. P. Ray (ed.), *Sanghol and the archaeology of Punjab*, 198–215. New Delhi: Aryan Books International.

–. 2019a. “Early historic Gujarat and the trading world of the western Indian Ocean.” In E. A. Alpers and C. Goswami (eds.), *Transregional trade and traders: Situating Gujarat in the Indian Ocean from early times to 1900*, 100–122. New Delhi: Oxford University Press.

–. 2019b. “History of fishing and sailing communities in the western Indian Ocean.” In D. E. Ludden (ed.), *Oxford Research Encyclopedia of Asian History*. https://doi.org/10.1093/acrefore/9780190277727.013.404.

Rea, A. 1904. “Prehistoric antiquities in Tinnevelly.” *Annual Report of Archaeological Survey of India 1902–03*, 111–140.

Reddy, D. R. 2014. “The emergence and spread of coins in ancient India.” In P. Bernholz and R. Vaubel (eds.), *Explaining monetary and financial innovation: A historical analysis*, 53–77. Cham: Springer International Publishing.

Roberts, B. 1996. *Landscapes of settlement: Prehistory to the present*. London: Routledge.

Saha, T. K. 2012. *Geology and mineral resources of Gujarat, Daman and Diu*. 2nd ed. Jaipur: Geological Survey of India.

Salles, J.-F. 1995. “The Periplus of the Erythraen Sea and the Arab–Persian Gulf.” In M.-F. Boussac and J.-F. Salles (eds.), *Athens, Aden, Arikamedu: Essays on the interrelations between India, Arabia, and the eastern Mediterranean*, 115–146. New Delhi: Manohar.

Schlingloff, D. 1976. “Kalyāṇakārin’s adventures. The identification of an Ajanta painting.” *Artibus Asiae* 38.1, 5–28.

Seland, E. H. 2010. *Ports and political power in the Periplus: Complex societies and maritime trade on the Indian Ocean in the first century AD*. Oxford: Archaeopress.

Selby, M. A. 2008. “Representations of the foreign in classical Tamil literature.” In G. R. Parker and C. M. Sinopoli (eds.), *Ancient India in its wider world*, 79–90. Ann Arbor, MI: University of Michigan Press.

Seneviratne, S. 1981. “Kalinga and Andhra: The process of secondary state formation in early India.” In H. J. M. Claessen and P. Skalnik (eds.), *The study of the state*, 317–338. The Hague: Mouton.

Shaw, J. 2013. “Archaeologies of Buddhist propagation in ancient India: ‘Ritual’ and ‘practical’ models of religious change.” *World Archaeology* 45.1, 83–108.

–. 2018. “Early Indian Buddhism, water and rice: Collective response to socioecological stress: Relevance for global environmental discourse and Anthropocene studies.” In Y. Zhuang and M. Altaweel (eds.), *Water societies and technologies from the past and present*, 223–255. London: UCL Press.

Shaw, J. and J. V. Sutcliffe. 2003a. “Ancient dams, settlement archaeology and Buddhist propagation in central India: The hydrological background.” *Hydrological Sciences Journal* 48.2, 277–291.

Shaw, J. and J. V. Sutcliffe. 2003b. “Water management, patronage networks and religious change: New evidence from the Sanchi Dam complex and counterparts in Gujarat and Sri Lanka.” *South Asian Studies* 19, 73–104.

Shinde, V. 1994. “The earliest temple of Lajjāgaurī? The recent evidence from Padri in Gujarat.” *East and West* 44.2/4, 481–485.

Shinde, V., P. Shirvalkar, and S. N. Rajaguru. 2008. “Padri: A Harappan salt manufacturing center on west coast of India.” *Journal of Indian Ocean Archaeology* 5, 57–84.

Smith, M. L. 2002. “The role of local trade networks in the Indian subcontinent during the early historic period.” *Man and Environment* 27.1, 139–151.

–. 2006. “The archaeology of South Asian cities.” *Journal of Archaeological Research* 14.2, 97–142.

Sonawane, V. H. 2000. “Early farming communities of Gujarat, India.” *Bulletin of the Indo-Pacific Prehistory Association* 19, 137–146.

–. 2011. “Sailing boats depicted in rock art in Charmadi in Gujarat.” In L. Varadarajan (ed.), *Gujarat and the sea*, 499–508. Ahmedabad: Darshak Itihas Nidhi.

Stiles, D. 1993. “Hunter-gatherer trade in wild forest products in the early centuries AD with the port of Broach, India.” *Asian Perspectives* 32.2, 153–167.

Strauch, I., ed. 2012. *Foreign sailors on Socotra: The inscriptions and drawings from the cave Hoq*. Bremen: Hempen Verlag.

Subbarao, B. 1953. *Baroda through the ages (Being the report of an excavation conducted in the Baroda area 1951–52)*. Baroda: Maharaja Sayajirao University of Baroda.

Sundaresh, A. S. Gaur, and S. Tripati. 2011. “Maritime archaeology of the Okhamandal region, Gujarat.” In L. Varadarajan (ed.), *Gujarat and the sea*, 63–78. Ahmedabad: Darshak Itihas Nidhi.

Suresh, S. 2004. *Symbols of trade: Roman and pseudo-Roman objects found in India*. New Delhi: Manohar.

–. 2007. *Arikamedu: Its place in the ancient Rome–India contacts*. Delhi: Embassy of Italy.

Tchernia, A. 1997. “Winds and coins: From the supposed discovery of the monsoon to the *denarii* of Tiberius.” In F. De Romanis and A. Tchernia (eds.), *Crossings: Early Mediterranean contacts with India*, 250–276. New Delhi: Manohar.

Thakur, V. K. 1987. “Role of guilds in ancient Indian urban administration (c. 200 BC–c. AD 600): A numismatic study.” *Journal of the Numismatic Society of India* 49, 70–76.

Tomber, R. 2008. *Indo-Roman trade: From pots to pepper.* Bristol: Bristol Classical Press.

–. 2009. “Beyond Western India: The evidence from imported amphorae.” In R. Tomber, L. Blue, and S. A. Abraham (eds.), *Migration, trade and peoples.* Part 1, *Indian Ocean commerce and the archaeology of western India*, 42–57. London: The British Academy.

–. 2017. “The Roman pottery from Pattanam.” In K. S. Mathew (ed.), *Imperial Rome, Indian Ocean regions and Muziris*, 381–394. London: Routledge.

Trautmann, T. R. 2009. “Elephants and the Mauryas.” In T. R. Trautmann (ed.), *The clash of chronologies: Ancient India in the modern world*, 229–254. Delhi: Yoda Press.

Tripati, S. 2011. “Ancient maritime trade of the eastern Indian littoral.” *Current Science* 100.7, 1076–1086.

–. 2017. “Early users of monsoon winds for navigation.” *Current Science* 113.8, 1618–1623.

Tripati, S., K. P. Rao, S. Kumari, O. Imsong, and V. Vanlalhruaitluangi. 2014. “A single-hole stone anchor from Kottapatnam: Early historic port site of Andhra Pradesh, India.” *The International Journal of Nautical Archaeology* 43.1, 188–191.

Tripati, S. and A. P. Patnaik. 2008. “Stone anchors along the coast of Chilika Lake: New light on the maritime activities of Orissa, India.” *Current Science* 94.3, 386–390.

Tripati, S., N. Prabhaharan, and R. P. Behera. 2020. “Recently discovered iron anchors from Tamil Nadu, east coast of India.” *Ancient Asia* 11, 1–11.

van’t Haaff, P. A. 2004. *Saurashtra (c. 450–50 BC) Surasena (c. 500–350 BC): Silver punchmarked coinage*. Nasik: IIRNS Publications.

Varadarajan, L. 1995. “Indian boat building traditions: The ethnological evidence.” In M.-F. Boussac and J.-F. Salles (eds.), *Athens, Aden, Arikamedu: Essays on the interrelations between India, Arabia, and the Eastern Mediterranean*, 167–179. Delhi: Manohar.

–. 2018. “Indian patterned cotton textiles and trade with the East and Southeast.” In S. Saran (ed.), *Cultural and civilisational links between India and Southeast Asia: Historical and contemporary dimensions*, 51–63. Singapore: Springer Singapore.

Varma, S. 1990. “Changing settlement patterns in Kathiawar.” *Studies in History* 6.2, 137–161.

–. 2008. “The absence of urban centers in early historic Kathiawad.” In G. Sengupta and S. Chakraborty (eds.), *Archaeology of Early Historic South Asia*, 212–230. New Delhi: Pragati Publications.

Varma, S., J. Menon, and D. Nair. 2021. “Ephemeral traces: Archaeology of a medieval rural settlement.” *The Medieval History Journal* 24.1–2, 281–319.

Verman, S. R. 2013. “Women and their role in ancient Indian textile craft.” *Journal of Eurasian Studies* 5.4, 10–21.

Whitewright, J. 2011. “Maritime rock art from Wadi Quseir Al-Qadim.” In D. P. S. Peacock and L. K. Blue (eds.), *Myos Hormos-Quseir Al-Qadim: Roman and Islamic ports on the Red Sea*. Vol. 2. *Finds from the excavation, 1999–2003*, 199–205. Oxford: Oxbow Books.

–. 2018. “The ships and shipping of Indo-Roman trade: A view from the Egyptian Red Sea ports.” *HEROM. Journal on Hellenistic and Roman Material Culture* 6.2.1, 137–172.

Wild, F. and J. P. Wild. 2018. “Textile contrasts at Berenike.” In J.-P. Brun, T. Faucher, B. Redon, and S. Sidebotham (eds.), *The Eastern Desert of Egypt during the Greco-Roman period: Archaeological reports*. Paris: Collège de France.

Wild, F. C. and J. P. Wild. 2001. “Sails from the Roman port at Berenike, Egypt.” *International Journal of Nautical Archaeology* 30.2, 211–220.

Wild, J. P. and F. Wild. 2005. “Rome and India: Early Indian cotton textiles from Berenike, Red Sea coast of Egypt.” In R. Barnes (ed.), *Textiles in Indian Ocean societies*, 10–15. New York: Routledge.

Sitta von Reden

8 Frontiers in the Mediterranean-Indian Ocean Exchange Network: The Eastern Desert of Egypt and its Ports

I Introduction

The Eastern Desert of Egypt is a hyperarid expanse stretching some 850 km between the Nile and the Red Sea, from the Negev in the north to the latitude of the first Nile cataract in the south. It is permeated by rugged mountain ranges with peaks of up to 1,500 meters and cut through by wadis – dried-out riverbeds – that once connected the Nile with the Red Sea by water.[1] Despite being such an inhospitable environment, the Eastern Desert became a busy place in antiquity. Not only were stones, gold, and minerals quarried and mined in its mountains, but also large volumes of trade moved between the Red Sea and Nile ports through its wadis for haulage down the river Nile to the city of Alexandria. From there it was marketed back into Egypt or moved on to other Mediterranean markets, most notably in Italy and Rome. Aromatics, scented oils, pearls, pepper, fabrics, and much more came from Arabia, Africa, India, and a city called Thina, an unequivocal reference to the never-visited but vaguely known place behind India from where silk came.[2] There was enough demand for these goods, both in terms of appreciation and financial capacity to buy them. In the far-away destinations, they served in religious rituals, as remedies against ailments, markers of distinction, and a means of demonstrating the power of the empire and its citizens.

The past twenty years have seen an explosion of research on Indian Ocean trade, including excavations of Arabian, Indian, and Eastern Desert port sites. This has dramatically increased our understanding of the infrastructures and trade networks that connected the Eastern Desert with the transimperial world of the Indian Ocean. From the Pharaonic to the Roman period, most trade and exchange will have been local and regional along the eastern African littoral. The Roman-era *Periplus Maris Erythraei* offers ample evidence for the local and regional networks that supplied coastal harbors along the long-distance route from the Red Sea to the Indian subcontinent.[3] Yet expeditions and trade across the sea to the west coast of the Arabian Peninsula also had a long tradition, and continued to be important in the Ptolemaic and Roman

1 Sidebotham 2011, 7–20; Weaverdyck et al., vol. 2, ch. 8, for the transformation of the environment into an imperial landscape. I owe special thanks to Eli Weaverdyck for valuable comments and discussion during the writing of this chapter.

2 *Periplus Maris Erythraei* (*PME*) 65 with Casson 1989 *ad loc*. Young 2001, 27–89, provides a good chapter-length introduction; Cobb 2018 and Sidebotham 2011 provide excellent surveys of Eastern Desert trade from the Ptolemaic to the Roman period.

3 Casson 1989.

https://doi.org/10.1515/9783110607628-010

periods.[4] The Ptolemies made forays into the Indian Ocean possibly up to India, by the middle of the second century BCE.[5] From the time of the Roman occupation of Egypt onward, trade with India became frequent, regular, and of high value. This trade formed a significant part of the Roman imperial economy, in terms of both the fiscal revenue it generated and the profits that could be gained from it.[6] This chapter explores the role the development of the Eastern Desert played in the transimperial trade between the Mediterranean and the Indian Ocean.

Imperial resource extraction and trade together led to several social and political frontiers in the Eastern Desert. Imperial actors, resident in Alexandria and along the Nile valley, met with a highly unfamiliar environment and its desert communities just as they met with a remote littoral and its "fish eaters."[7] There was, moreover, the fuzzy political frontier toward the Nubian kingdoms in the south, and the even fuzzier maritime frontier toward the Arabian Peninsula.[8] Garrisons protected these frontiers, however patchily, and soldiers were sent into the desert to protect the trails and settlements. Nome administrations and armies around Edfu and Koptos organized the supply of the forts and tax collection. Banks and toll stations were junctions for their reception and storage. Like vectors, these institutions reached into the desert and made it part of the administrative and military landscape of Egypt. Institutionally and ideologically, the Eastern Desert gradually became part of Egypt. Ecologically, this was never possible. In a letter from the fort at Bi'r Samut, a soldier writes that a flash flood that had affected the fort should to be reported "to Egypt."[9] From the perspective of the forts, Egypt was a foreign country. Different ecologies created the toughest frontier.

It is worth pointing out, therefore, that the label 'Roman' is not quite adequate for the trade networks that spanned the Indian Ocean and the Mediterranean under the Roman imperial period. 'Rome' and 'Roman' are slippery terms, sliding over a host of internal frontiers that rendered Rome and the Roman Empire no single actor, but a complex of interconnecting social, political, military, financial, and fiscal networks and infrastructures whose coordination was vital for the growth of long-distance trade.[10] In this chapter, I will show that the mostly state-sponsored infrastructural development of the Eastern Desert from the Pharaonic to the Roman period went

4 Weaverdyck, ch. 12.A, this volume.

5 In his survey of Ptolemaic foreign trade, Fraser 1970, 148–188, is sceptical about Ptolemaic trade reaching India. Diodoros (Diod.) 3. 43. 1–3 = Agatharchides frgm. 90 (Burstein 1989) mentions Ptolemaic campaigning in the Gulf of Aqaba, which Burstein takes as a sign of commercial expansion into the Indian Ocean.

6 Wilson and Bowman 2018b.

7 Weaverdyck, vol. 2, ch. 7.

8 For the Nubian frontier, Boozer 2018; Schmidt 2021; and below. For the Arabian frontiers, Weaverdyck, ch. 12.A, this volume.

9 *O. Sam. Inv.* 985 = *Tresmegistos* (*TM*) 754181.

10 Rathbone 2007; see also Manning 2011 for the Ptolemaic period.

along with an increasing coordination of networks of different kinds and scales. Under the Roman Empire, network coordination between the Mediterranean and Indian Ocean was most successful, but the growth of these networks goes back to pre-Roman times. It built on regional and local social interaction and network coordination within Egypt and the Eastern Desert, the principles of which date back to the earliest phase of Pharaonic state formation. The Eastern Desert was never just a transit zone, but for those who successfully navigated the many social and ecological frictions in the desert, it became a site of great economic opportunity. The Upper Egyptian metropoleis, most importantly Apollonopolis Magna (modern Edfu) and Koptos (modern Qift), well connected by river to Alexandria, were important interfaces between the Mediterranean and the desert. Various actors made these places nodal points of social interaction and trust with positive outcomes for the circulation of goods and money into and out of the desert. In other words, the desert frontier was linked to imperial spaces (a network of 'weak ties') through distinct nodes that concentrated strong network ties formed in local social relationships.[11]

The following chapter builds on the approaches developed in volume 2 of this handbook. It looks at imperial and transimperial (global), as well as local and regional, actors: kings and emperors, cities, armies, imperial agents, and what we called 'networking agents,' that is, financiers and traders. These actors deployed tools, most notably physical infrastructures, fiscal institutions, *euergetism* (public benefaction), family ties, and principal–agent relationships, in order to achieve their network goals.[12] The networks of some of these actors were empire-wide and profited considerably from that scale of activity. But many actors operated in a much more local or regional framework, and the agents of the imperial actors closely interacted with those. The scale and nature of the networks changed together with developing political and imperial contexts, but it is interesting to see that the interaction of non-desert actors with those in the desert remained rather stable through changing political circumstances.

In order to emphasize long-term continuities, considerable room is given to pre-Roman developments in this chapter. The nature of the evidence often permits a close reading of network development over time. Inscriptions and ostraca from the desert itself tell us in great detail how network actors played and changed their roles. Together with papyri and inscriptions from the Nile valley, they show how networking tools

11 Consider Granovetter 2005, 33, here: "Social structure, especially in the form of social networks, affects economic outcomes for three main reasons. First, social networks affect the flow and the quality of information. Much information is subtle, nuanced and difficult to verify, so actors do not believe impersonal sources and instead rely on people they know. Second, social networks are an important source of reward and punishment, since these are often magnified in their impact when coming from others personally known. Third, trust, by which I mean the confidence that others will do the 'right' thing despite a clear balance of incentives to the contrary, emerges, if it does, in the context of a social network." See also Weaverdyck, vol. 2, ch. 12c, 663 and 679–680.

12 Von Reden, vol. 2, ch. 2, esp. 35, 46, 52; also Manning 2011.

were adapted to particular circumstances. As the desert was a rough environment, adaptation and collaboration were particularly important network practices. A long-term perspective reveals how this frontier zone over centuries and under changing political circumstances was made a landscape of immensely profitable connectivity.

II The Eastern Desert under the Pharaohs

II.1 The Pharaonic State in the Desert

From the Bronze Age onward, the region along the River Nile from the Delta to the first cataract formed a theocratic state, binding together local social hierarchies that controlled land and people.[13] Large landed estates, in principle belonging to the pharaoh but in practice ceded to the temples in the Nile valley, formed large organizational units putting hundreds of tenants and laborers to work and generating incomes in kind incomparable to those of the private-property regimes of Mediterranean city-states. Diplomatic exchanges and trade of the pharaohs and temple elites, moreover, were oriented toward the cities along the Phoenician coast and western Anatolia, as is well documented in the Al-Amarna letters (1362–1330 BCE), the Uluburun shipwreck (dated to around the same time), and the story of the voyage of Wenamun to Lebanon under Ramesses XI (1107–1077 BCE).[14]

Pharaonic interest in the Eastern Desert was intense from the Old Kingdom onward (map 1). The earliest evidence for construction work in the Eastern Desert is an unfinished dam about 30 km east of modern Cairo in the Wadi Gerady, dated tentatively to the time of Cheops (2551–2428 BCE).[15] Middle Kingdom rock inscriptions refer to expeditions of up to 10,000 men into Wadi Hammamat, Wadi el-Hudi, and Hatnub with the purpose of quarrying gold, digging wells, and acquiring aromatics from the people in the desert and beyond.[16] Wadi Hammamat in particular was famed for its gold, minerals, and a kind of stone that was used for sculptures and vessels.[17] The west–east orientation of the wadi also provided opportunities for traveling from the Nile to the Red Sea across the hills on the shortest route from Koptos to what later became the harbor of Myos Hormos. New Kingdom archaeological data also attest to the exploitation of galena mines at Gebel el-Zeit on the northern shore of the

13 The following is based on Kemp 2018, Cooper 2021; Cooper 2022; Tallet 2012; and Sidebotham 2011. Any misreading of these works is my own fault.

14 Broodbank 2013; Becking 2017.

15 Sidebotham 2011, 22.

16 Cooper 2022, 6: Wadi Hammamat (graywacke); Wadi el-Hidi (amethyst); Hatnub (calcite and travertine).

17 Ogden 2001 for a survey of ancient Egyptian minerals and mining in the Eastern Desert.

Map 1: Eastern Desert sites during the Pharaonic period (after Sidebotham 2011, fig. 3.1).

Red Sea.[18] Travel in the desert was organized in large expeditions and highly prestigious for the pharaoh. Ramesses IV's expedition is praised as having comprised 8,388 men, of whom 900 died in the harsh conditions of the desert. Nevertheless, the fact that such details were represented on temple walls and funerary monuments shows the status of desert expeditions in the ideology of Pharaonic kingship.[19]

Archaeological remains of harbors and storage facilities at Ayn Sukhna and Wadi el-Jarf on the western bank of the Gulf of Suez about 120 km east of Cairo attest to substantial amounts of state-organized maritime activity across the Red Sea.[20] From the Old through to the New Kingdom, Ayn Sukhna and Wadi el-Jarf were used to cross over to the Sinai Peninsula, where turquoise, copper, and bronze were mined, and "other fine products" collected, as a rock inscription states.[21] Further south, elephants, ivory, frankincense, myrrh, and other exotic products were imported from a land the Egyptians called Punt, an unspecified region extending beyond the eastern Egyptian frontier toward the Horn of Africa.[22] The reliefs of the Punt portico in the funerary temple of Queen Hatshepsut (1473–1458 BCE) at Deir el-Bahari depict an Egyptian expedition sent by the queen to procure gold, electrum, and incense-tree plants from Punt to be naturalized in Egypt.[23] The high steward Henu, leader of a 3,000-man expedition under Mentuhotep III (2009–1997 BCE) ventured from Koptos to the Red Sea coast in order to bring back fresh myrrh.[24] Henu did not travel to Punt but acquired myrrh from the "rulers of the desert," who will have acted as middlemen. He built wells along the route and may have opened the port at Mersa at the mouth of Wadi Gawasis from where maritime expeditions departed by the time of the Middle Kingdom. While Henu's activities dominate the historical memory, the role of desert dwellers as intermediaries of imperial success should equally be remembered.

Expeditions into the desert formed part of the narratives of Pharaonic self-representation on temple walls and tombstones. But the expeditions were carried out by the pharaoh in name only; rather, as in later periods, it seems that local temples and their armies took their own initiative. While acting locally and in their own interest, priesthoods inserted themselves into a wider framework of authority on which their legitimacy relied. As an expedition under Ramesses IX reveals, it was the local priesthood of Amun that exploited the gold mines in the Lower Nubian district, and it was they who sent supplies to the desert forts.[25] In their retinue were pastoralists, chosen for their local knowledge and made loyal to the priests. Under the generalizing rhetor-

18 Sidebotham 2011; Cooper 2022.
19 Sidebotham 2011, 23.
20 Tallet 2012.
21 Tallet 2012; Bard and Fattovich 2015 for Mersa/Gawasis.
22 Bard and Fattovich 2015; Wilken 1925; Sidebotham 2011, 24.
23 Sidebotham 2011, 24; Pantalacci 2018, §8.
24 Cooper 2022, 13.
25 *P. Cair.* C–D, discussed and translated by Cooper 2022, 18–21.

ic of Pharaonic desert expeditions, there were a host of internal frontiers that needed to be mediated in order for expeditions to be successful.

II.2 Local Desert Communities

The desert was not an uninhabited space when the pharaohs sent their expeditions in search of gold, minerals, and stone. Substantial numbers of ethnically related, though independent and mobile, desert communities varyingly referred to as Nehesy, Medjay, Iuntiu, Shasu, or Blemmyes in Pharaonic texts lived in the Eastern Desert between Cairo and Aswan, as well as further south in the contested Egyptian/Nubian borderzone toward Wadi Allaqi. Small mobile communities had occupied the Eastern Desert since the Neolithic. But rather than being a socially undifferentiated lot of barbarians, they were organized in familial-territorial units capable of communal action.[26] They had traced pathways, built wells, and settled seasonally or over longer periods in the hills and near the Nile valley in Lower Nubia and Upper Egypt, where some of them also appear as mercenaries, guards, and soldiers in the employ of Egyptian temples from the Old Kingdom period onward.[27] By the time of the New Kingdom, members of pastoralist communities occur as firmly integrated into Egypt, acting as patrols in cemeteries, in the desert, and along the frontiers.[28] Medjay, a persistent Egyptian reference to desert people, became the typical word for mercenary soldiers.[29] Their use as paid laborers and soldiers over time must have been preceded by a significant amount of regular collaboration and interaction with actors of the Nile-Egyptian state.

Unfortunately, mobile communities have left notoriously little evidence of their own, and scholarly interest in the stateless societies of the Egyptian deserts has been rather limited until recently.[30] Local archaeological evidence comprises petroglyphs, funerary monuments (so-called Pan-graves), and pottery identified as Eastern Desert ware. Unfortunately, so far this evidence contributes little to our knowledge of the location and identification of different mobile groups.[31] Eastern Desert ware has been found in forts and settlements in the desert, the Upper Nile valley, and the Red Sea coast but rarely dates back to the Pharaonic period.[32] Moreover, Pharaonic rock-wall

26 Cooper 2021 for the political organization of nomadic communities that can be shown to have been related to the Beja living in the desert until the present day.

27 Barnard 2019, 391; Cooper 2022, 7.

28 Cooper 2022, 11.

29 Barnard 2019, 391.

30 Barnard 2009; 2019; Cuvigny 2014; Cuvigny 2022b; Cooper 2021; Cooper 2022.

31 Barnard 2019.

32 Only in two of the 31 sites where Eastern Desert ware was found can it be attributed to the Pharaonic period; the majority is dated to the third to sixth centuries CE. See Barnard 2019, 398, table 6.1. All finds are pre- and postdated by literary evidence, so the archaeology adds little to the subject.

inscriptions related to quarrying in the desert are mostly silent about the local communities that participated in or lived in the vicinity of their work. In the northern part of the Eastern Desert, hints about locals are limited to the mention of 'Asiatics,' possibly comparable to the 'Arabs' that later roamed the region across the border to the Sinai.[33]

Texts related to the gold-rich frontier zone between Egypt and Nubia, a region that the Ptolemies later called *dodekaschoinos* (the twelve-*schoeni*-land), are a little more abundant.[34] They reveal considerable contacts and interaction with the mobile populations there. Throughout the *dodekaschoinos*, Thebans and Nubians entertained long-term relationships with each other in which nonsedentary groups seem to have played an important part. The connection led to many military campaigns and Nubian-induced revolts against Egyptian state control over Thebes during the long history of this frontier zone. During the Pharaonic, Persian, and Graeco-Roman periods, the border toward Nubia was secured by forts at Aswan/Syene, which, if not to keep Nubians and pastoralists out, aimed at controlling their movements.[35] Alexander immediately stationed a garrison at Syene, and Ptolemy II campaigned in the zone. It was lost in the course of the Theban revolt at the end of the third century BCE but regained sometime in the second when an official in charge "of the Thebaid and Nubia" is attested.[36] It was annexed again by the Roman prefect Cornelius Gallus shortly after the Roman takeover, but the Roman presence remains elusive and will never have been very intense.[37] After the decline of Roman power in Egypt, this region formed the core of the confederation of the Blemmyes, who emerged as a unified pastoral kingdom in the fourth century CE.[38]

In the tomb inscription from the court official Weni found in Abydos, Medjay are listed as recruits of the army of Pharaoh Pepi (2332–2287 BCE). Later, they delivered timber for the ships that Pharaoh Merenre, the son of Pepi, had requested.[39] As timber is not part of the pastoralist economy of the Eastern Desert itself, this example reveals once again the important role of the desert dwellers as intermediaries in networks to which the Pharaonic state had no access. The tomb inscription of the local governor

33 Both these terms were used to denote not only ecological but also geographical foreigners, and we can never be sure whether they refer to nomads or sedentary foreigners threatening the north; Cooper 2022 and Cuvigny 2022b for discussion.

34 The *dodekaschoinos* (later extended further south and then called *triakontaschoinos*) was a stretch of some 120 km from the first cataract southward into Lower Nubia. In the first century CE, a Roman temple to Isis and Sarapis was erected on its southern border at al-Maharraqa; Gates-Foster 2012; Schmidt 2021; Cooper 2021; Cooper 2022 for the significance of Egyptian control of this region for the development of the Eastern Desert; Boozer 2018 for a discussion of its frontier status in the Graeco-Roman period.

35 Cooper 2022, 32.

36 Gates-Foster 2012, 196–197; and below.

37 Boozer 2018; Barnard 2019; Cooper 2022, 5; Schmidt 2021.

38 Cooper 2021; Cuvigny 2022b.

39 Barnard 2019, 391.

Sobeknakht, probably active under Amenemhet I (1994–1975 BCE), reports that Medjay had joined forces with the people from Kush and Punt against the Egyptians. The Medjay's in-between status gave them a lot of power over their sedentary neighbors. During the New Kingdom period, an Egyptian campaign against a local Medjay ruler is recorded to have followed a raid during which harvests in Lower Nubia had been stolen. In this campaign, 1,052 people – soldiers, servants, women, and children – were killed or captured, and the herds of livestock of the Medjay appropriated.[40]

Through the scanty references spread over two millennia, we glimpse rather typical frontier-zone scenarios. Relationships between the sedentary state and mobile populations were both hostile and collaborative. In the case of Lower Nubia, they may even have been symbiotic. The mobile peoples, differentiated among themselves and difficult for outsiders to pin down to one particular region, were in many respects dangerous barbarians, plundering, attacking, and bothering the affairs of their sedentary neighbors. A director of works, Khui, living in the period of Senwosret III (1879–1839 BCE), boasts of having trampled down not just the four foreign lands, but also the Iuntiu people.[41] According to a set of letters preserved in a Cairo papyrus, a military expedition under Ramesses IX (1129–1111 BCE) set out with a small group of mercenaries from Thebes to defeat a group of Shasu who had attacked the gold washers of the temple of Amun.[42] But these often hostile and violent people also forged alliances with the neighboring states, settled around their cities, and were sent bread and beer as diplomatic gifts. The escort of the military expedition under Ramesses was equipped with 1,000 loaves of bread, tunics and cloth, knives, cups, cattle, and donkeys that far exceeded the needs of the escort and were likely aimed at pacifying the Shasu ruler. Henu, on his journey to the Red Sea coast (above), reports that watchmen cleared his path, and "hunters" and "children of the desert" were set "as the protection of his limbs," before he overthrew the "rebels of the king." All these groups are believed to have been different mobile communities. They were by no means an undifferentiated 'Other.' Some held a lot of power and control over desert territories and their mines, some were open to negotiation, some settled in cultivable land, some were middlemen and traders, and yet others gained a living through continuous plunder. It is impossible to say whether the populations of the desert in total facilitated or obstructed the interests of the sedentary state. Cooper suggests that the desert communities were the "hidden hand in the success of the many mining operations"; yet the mines in Lower Nubia were also a continuous source of contention and conflict during the entirety of ancient Egyptian history.[43] That frontier situation of the desert certainly elicited responses – protection, defense, interaction, and negotiation – and remained a major condition of the economic development of the desert in later periods.

40 Barnard 2019, 390–391; Cooper 2022, 6.

41 Hammamat 47, quoted and discussed in Cooper 2022, 13; Cooper 2022, 19–20 for the following.

42 *P. Cair.* A–D, with Cooper 2022.

43 Cooper 2022, 39–40.

III The Eastern Desert under the Ptolemies

III.1 Continuities and Change

Egypt under the Ptolemies was a continuation of and departure from the previous state structures. These had developed significantly during the Late Period under the rule of the Saïte pharaohs (664–525 BCE) and the Persians (525–332 BCE). Many Ptolemaic fiscal institutions and principles of administration are thought to have been rooted in those of their immediate predecessor, though details are difficult to reconstruct.[44] Trade connections via Syria and Gaza continued if not grew under the Persians. An Aramaic tax account found at Syene (Elephantine) lists the import of several Greek and Phoenician ships that were taxed in silver and in kind for the Achaemenid treasury: Greek and Sidonian wine, empty jars, metals, wood, and clay.[45] How the document reached Syene, and why Phoenician and Greek imports were taxed there, is unclear. Possibly, the tax document was written in the Delta and only subsequently deposited in the Persian border fortress at Elephantine; alternatively, the ships and their loads were destined to reach Phoenicians in Elephantine where they were active as merchants or soldiers.[46] Whatever may be the case, tolls and customs along the Nile formed an integral part of the Persian tax regime. Moreover, Neo-Babylonian tablets from shortly before the Persian conquest of Egypt confirm trade connections between Babylonia, Asia Minor, the Syro-Phoenician coast, and Egypt. Natron (alum) and imitation lapis lazuli seem to have been among the main regular exports from the latter. Evidence for Persian activity in the Eastern Desert and the Red Sea coast is limited at our present stage of knowledge. Recent archaeological surveys have identified Achaemenid pottery that was related to gold mining and quarrying along the Nile–Red Sea routes.[47] There is no indication so far, however, that Persian-era activities in the desert were intense, nor that there was much trade via the Red Sea.

The Persian king Darius, however, built a canal from the Bitter Lakes via Pithom to Boubastis on the eastern arm of the Nile Delta.[48] The canal created a waterway from the Red Sea to Memphis, as royal inscriptions erected along its course state in three imperial Persian and the Egyptian languages.[49] It has sometimes been interpreted as the attempt to create a passage for trade; but as it is navigable only during the period of the Nile inundation (July to December), it is questionable whether it played

44 Manning 2010 on Pharaonic continuities; Gates-Foster 2012 on Persian and Saïte predecessors.
45 Briant 2002, 385–387; Manning 2014 with TADAE III, 282–93.
46 Becking 2017 for discussion.
47 Gates-Foster 2019, 287–290; Sidebotham and Wright 2019, no. 44 (Samut, gold-mining settlement); no. 50 (Abu Gehād, small fort close to a quarrying district); no. 59 (Dakhbaj/?ancient Compasi, gold-mining settlement).
48 Tuplin 1991 for a detailed history of the canal; Briant 2002, 384, for its commercial function.
49 Posener 1936, nos. 8–10.

a major role in Red Sea trade. The canal silted up and fell into disrepair, probably in the course of the decline in Achaemenid power over Egypt. It was reopened by Ptolemy II early in his reign, and again by Trajan after the conquest of the Nabataean kingdom in 106 CE. The Pithom Stele mentions that Ptolemy shipped elephants from Africa along the canal, "a marvel to see!"[50] Being able to cross the desert and bringing elephants to the north clearly was a sign of royal power and achievement, but there is little evidence that the canal was used regularly for trade between the Red Sea and the Delta.

After taking over Egypt from the Persians, the Ptolemies developed the *satrapy* as the core of a maritime empire that stretched far into the Mediterranean and – commercially though not politically – into the Black Sea.[51] The establishment of Alexandria as the capital on the Mediterranean coast, the tightening of control over the Thebaid and Lower Nubia, and the urbanization of coastal settlements on the Red Sea under the first two Ptolemies were part of a wider imperial project to make Egypt the center of the Mediterranean, connected with the Indian Ocean. Although there had been trade links between Egypt, the Mediterranean, and the Red Sea throughout the first millennium BCE,[52] the regularity of contacts and exchange, the geographical reach of trade, and the ease of trading and traveling across Egypt and its deserts were unprecedented. The Ptolemies, their administration, and their army did not only make forceful efforts to equip the Eastern Desert with more wells, forts, and better transport animals, which contrasts the prestigious canal project with investment in less glamorous network infrastructure. Language, administrative principles, media of payment, and legal and social institutions also became more familiar and allowed much greater network coordination than ever before.[53]

Another Ptolemaic innovation was the regular use of camels for desert transport. Both faunal remains and literary sources hint at the fact that dromedaries (the one-humped Arabian species of the camel) were introduced into Egypt by the neighboring Arabs sometime during the first millennium BCE.[54] Herodotus reports that when invading Egypt via Gaza and the Negev, Kambysis was helped by Arabs who provided camels that carried large amounts of water through the desert (Hdt. 3. 9. 1). However, regular use and breeding of dromedaries in Egypt did not start before the Ptolemies,

50 *CM* 22183; trans. in Müller 2006, appendix 1; the commercial use of the canal when it was reopened under Ptolemy II, then by Trajan in 106 CE, is controversial. Nothing indicates that substantial amounts of trade went through Arsinoe/Klysma in either the Ptolemaic or the Roman period; see von Reden 2015 for the former; Rathbone 2003 for the latter; *contra* Wilson 2015.

51 Strootman 2019; cities in the Black Sea were never under direct Ptolemaic control, but commercial and ideological relationships were strong; see von Reden, vol. 2, ch. 12.A, 620–621; for the main Ptolemaic god Serapis, believed to have immigrated to Egypt from the commercial hub of Sinope in the Black Sea, Strootman and von Reden 2021, 29–31.

52 Manning 2018.

53 Von Reden, vol. 2, ch. 12.A.

54 Agut-Labordère and Redon 2020b, summarizing earlier research.

who seem to have made a deliberate effort to bring them down to the south of the Eastern Desert.[55] It is only under the Ptolemies that we encounter camel guides in the employ of the king. These guides usually have Arab names and were in charge of the complicated local breeding of camels.[56] The introduction of camels into the Eastern Desert was a veritable revolution in transport technology, which up to then had relied solely on donkeys, horses, and human carriers. Larger loads could be transported through the desert faster than ever before, and with less need for water and food.[57] Just like wells and fortifications, camels changed the landscape of the desert, creating affordances that allowed easier and more efficient travel.

Archaeological work over the past 10 years has uncovered much more evidence for Ptolemaic activity in the Eastern Desert than had been available before.[58] Alongside their interest in war elephants hunted in Punt, the Ptolemies also exploited Eastern Desert gold mines.[59] Gold was much in need for the long-lived gold coinages that compensated for the lack of silver resources in Egypt. It supported diplomatic interaction with the Egyptian temple aristocracies who were more interested in gold than in silver and enhanced the sumptuous self-representation of the kings in Alexandria.[60] The display of gold, elephants, exotic products, and Aithiopian gift-bearers in the procession in honor of the Ptolemaic dynasty, first celebrated in the early years of Ptolemy II, was stunning.[61] Contemporary to these costly displays was the conquest of the *dodekaschoinos*, as a result of which the gold mines of Wadi Allaqi (possibly worked by local Blemmyes) could be taken over. There was also continuous warfare in Syria and several major campaigns in Greece, the Aegean, and Asia Minor to expand the empire.[62] The development of the Eastern Desert was both a condition for, and result of, the triangular relationship of self-representation, warfare, and imperialism under the Ptolemies.

III.2 Gold Mining and Road Development: The Example of the Samut District

The kings and their military, police, and administrative personnel were the strongest imperial actors in the Eastern Desert. The excavations of the gold-mining district at

55 Cuvigny 2020, 17.

56 *O. Sam. inv.* 578 = *TM* 706233, February 23, 223 BCE with Cuvigny 2020 for text, translation, and commentary; Manière, Crépy, and Redon 2021, 24, for regular use and breeding of camels not before the Ptolemies.

57 Manière, Crépy, and Redon 2021.

58 Gates-Foster 2012; Gates-Foster 2019.

59 For the import, use, and hunting of elephants, Sidebotham 2011, 39–53; Gates-Foster 2012, 197; Manning 2011; Schmidt 2021, 271–273.

60 Redon 2018; Faucher 2018.

61 *Athenaios Deipnosophistai* (*Athen. Deipn.*) 5. 197a–203d.

62 Von Reden, vol. 1, ch. 1, 44–45.

Samut by a French team between 2013 and 2016 have brought to light new material from an early Ptolemaic gold-mining settlement, a fortress, and ostraca that contain notes of its daily operations during the third century BCE.[63] The development and administration of the fort offer important new insights not only into the strategies by which the Ptolemies exploited the desert, but also the social relationships that made it possible.

Samut is located ca. 120 km into the desert from the city of Edfu and 200 km from the Red Sea coast where the harbor of Berenike was founded under Ptolemy II (map 2, p. 418). It was divided into two districts: Samut North, which was entirely devoted to mining operations, and Bi'r Samut, a fortress constructed as a place of habitation and transit around a well.[64] Samut North shows traces of activity under the Late Pharaonic and Achaemenid periods and must have been known to the Ptolemies from their predecessors.[65] Ptolemaic exploitation started soon after the takeover in the last quarter of the fourth century; possibly more precisely in 310 BCE when Ptolemy was not yet king of Egypt.[66] The construction around the gold vein, dedicated to different activities of mining and processing, and the buildings for housing miners and soldiers were executed in a single operation.[67] The amphora finds on the site all point to Mediterranean production and contained a large variety of non-Egyptian produce: Lykian honey, Knidian wine, *cardamon*, dried black figs, and cress – quite surprisingly for a desert location, but an indication of the well-established connections between the Mediterranean, Alexandria, and Upper Egypt at the beginning of the Ptolemaic period. The scale and sophistication of the construction work (some superior rooms had two stories), together with the Mediterranean origin of the pottery, suggest that Samut North was a state investment launched directly by Ptolemy Soter from Alexandria.[68]

Samut North was abandoned after less than 10 years of operation.[69] The reasons for its abandonment are not clear, but it is possible that other sites were just more promising.[70] Gold mining about 5 km further south at Bi'r Samut continued a few years later, yet more importantly, this site was soon used as a stopover on the route from Edfu to the newly founded port of Berenike.[71] With a size of 71.5 × 58 m, the fort built on the site (probably toward the end of Ptolemy's reign) is the largest Ptolemaic

63 Redon 2018; Sidebotham and Wright 2019, no. 43 (fortress) and 44 (gold-mining settlement); Chaufray and Redon 2020 for the ostraca and their find spots.

64 Redon 2018 and Chaufray and Redon 2020 for general summaries of the excavation.

65 Sidebotham and Wright 2019, 201.

66 Chaufray and Redon 2020, 168.

67 Redon 2018, §10.

68 Chaufray and Redon 2020, 170.

69 Redon 2018, §12.

70 Twenty-four sites are recorded archaeologically; Gates-Foster 2012, 197.

71 Chaufray and Redon 2020, 178; Gates-Foster 2022 for the network of other forts along the route from Edfu to Berenike.

fort discovered so far.[72] Its interior, arranged in one, two, or three rows of rooms, was divided into different functional areas. Along the south wall, rooms were equipped with silos, along the north with baths, and in the northwestern corner dozens of loom weights and weaving tools suggest that some textile work took place here.[73] There were kitchens and bakeries, and a large area of 50 × 10 m was probably uncovered and served as an animal resting place.[74] The well that gave the fort its name has not been found, but there was a tank holding 100 m^3 of water that most likely was supplied by the well. The entire fort was surrounded by a curtain wall of an average thickness of 1.4–1.5 m and height of 2.5 m. This wall together with its corner towers made Bi'r Samut a stronghold designed to withstand not just sand and storm, but also human attacks.

Large numbers of amphoras of extraordinary size were found in the fort.[75] The capacity of the amphoras when full clusters around 42 to 60 l, which makes them the largest containers ever found from the Hellenistic period.[76] Moreover, in contrast to the vessels and their contents found in Samut North, most of the ceramic finds in Bi'r Samut were produced in Egypt and show a lesser variety of products consumed in the fort. Whereas the supply of Samut North seems to reflect direct supply networks of the Mediterranean in the earliest years of the Ptolemaic period, supplies from Egypt itself had become more effective in the course of half a century. The large proportion of amphoras (70 percent) as opposed to other pottery is also untypical for Graeco-Egyptian settlements. The deliveries were dated by regnal year and seem to have been measured according to Attic weight standards.[77] Several of them were found embedded into the ground with their necks cut off, suggesting that they were reused for storage when their original contents had been emptied. All of this points to the fact that both the gold-mining district and the fort were supplied by central Alexandrian directive. Yet the Alexandrian networks had come to rely more firmly on Egyptian resources in the course of the first three generations of Ptolemaic rule.[78]

Samut North and Bi'r Samut together have left behind over 1,200 ostraca, either inside the settlement/fort or heaped up in rubbish dumps outside them.[79] The majority of ostraca found at Bi'r Samut are accounts of wheat, barley, wine, or beer distributed by Greeks or Egyptians to individuals or groups. Most of the recipients are men,

72 Another Ptolemaic fort at el-Kanais is nearly as big (71 × 51 m), and Apollonos *hydreuma* even bigger, but the latter might not belong to the Ptolemaic period; Redon 2018, n. 19.

73 Chaufray and Redon 2020, 173.

74 Redon 2018, §17.

75 Gates-Foster 2018, 2022.

76 Gates-Foster 2022, 359–361, also for the following.

77 Gates Foster 2022 with Chaufray and Redon 2020. The suggestion so far seems rather hypothetical.

78 Thus also Gates-Foster 2022, but with greater emphasis on Egypt's growing export markets reflected in the amphora material.

79 Fifteen Aramaic ostraca were found in Samut North; 622 demotic ostraca are recorded just in Bi'r Samut; Chaufray and Redon 2020, 178.

but female names are by no means absent. *In situ* finds of ostraca show that inhabitants of different tongues mixed with each other closely. The texts mention *strategoi* and *hegemones* (higher military posts), together with soldiers and police, as well as Greek and Egyptian scribes who ran the accounts and wrote notes. Camel drivers, business agents, and "Blemmyes" are mentioned as recipients of rations and will have been the groups passing through the fort.[80] If textile working was in the hands of women, residents may have brought their wives who supplied the fort with clothes, blankets, and other textiles. It is noteworthy, moreover, that in the ostraca from Samut North an *oikonomos* (head of a nome) and a banker (the first attestation of a bank in Egypt) are mentioned as recipients of rations. Their precise reason for being in the fort, however, is unclear.[81]

III.3 State and Private Actors in the Eastern Desert

References to administrative personnel together with the accounting procedures documented in the Bi'r Samut ostraca show that Eastern Desert forts were firmly integrated into the administrative structure of the Upper Nile valley.[82] A distance marker dated to 257 BCE and found at the small waystation of Bi'r 'Iayyan some 98 km east of Edfu toward the gold mines of Wadi Barammyia gives the precise distance from Edfu to this point. The person in charge of the operation, Rhodon, calls himself a resident of Ptolemais (the southern outpost of the capital of Alexandria), and *toparch* (subordinate nome official) "of the three [?nomes]."[83] Rhodon is also attested as witness in an Egyptian contract, suggesting that he was involved both in the Greek administrative and local Egyptian social milieu. A papyrus of the same time mentions another official ic5in charge of "looking after the leading of the elephants in the Thebaid."[84] *Strategoi* executed royal commands with the help of local Greek and Egyptian soldiers and local police.[85] The control of the desert was thus closely mapped on the military-administrative structure of the Nile valley and its entanglement with Egyptian popula-

80 Blemmyes or Trogodytes are mentioned in 16 ostraca of the sample and occur as named individuals or groups called "Blemmyes"; for texts and trans., see Chaufray 2022 (= *O. Blem.* 1–16); for Trogodytes (also referred to as Troglodytes in later Greek and Roman texts), see Cuvigny 2022c.

81 *O. Sam.* 4 = *TM* 706211, late fourth century BCE. Redon 2018 assumes that he looked after weights and measures in the mining settlement, but it is more likely that he made and received payments.

82 Banks are attested in Edfu (Manning 2010, 13) and in Koptos (*P. Petr. Mus.* 80 [122 BCE] and *P. Petr. Mus.* 79 [56 BCE]); von Reden, vol. 1, ch. 8, 362–372 for the papyrological evidence of administrative principles in the Nile valley.

83 Bagnall et al. 1996. For the possibly Egyptian identity of Rhodon, see Manning 2010, 113; for the significance of the signpost, Sidebotham 2011, 29.

84 *P. Hib.* I, 110, 257 BCE, together with the previous discussed by Gates-Foster 2012, 198–199.

85 Fischer-Bovet 2014, map 2, for garrisons in and around Edfu.

tions and elites willing to cooperate with the Ptolemaic regime. Not accidentally, Samut was abandoned when the Thebaid broke away from Alexandria at the end of the third century BCE. Not only would it have been impossible to maintain an armed fortress in a land belonging to the rebels, but the supply of the fort from Edfu will have been impossible once the town had fallen into their hands.

In collaboration with Egyptians and desert dwellers, the king, the administration, and the army were thus the most visible actors in the Eastern Desert. Was there private business alongside state activity? Any separation of state-controlled expeditions and private trade is inappropriate here. If we can judge from the system of labor organization in Ptolemaic Egypt, the two were closely intertwined.[86] There was little private production or trade happening independently of the royal household, large gift-estates, temple-estates, and the cleruchic holdings that were dependent on army membership.[87] This does not mean that the economy and trade in Egypt were centralized or state-controlled – a model that has been abandoned successfully in recent years.[88] Business agents acting on behalf of larger economic units worked within contractual relationships that bound them into contractual obligations of which one was the return of the loans they had received for that purpose. Business and trade thus took place within wider institutional frameworks that were connected in one way or another to the political and military networks of the king and his court. There was, however, no reasons not to take the opportunity of running some personal business alongside contractual work, and then to benefit from the protection and infrastructure provided by the royal network.[89] We can assume that some trade networks developed that were not state-organized (though it should be noted that trade with the Arabian kingdoms in the third century BCE still went via Gaza and the trans-Arabian routes).[90] Yet any trade that interfered with the interests of the king was likely to have ended, like that of Eudoxos of Kyzikos, who had his goods confiscated when returning to Alexandria.[91]

Gold mining and transport between the Red Sea and the Nile continued after the Thebaid was reintegrated into the Ptolemaic Empire in 186 BCE, but it was then con-

86 *P. Col.* 3 2 (257 BCE), for example, gives a list of provisions dispensed to a caravan that traveled via Gaza to Sidon on behalf of Zenon, the manager of a gift-estate ceded to Apollonios, the *dioiketes* (chief finance minister) of Ptolemy II. Zenon and his agents operated quite independently on these journeys, but their activities were bound into the institutional structure of the monarchy; Terpstra 2019 for traveling agents; von Reden 2007, 142 and 281, for Zenon's activity in trade.

87 Von Reden, vol. 1, ch. 1, V.2.

88 Manning 2010; cf. von Reden, vol. 2, ch. 17, 592–594.

89 Terpstra 2019; von Reden 2007; Kemp 2018 for ancient Egyptian precedents.

90 Weaverdyck, ch. 12.A, III.4, this volume. Several papyri of the Zenon archive (mid-third century BCE) refer to caravan journeys through Gaza, e.g., *C. Zen. Palestine* 15 (= *P. Cair. Zen.* 5. 59804), and *P. Col. Zen.* 3. 2 mentioned above.

91 Strabo 2. 3. 4–5; Cobb 2018, 41 for discussion. The exact events are difficult to reconstruct, as they are shrouded in the myth of the discovery of the monsoon winds; but it is possible that some agreement had been broken, as a result of which the goods were confiscated.

trolled by a broader range of more specialized officials responsible for the Thebaid and Lower Nubia together. An inscription dated to 130 BCE refers to a certain Paos, *strategos* of Thebes, and his subordinate Soterichos "in charge of the mining of precious stones, monitoring of the ships, and security for those who bring down loads of incense and other foreign wares from the desert-mountain above Koptos."[92] Another inscription, variously dated to the late second or first quarter of the first century BCE, mentions a *strategos* of the Koptite nome "for the supervision of the Red and Indian Seas."[93] In line with the general trend toward greater regionalization in the second century BCE, the officials were now more closely connected to the region. They asserted their regional authority through multiple positions and titles (often combined with local religious affiliations), although their official mandate was still nominally derived from the court in Alexandria.[94]

III.4 Settlement Politics between the Red Sea and the Nile

The routes and forts in the Eastern Desert were part of settlement politics launched by Ptolemy II early in his reign, which became part of his official propaganda.[95] The early Hellenistic period was a time of intense migration, both within and between the Hellenistic empires.[96] The establishment of new settlements, together with the physical alteration and renaming of existing places, is regarded as a typical tool of colonization, whereby core cities and new foundations form a network of communication that delineates an ever-expanding imperial space.[97] The dynastic nomenclature of the urban foundations along the Red Sea coast – Arsinoe, Philotera, Berenike, Ptolemais – leaves no doubt that by placing ports and forts along the Red Sea coast, the Ptolemies extended their imperial space and integrated its fringes physically and symbolically into their realm. Recent archaeological work has revealed that the coastal settlements were at first no more than walled military forts, built preferably on rocky promontories for further protection, with small entrances for the ships.[98] Through their dynastic nomenclature, however, these coastal forts became part of the royal geography of Egypt with Alexandria in its center.

92 *I. Pan.* 86 (= *OGIS* 132) = Bernand 1977, 86; Engl. trans. in Rathbone 2002, 181 n. 11.

93 *I. Portes* 49 = Bernand 1984, 169–172; also *I. Philae* 52 (62 BCE) for the *strategos* of the Indian and the Red Sea. This official was comparable to the *ho epi tes libanotikes* ("supervisor of the Lebanese district") stationed in Gaza (*C. Zen. Palestine* 19 = PSI 6, 628); see Johannsen 2023, 142–143.

94 Gates-Foster 2012, 200.

95 Again Pithom Stele, *CM* 22183, trans. Müller 2006.

96 See von Reden, vol. 1, ch. 1.

97 Mairs and Fischer-Bovet 2021, 48; Müller 2006 for an attempt to demonstrate the network dynamic of Ptolemaic settlement.

98 Woźniak 2018 for the latest excavations in Hellenistic Berenike; Cobb 2018, 54 with reference to earlier excavation reports.

The foundation of the Red Sea port cities is usually regarded as a functional part of the Ptolemaic interest in the import of elephants. Yet in order to function as a network of communication and supply, nodal points and routes had to be integrated into the imperial geography. Ideologically speaking, they had to become the property of the king. The Pithom Stele, erected 265/4 BCE (or a little earlier) in honor of Ptolemy II on the occasion of the (re)opening of the Darius canal (see above), offers a surprisingly explicit example of how the foundation of a Red Sea port, Ptolemais Theron (Ptolemais-of-the-Hunt), was represented within royal propaganda:[99]

> He [Eumedes[100]] navigated toward the coast of the Red Sea; he arrived at Khemtit, the end of the land of the Negroes [northern Sudan] ... he brought provisions to the king ... on his return he steered toward the island of the Lake of the Scorpion [Great Bitter Lake]. He brought all the things which are agreeable to the king and to his sister [Arsinoe], his royal wife. He built a great city to the king with the illustrious name of the king, the lord of Egypt. And he took possession of it with the soldiers of his Majesty and all the officials of Egypt and the land of ...; he made there fields and cultivated them with plows and cattle; no such thing took place from the beginning [i.e. ever before]. He caught elephants in great number for the king and he brought them as marvels to the king, on his transports on the sea.[101]

The bucolic imagery of city foundation involving the appropriation of land and putting it under cultivation with plows and cattle makes this a typical colonial foundation story.[102] Regardless of whether Ptolemais Theron was located in the southern expanse of the Eastern Desert or in tropical East Africa, it is unlikely that there was much arable land around the port; also, cattle like neither arid nor tropical climates.[103] Couched in a foundation myth that was probably copied directly from Alexandrian court poetry, the establishment of Ptolemais as a port was presented as a colonial gift

99 Strabo (16. 4. 7) in the late first century BCE still knew the details of the foundation story, confirming the long-term role such stories played within and outside the closer circles of the native elite. Strabo even mentions a city wall (*peribolos*) but also writes that Eumedes had won over the surrounding population as friends, which might be a significant shift of the foundation story in light of subsequent developments of the relationship with the neighboring desert communities.

100 The name is reconstructed from Strabo's account, which also informs us that Eumedes was on a royal hunting expedition.

101 Pithom Stele ll. 22–24, trans. Müller 2006.

102 The archetypal foundation story of this kind is told by Homer *Odyssey* (6. 8–10); for its application to the foundation of Alexandria, Strootman and von Reden 2021, 19.

103 The precise location of Ptolemais Theron is unknown; Pliny (*NH* 6. 34. 171) places it in a forested region 602.5 Roman miles (ca. 890 km) south of Berenike. There is general agreement that it was located on the coast between 18° and 19° latitude, a little more than halfway between Berenike and Adulis. Pliny also writes that it was surrounded by forests and close to a lake; if it was located in the Meroitic kingdom, it is possible that the town had some arable hinterland. *PME* 3 states that (in the mid-first century CE) there was no longer a harbor, and only small rafts could anchor there. *Moschophagoi* (seed eaters) lived around it. *O. Blem.* 13 (Chaufray 2022, 98–99), surprisingly, refers to rations for cattle in the fort, and Agatharchides mentions that the Trogodytai on the coast had cattle (Burstein 1989 64b = Diod. 3. 32. 3).

to the king.[104] The defeat of enemies around the city made Eumedes a heroic founder of outer imperial posts, in a direct line with other founders, such as Ptolemy, Alexander, and their Pharaonic predecessors. They, too, had founded cities and brought civilization to remote places through conquest and the expulsion of enemies.[105] There is probably not much history in the foundation story of Ptolemais Theron, but its circulation created an understanding of a new spatial order in which the remotest and most inaccessible regions became royal property – and as such part of a royal geography that brought prosperity and joy to the kings and his subjects.

Ptolemais Theron is only one of the ports founded under Ptolemy II along the Red Sea coast. Strabo (16. 4. 5) lists six from north to south: Philotera, Arsinoe, Myos Hormos, Berenike, Ptolemais Theron, and Berenike Sabai (perhaps near Sabai on the southern Arabian Peninsula). Pliny knows of seven: Arsinoe, Philotera, Myoshormos (in this spelling), Berenike Trogodytike, Berenike Panchrysos ("the Golden"), Berenike Epi Dires ("on the Neck"), and Ptolemais Theron.[106] The evidence has given rise to much discussion about the location of the ports, which is relatively certain only for Myos Hormos (Quseir al-Quadim) and Berenike Trogodytike.[107] Though ancient authors and modern research tend to concentrate on these two, one must bear in mind that they were part of a network of ports that were connected via roads and forts to several major towns along the Nile, and via the Nile to Alexandria.[108] Berenike and Myos Hormos changed their role as the main Red Sea harbor several times in their history. Berenike was founded by Ptolemy II around 270/265 BCE. It is believed to have been particularly suitable for the exceptionally large ships carrying elephants.[109] When precisely Myos Hormos was founded is not known, but it was a firm part of the coastal geography at the time of Agatharchides (mid-second century BCE).[110] When Strabo visited Egypt, Myos Hormos was the main harbor for Red Sea traffic.[111] Being closer to Koptos, it reduced travel time through the desert by three days. It has recently been proposed that the well supplying Berenike with water may have dried up at the end of the third century BCE; but this must have been only a temporary problem,

104 For the role of euergetism in the context of infrastructural development, see Fabian and Weaverdyck, vol. 2, ch. 8.A, 365–366; for its part in the symbolic infrastructure of Hellenistic rule, von Reden, vol. 1, ch. 1, 27–32.

105 See above, and the famous *Idyll* 17 by Theokritos for Ptolemy's court representation in that tradition.

106 *NH* 6. 34. 167–171. Further catalogues are given in Ptolemy's *Geography* (Ptol. *Geogr.*) 4. 5. 14–15; Diod. 3. 39. 1; and Photios 250. 80–81; listed and discussed by Cohen 2006, 307–343, esp. 311.

107 Cohen 2006, 307–343 for discussion and earlier literature.

108 Sidebotham 2011, 128, and Schmidt 2021 for a route to Syene; Woźniak and Harrel 2021 for a network approach to the Red Sea harbors.

109 Schmidt 2021; Rathbone 2003 for the exceptional size of Ptolemaic merchant ships.

110 Cohen 2006, 332–334.

111 Strabo 2. 5. 12; 16. 4. 24.

as the harbor continued to be in some use during the second and first centuries BCE.[112] At the time of Pliny's *Natural History* and the *Periplous Maris Erythraei* (mid-first century CE), it was again Berenike that was most important for Red Sea traffic, possibly because it was more suitable for large ships.

The deliberate transformation of the desert landscape also entailed the transformation of the major Nile cities that interconnected with the desert. Koptos and Edfu both had a long pre-Ptolemaic history.[113] With the conquest of the *dodekaschoinos* and the increasing exploitation of the deserts on both sides of the Nile, they received visible attention from the Ptolemies and their local agents. The great temple of Horus, begun in 237 BCE under Ptolemy III, was the first Ptolemaic temple building project in Upper Egypt, followed by several others still visible along the Nile. The Horus temple stands out as an example of the massive investment by the early Ptolemies into the religious networks of the Thebaid. Royal benefactions to the powerful religious organizations and economic development were intimately intertwined. Such benefactions were powerful investments in the loyalty and collaboration of local elites. It is in Upper Egypt that the Egyptian and Ptolemaic social and political hierarchies most intensely overlapped. Egyptian priests served as local governors or army officers, and Ptolemaic army officers intermarried with influential local families and held important temple positions.[114]

The interdependence of political and religious network politics is particularly visible in the urban development of Koptos. Koptos was a local metropolis that was inhabited by Egyptians and what Strabo calls "Arabs," when he visited at the end of the first century BCE (17. 1. 44).[115] Large amounts of Mediterranean pottery suggest intense exchange between the city and the Mediterranean throughout the Ptolemaic period.[116] Religious architecture and building inscriptions reflect the growing prosperity and political centrality of the city at the intersection of Arabian, Egyptian, and Mediterranean exchange networks.[117] First, the main temple of Koptos, dedicated to

112 Woźniak and Harrel 2021 for the drying up of the central well and possible abandonment of Berenike at the end of the third century; Cobb 2018, 52–56 for the continuous use of Berenike from the third century BCE onward.

113 Manning 2014 for a brief introduction to the economic and political significance of Edfu under Ptolemy II.

114 Gates-Foster 2012 for the famous example of Boiotos; Manning 2010, 113, and Fischer-Bovet 2014, 303–323, for priests active in the army and as regional governors, and vice versa. On interethnic cooperation in Egypt generally, see von Reden, vol. 2, ch. 12.A, VI with further literature.

115 There is no reason to doubt that the situation was any different in the third century BCE. Whether the term Arab was used here as a geographical, ethnic, or generic term for people with a nomadic background, or whether it referred specifically to people from *Trogodytike* (who were often in charge of camel breeding and guiding), cannot be ascertained; see Cuvigny 2022b, 45–47; and Cuvigny 2014, 170 for a general discussion of *Arabes* in Egyptian sources.

116 Pantalacci 2018, § 13; Cobb 2018, 48.

117 Pantalacci 2018, §10–17 for the following; Ptolemaic-period building activity becomes less intense in later generations; for the urban development of Koptos more generally, Herbert and Berlin 2003.

Min, the god of the desert, and Isis, the main goddess of Egypt, was rebuilt and extended to the west. From the time of Ptolemy II come the foundations of the inner temple, built on a high plateau accessible from the west by several staircases, the third gate in the temple axis of Isis, and probably the twin gates opening from the western front wall. More important even was the extension of the southern sanctuary, the *Netjery-shema*, which a Graeco-Egyptian with the double name of Zenon/Shenou sponsored. Zenon/Shenou was a governor of Koptos and courtier of Ptolemy II in the high position of "Intendent of the Harem."[118] His Egyptian background is known from two hieroglyphic inscriptions he left on the dorsal pillars of two statues in Koptos. He also had the "Castle of Provisions," *Ḥut-djefau*, in the same area renovated. Here, he raised the ground level, completed its enclosure, and erected monumental doors made of precious materials. Pantallacci suggests that Zenon/Shenou also played a role in the growing trade between the Red Sea and the Mediterranean via Koptos. There is no explicit evidence for that, but Zenon/Shenou's benefactions to the local metropolis show the close interdependence of religious and political office-holding combined with great wealth and social and political activity in Koptos. There were large amounts of road tolls, protection fees, and taxes to be earned from Eastern Desert and Nile traffic in addition to the rewards that the import of elephants and aromatics brought to individuals cooperating with the king. The profits gained from portfolio capitalism – the skillful combination of commercial, political, and fiscal opportunities and profits – will become more visible in the Roman period, but the origins of such practices were clearly not Roman.[119]

III.5 Ethnographies of a Frontier Zone

Studying foreign geographies and indigenous populations is another strategy of imperial appropriation of colonial space. The Eastern Desert, together with the Arabian and African coasts, attracted much state-sponsored ethnographic attention in Alexandria.[120] Like other kings in the past, the Ptolemies sent expeditions to the outer frontiers and neighboring kingdoms of their realm, which could lead to further forms of submission and appropriation.[121] Agatharchides of Knidos (active in the second

118 Fischer-Bovet 2014, 313 on Zenon/Shenou.

119 For the role of portfolio capitalists in the Graeco-Roman world, and premodern empires more generally, Fabian and Weaverdyck, vol. 2, ch. 3.A, 125; and von Reden, vol. 2, ch. 2, 34–35.

120 For scholarship and science as an instrument of power and imperial politics in Hellenistic empires, see von Reden, vol. 2, ch. 12.A, 598.

121 For state-sponsored geographical writing, von Reden, vol. 1, ch. 10.B; Marcotte 2016 esp. for explorations of the Erythraean Sea. A first expedition surveying the west coast of the Arabian Peninsula is recorded by Strabo to have been undertaken by a Greek called Anaxikrates in 324/3 BCE (Strabo 16. 4. 4); another is mentioned by Agatharchides as having been conducted on behalf of one Ptolemy by a certain Ariston (Burstein 1989, no. 87a); Marcotte 2016 and Cobb 2018 date this expedition to Ptolemy III; Burstein 1989 to Ptolemy II.

century BCE) has left us with a rich archive of this academic interest, most of which dates back to the first Ptolemies.[122] Agatharchides did not travel to the Red Sea himself but described the region on the basis of past records (*hypomnemata*) that he accessed in Alexandria.[123] He was a minor scholar in the employ of two influential courtiers, one being Kineas, who was a councillor of Ptolemy VI during the late 170s and coregent of the underage king in the early 160s. The other was Herakleides, a scholar of the Aristotelian tradition and the diplomat responsible for negotiating the treaty that ended Antiochos IV's invasion of Egypt in 169 BCE. Agatharchides wrote a *Periplous* (circumnavigation) of the Erythraean Sea toward the end of his life.[124] It remained unfinished because of, in his own words, old age and his inability to study the Alexandrian records as a result of the disturbances in the city. Burstein assumes that he was exiled from Egypt, possibly in the course of the purge of intellectuals in 145 BCE, which might explain his often-anti-Ptolemaic sentiments. Agatharchides's *Periplous* is usually considered a trustworthy source for Ptolemaic gold-mining practices in the Eastern Desert; and similarly, one might receive faithful details about the fishing techniques of the littoral people along the Erythrian coasts.[125] Here, however, the subject is introduced as an example of how the desert and the Erythraean costs were appropriated, as under the pharaohs, as spaces of wonder, danger, and opportunity.

The amount of detailed observation presented in the *Periplous* is striking. The regions of the Erythraean Sea were intensely studied, even if through an ethnographic lens.[126] Agatharchides's description leads the reader upriver from Memphis to Koptos and Aswan, the fortified border of Egypt. Crossing the *dodekaschoinos* into the desert and the Nubian gold mines, he describes working conditions in the mines in some detail. This is followed by a description of the fish-eaters (*ichthyophagoi*) and their various fishing practices all along the African and Arabian coasts up to the Persian Gulf. Agatharchides then moves back to Africa and Aithiopian inland tribes before turning back to the Egyptian coast, which he describes from north to south. From northern Arsinoe/Klysma to Berenike Trogodytike, this is a region controlled by the kings and patrolled by their navy. But the danger of nature persists, as unexpected waves can impale ships on rocks or drive them into sandbars.[127] The journey concludes with an account of the kingdoms along the southern Arabian coast, including

122 Burstein 1989, 12–18 for this and the following.

123 Burstein 1989, no. 112; Agatharchides's work is preserved fragmentarily in the works of Diodoros, Strabo, and Photios, a Byzantine scholar of the ninth century CE. The authoritative arrangement of the text is the translation by Burstein 1989 used here. A concordance of the fragments with their host texts is given in Burstein 1989, 176–182.

124 The Erythraean Sea comprised the waters from the Red Sea to the western Indian coast. The firsthand knowledge of Agatharchides's Alexandrian sources extended as far as the southern Arabian coastline, but little further. For *periplous* literature, von Reden, vol. 1, ch. 10.B, 479–471.

125 Faucher 2018 for the former; Ray 2004, for the latter.

126 Von Reden, vol. 1, ch. 10 for some standard patterns of Graeco-Roman ethnography.

127 Burstein 1989, nos. 81 and 85a.

a country that the Greeks called Eudaimon (blessed). Here, the Sabaeans and Gerrhaeans lived with an abundance of trees, fruits, fragrant plants, gold, and silver from which Greek trade profited.[128]

Wondrous animals and human giants, unsurprisingly, are found in many of these regions. Most tribes inhabit a wilderness of small worlds that were notably different from the vast empire of the Ptolemies. Yet in typical ethnographic fashion, the contrast between civilization and wilderness was not so simple. Cast against the background of the brutality of Ptolemaic gold mining, where prisoners, their wives, and children were worked to death by beastly superiors, the fishing techniques of the happy barbarians who chant and dance while defying the violence of the ocean waves raise the question of where civilization resides:

> Since they are not greedy for riches, they do not inflict many evils on others and do not themselves suffer many unnecessary evils. Since they do not stir up serious quarrels in order to cause bodily harm to an enemy, they do not come to ruin because of the misfortunes of their kinsmen. Since they do not go to sea and risk their life for gain, they do not measure distress by the accidents of their life. But since they have few needs, they also suffer little since they possess enough and do not seek more ... They are not governed by laws, for why should a person who is able to act correctly without written law be a slave to decrees?[129]

This is a typical ethnographic mirror known since the time of Herodotus.[130] There is no warfare, no civil war, no greed, and thus no need for laws and trade among people who inhabit regions at the edge of the world. Yet the world had grown, and the world of the fringes that once, from a Greek point of view, had included Egypt, had moved beyond the country on the Nile. But the spaces that the Ptolemies had colonized in Agatharchides's view had not turned into the civilized idylls that the priests of Pithom had conjured in their praise of Ptolemy (above). The harsh environment had left the people of the wilderness as better people than those who eagerly sought their products. Here we hear Agatharchides's own voice, at a time when the royal economy of Alexandria had lost much of its authority and influence in the networks that had spun in the south.

III.6 Expanding Networks

By the time that Agatharchides studied early Alexandrian scholarship to describe the edges of the Ptolemaic Empire, the exchange networks in the Erythraean Sea had begun to grow. Mediterranean pottery appears in Arikamedu on the southeast coast of India

128 Burstein 1989, nos. 87–107.

129 Burstein 1989, no. 49.

130 See briefly von Reden, vol. 1, ch. 10.B, 469–471, with further literature.

during the second century BCE.[131] Some second-century Indian rouletted ware in Arikamedu, moreover, shows some Mediterranean influence, and the presence of rouletted ware and paddle impressed ware of East Asian origin in Arikamedu, Sumhuram (Khor Rori), and Berenike strongly suggests that the earliest trade connections between Egypt and India went through the southern Arabian coastal ports.[132] Agatharchides already knew that the Fortunate Island (likely Socotra/*gr*. Dioskourides) was the meeting place of merchants from Alexandria on the Indus (Patala), Persia and Carmania along the eastern coast of the Persian Gulf, and other places.[133] Given the increasing knowledge about the southern Arabian maritime region, Greeks and Egyptians had become familiar with the Arab–Indian exchange networks that spread into the Gulf and down the subcontinent.[134]

The two stories of the Greek 'discovery' of the monsoon winds date to about that time. One ascribes the discovery to Eudoxos of Kyzikos, an Alexandrian courtier, who was guided to India by a shipwrecked Indian who had been stranded on the Red Sea coast. The other credits the discovery to an otherwise-unknown sailor called Hippalos.[135] It is generally agreed that learning to navigate the monsoon across the Indian Ocean was not a discovery but a gradual process of getting familiar with the sailing traditions along the Arabian and Persian coastlines. Already, Skylax of Karyanda (sixth century BCE) might have circumnavigated the Arabian Peninsula with the help in part of the winds. Alexander's navy in 325/4 BCE was also aware of their rhythm when waiting at the mouth of the Indus for the winds to subside.[136] Ptolemaic-era familiarity with the southern Arabian coastal kingdoms, together with the ceramic evidence of Indian–Arabian connections, makes it likely that these networks played a vital role in mastering open-sea navigation of the Indian Ocean. It is also possible that via these channels Greek pottery arrived in the Indian subcontinent before Greeks sailed there themselves.[137]

When Strabo visited the Thebaid with the prefect Cornelius Gallus after his campaign against Nubia, he learned about the burgeoning trade going out from Myos Hormos. This was a visible sign of Augustan achievement: 120 ships went out from

131 Cobb 2018, 49–51. Of the the moderate quantities of pottery sherds from Kos, 50 percent of had strong commercial connections with Ptolemaic Alexandria and its hinterland. Other pottery is Knidian and Rhodian, also regular trading partners with Egypt.

132 Cobb 2018, 33 for Ptolemaic-era pottery along the southern Arabian coast; Cobb 2018, 51 with Avanzini 2016 for Greek pottery in Arikamedu. For the East Asian origin of paddle impressed ware, Selvakumar 2011. Indian contacts with Khor Rori seem to have had a long tradition, judging from finds of rouletted ware at Sumhuram, the port fortress of Khor Rori; for Sumhuram, Avanzini 2008.

133 Burstein 1989, no. 105a; for Persia and Carmania, also Gregoratti, ch. 10, this volume.

134 Gregoratti, ch. 10, this volume, for the Gulf region.

135 Strabo 2. 3. 4–5 for Eudoxos; Plin. *NH* 6. 26. 100 for Hippalos; Cobb 2018, 39–43 for discussion; see also Dwivedi, ch. 7, this volume.

136 Arrian *Indica* (Ar. *Ind*.) 21. 1; Cobb 2018, 42.

137 Cobb 2018, 35–39 for further, though rather singular, pieces of evidence for Ptolemaic-era Greek presence in coastal Indian sites, and vice versa.

the port per year, while under the Ptolemies fewer than 20 had dared to traverse the Arabian Gulf just to get a peep outside the Straits of Aden.[138] But this was as much pro-Augustan as it was anti-Ptolemaic rhetoric: how much better was Augustan rule than that of the Ptolemies![139] The reality was different. Indian Ocean trade did not develop within three years of Roman arrival. We have just surveyed the increasing commercial activities between Egypt and the Indian Ocean in the second century BCE. There was now also a special official in charge of the Red Sea and Indian Ocean.[140] Several factors explain the growth of Indian Ocean trade in the second century BCE: the loss of Gaza to the Seleukids in 197 BCE, as a result of which Ptolemaic portfolio capitalists (whose economic activities were deeply entwined with state structures) were cut off from the port of Gaza, which was connected to the trans-Arabian routes; the decline of elephant hunting, which shifted attention to other goods and networks in the Red Sea region; the greater regionalization of Egyptian state structures, which, combined with a greater de facto privatization of agrarian estates (gift-estates had become inheritable in the late third century BCE), created more space for economic activity independent of the Alexandrian court; the increasing presence of Mediterranean business people in Alexandria, including those from Italy and Rome; and, as a the result of all of this, the development of multiactor networks that created better conditions for long-distance trade.

III.7 Multiactor Networks: The Case of *SB* III 7169

A maritime loan contract dated to the mid-second century BCE sheds light on several of these propositions at once.[141] It is only fragmentarily preserved, and its poor preservation has discouraged scholars from in-depth interpretation since its first reading and discussion by Ulrich Wilken in 1925.[142] The contract is likely to have been drawn up in Alexandria, although a copy must have been kept in the *chora*, since no papyri survived in the wet conditions of the Delta. The document was part of a notary roll on which contracts were copied for safekeeping in case of legal disputes arising from them. The contract itself was drawn up between the lender, Archippos, son of Eude-

138 Strabo 2. 5. 12; 17. 1. 13.

139 Cobb 2018, 46–47.

140 See above, *I. Portes* 49; most likely a tax-collecting official.

141 *SB* III 7169. Wilken 1925, 93 for the dating, on palaeographical grounds, and form of transmission (in cartonnage) of the papyrus. A maritime loan was a special contractual format developed in fifth-century BCE Athens, whereby a loan was extended for a return journey on security of the cargo purchased with the loan. If the cargo was lost through *force majeure*, the loan did not have to be repaid. Because of the high risk of the loan for the creditor, maritime loans were exempted from legally fixed interest rates. The fact that it is interest-free in this case is particularly noteworthy.

142 Cobb 2018 (with earlier literature), 32; Sidebotham 2011, 34; Rathbone 2002, 181, cf. Rathbone 2003, 212; Young 2001, 54; Raschke 1978, 662.

mos, and five borrowers, of whom one was from Sparta and another from Massilia (ll. 6–11). The size of the loan is not preserved, but it was destined for a voyage to the spice-bearing country (*aromatophoros,* ll. 12 and 14), which may have been Punt or the southern Arabian coastal ports renowned for their spices. The money was to be paid out through (*dia*) a person called by the Roman name Gnaios (Gnaeus) and now likely a resident of Alexandria (l. 12). Gnaios will have been a banker with whom Archippos kept an account, out of which the money was to be paid.[143] The loan was extended for one year, and in all likelihood, despite a critical lacuna in the text, lent without interest ([*ato*]*kos,* l. 13). There follows the penalty clause according to which, if the loan was not repaid after a year or, in the case of delayed return, 50 days after the return, the borrowers had to pay the *hemiolion* (the customary penalty of 50 percent of the principal), plus 2 percent interest per month on the sum outstanding, as laid down in the royal *diagramma* about loans (ll. 15–16).[144] Five guarantors secured the loan in case of nonfulfillment. All belonged in one way or the other to the Ptolemaic army or navy: one originating from Thessaloniki, one from Elea in Italy, one from Massilia, one from Carthage, and a fifth whose ethnic is not preserved, but who had a Celtic name (ll. 16–22). The contract then claims the right of legal execution (*praxis*), if the loan, the penalty, or the interest were not paid (l. 22), which was a standard clause in formal Ptolemaic loan contracts.

The contract does not end here, as would normally be the case. Unfortunately, the additional paragraph is very fragmentary and can only tentatively be reconstructed. Vestiges of the texts, however, allowed Wilken to read its possible contents as follows: if the two debtors named first in the list of borrowers did not hand over/put down (*epithetosan*) the spices, wherever they unloaded the cargo, they incurred some further penalty. Such an additional clause is not attested in any other Ptolemaic loan contract, and together with the unusual fact that the loan was interest-free and had an exceptionally lenient repayment clause suggests that it was not an ordinary loan between economically unconnected parties. Rather, as Wilken notes, the creditor must have participated in the profits of the journey and was thus involved in it. The traders and the creditor seem to have formed some business association with several hierarchies built into it. If this is correct, *SB* III 7169 can be regarded as a combination of a loan and labor contract, an innovative institutional arrangement to suit the particular requirements of a long-distance and high-value trade journey where considerable capital and trust were required.[145]

143 This may provide a possible explanation for why a copy was kept in the *chora*, where Archippos might have lived. For the function of banks as institutions for making payments on order, see above.
144 The payment of two percent interest according to royal *diagramma* was a standard rate of interest in Ptolemaic loan contracts.
145 Von Reden 2014 for Ptolemaic labor contracts; interest-free seed or monetary loans (*daneia eis katerga*) were typical for Ptolemaic labor contracts and in fact form a large portion of the extant loan contracts of the Ptolemaic period; von Reden 2007, 205–226.

The contract reflects the changing nature of trade in the Eastern Desert in many ways. First of all, this is genuine trade and no longer a state expedition. Second, the personnel had changed. Both the traders and their guarantors originated from outside Egypt: Massilia, Carthage, Italy, the Peloponnese, and Thessaloniki. Their association as a group is also a new phenomenon. Profitable business consortia are first attested, however dismissively, in the much-quoted story of the Elder Cato (234–149 BCE) reported by Plutarch: Cato, rather wickedly according to Plutarch, "told borrowers to recruit a multiple partnership and when they were fifty men and as many ships, he himself took one share through his freedman Quintio, who was in business with them and sailed with the borrowers."[146] Quintio is supposed to have joined the trade journey, which Archippos in *SB* III 7169 did not do, but the profitable involvement in the proceeds of the journey is rather comparable. The formation of partnerships (*koinonia* [Gr.] or *societates* [Lat.]) increased the volume of capital that could be invested, while at the same time spreading the risk of loss over several participants. Such arrangements became increasingly popular in the Roman period and may have led eventually to such complex financial arrangements of portfolio capitalists as attested in the Muziris contract.[147] Third, the presence of a banker with a Latin name shows the increasing presence of Romans (or Roman networks) in Alexandria.[148] This should be read in connection with the changing role of the Aegean island of Delos, which was declared a free port by the Roman senate in 166 BCE, at the cost of Rhodes, which used to be Egypt's main port of transit in the Mediterranean. The better trading conditions on the island attracted many Roman and Graeco-Egyptian traders and financial intermediaries to Delos, which is visible once again in the monumental benefactions wealthy bankers made on the island.[149] Fourth, the connection between trade, finance, and the army is also worth noting. The army members mentioned in the contract were wealthy *kleruchs* with sufficient landed property in Egypt to guarantee risky but profitable financial enterprises. At the same time, the guarantors were ethnically (and likely socially) connected to the traders whom they supported. This created a business environment of trust, reducing the usual discrepancy of interest and information between lenders and the borrowers. The surety from Carthage, moreover, might have been familiar with the Red Sea trading environment. He was a member of the fleet "*exo thalassa* (in the Outer Sea)," a term geographers applied to foreign seas outside their own.[150] Here, it most likely referred to the Ptolemaic navy that Agatharchides

146 Plutarch (Plut.) *Cato major*, 21. 6, discussed in, e.g., Rathbone 2003.

147 See below with de Romanis 2020, 298–320.

148 Rathbone 2007 for the expansion of Roman networks in the Hellenistic period.

149 Huzar 1962; Harris 2007, 153; and Andreau 1999, 49 for Delos; Strabo 10. 5. 4; Polybios (Polyb.) 30. 29; 31.7 for the declaration of Delos as a free port, and its consequences for Rhodes. Wilken 1925 points out that Roman names in Alexandria became frequent in the second century and might not necessarily refer to Roman origin.

150 Wilken 1925, 97 for examples.

attests in the Red Sea, or possibly to one further beyond.[151] There was thus much overlap between social, military, and ethnic networks that in combination strengthened trust and economic ties between private actors active in the Red Sea trading environment. We see the emergence of long-distance merchant networks and finance that were anchored in Egyptian contractual traditions, the Ptolemaic army as a social network, and cross-Mediterranean financial networks.[152]

IV The Eastern Desert under the Roman Empire

IV.1 From the Ptolemies to the Romans

Major administrative, physical, financial, and social networks facilitating trade in the Eastern Desert were established by the time of the Roman conquest. Yet new frontiers emerged. In the course of the civil wars surrounding the decline of the Ptolemaic dynasty in the late second and first centuries BCE, Alexandria had become increasingly separate from the networks of the Egyptian *chora*. Already by the mid-second century BCE, Alexandria could be referred to as Alexandria 'by Egypt' (lat. *Alexandria ad Aegyptum* or gr. *pros Aigypto*).[153] This captures Alexandria's status between the Mediterranean and the Nile valley. During the second century BCE, mostly for political reasons, Alexandria transformed from being the capital of Egypt to a city near Egypt. When the Romans conquered Egypt and made it a province, it was called *provincia Alexandriae et Aegypti* (province of Alexandria and Egypt) with different legal and administrative statuses attached to the city and the *chora*.[154] With the shift in economic geography, Alexandria had become both a center and a new frontier in the Mediterranean, a contested space between Mediterranean, Alexandrian, and Egyptian actors that negotiated their network relationships in various directions with a number of contractual, social, religious, and infrastructural tools.

We begin to see more clearly the problems of the label of 'Roman' for Indian Ocean trade. There was Roman involvement in the merchant networks active in the Red Sea area already during the Ptolemaic period. Conversely, Ptolemaic-era Egyptian networks and infrastructures continued to play a role under the Romans, rendering Egypt a space where existing social conventions and Roman administrative structures

151 Agatharchides (Burstein 1989, nos. 81 and 85a); Wilken 1925, 97, suggests that the Carthaginian might have served in the Ptolemaic expeditionary fleets along the African and Arabian coasts.

152 Rathbone 2007 for the theoretical argument; Evers 2016, 83–116 for cases of such multiactor networks involved in Indian Ocean trade.

153 Strabo 5. 1. 7; and Cohen 2006, 367, for further references and the ethnic mix of Alexandrian residents.

154 Vandorpe 2015.

had to be put into one frame.[155] There was in fact little Roman immigration to Egypt. Whereas the *praefectus Aegypti* (governor of Egypt) was a direct appointee of the emperor, the local administration was in the firm grip of wealthy Alexandrians who reached out into the *chora* through their agrarian status as landholders as well as their positions in Egyptian temples. The superrich *arabarchs* (tax farmers in charge of the taxes raised in the Eastern Desert, see below) were members of the highest local elites. They had their own network of staff and agents, creating a network structure alongside the imperial administration.[156] Furthermore, the very denomination of the Eastern Desert as the *arabarchia* (tax district of the Arabs) shows the extent to which the desert and its ports were still regarded as places of Arabs, 'foreigners,' just as Koptos was a city where half of the population were Arabs.[157] Roman involvement in the Eastern Desert built on existing non-Roman networks and created new Roman ones. Instead of attempting a comprehensive account of the network structures under the Romans, I shall concentrate on a few examples that show how the coalescence of different local, regional, and imperial networks made the Eastern Desert a site of particular economic opportunity in transimperial exchange.

IV.2 The Network of Roads

From the time of the Roman conquest, the Eastern Desert was crisscrossed by a road network that was unmatched until the 20th century (map 2).[158] The expansion of the road network went hand in hand with urban growth at Berenike and Koptos.[159] Yet the developments do not exactly coincide. Expansion of infrastructure and living areas in Berenike is dated archaeologically and epigraphically to the time of Tiberius (r. 14–37 CE). Many of the main roads and smaller arteries were refurbishments or extensions of older tracks, and their fortification was an incremental process.[160] Archaeologically, it is difficult to distinguish between work undertaken under Augustus and Tiberius, and there is no hint that from the time of Augustus there was anything like a planned road building program.[161]

155 Thus the continuous debate among Roman historians as to whether Egypt was a typical Roman province or not, briefly alluded to in Vandorpe 2015, 89.

156 Vandorpe 2015, 101 for *arabarchs* from the local milieu of Upper Egypt; de Romanis 2020, 300–301, for wealthy *arabarchs* from Alexandria; *SB* XVIII 13167 (Muziris papyrus) for the warehouses and agents of the *arabarch*.

157 Strabo 17. 1. 44 with note 115 above.

158 Sidebotham 2011, 125–126; the main highways alone totalled a length of approximately 2,000 to 2,200 km.

159 Sidebotham 2011, 59–60 for Berenike; Rathbone 2002, 182 for Koptos, emphasizing a late first-century peak in infrastructural development in the Eastern Desert.

160 Paprocki 2019, 54.

161 The dating of the waystations, wells, and sites of habitation is dependent on pottery finds that spread over several periods. The survey of the over 60 sites recorded by Sidebotham and Wright

Map 2: Map of the Eastern Desert with major Roman roads and sites (after Sidebotham 2011, fig. 8.1). © Peter Palm.

Major developments along the desert roads, as well as a further spurt of building activity in Koptos, date to no earlier than the Flavian period (69–96 CE).[162] It is also at that time that the main road sections linking Myos Hormos and Berenike with Koptos were equipped with military forts (*praesidia*).[163] Didymoi, for example, excavated between 1998 and 2000, was founded in 76/77 CE; Xeron Pelagos, excavated between 2010 and 2013, was founded at the end of the first century CE; Dios, excavated between 2006 and 2009, in 115/116 CE, and Krokodilo, excavated between 1997 and 1998, was occupied for a brief period only in the first decades of the second century. The building of forts equipped with protective walls and watch towers has been explained by increasing attacks on wells and caravans by local bandits.[164] The fortification of stopovers roughly coincides with Pliny's statement of the high value of trade passing through the desert (*HN* 5. 26. 101), and complaints about barbarian attacks occasionally surface in the ostraca left behind in the *praesidia*. But the argument is a little circular: if there are complaints about Blemmyes recorded in the ostraca when the forts were built, this does not mean that their attacks became stronger at that time. More likely, the recording of complaints, regular communication of events between waystations, and their fortification were all parts of the process in which travel standards, road security, and trading conditions improved over time. It should be kept in mind that Roman rule over the desert was never total. As Gary Reger has put it, throughout the centuries this rule remained "no more than a series of narrow bands, centred on roads and forts, with nodes at quarries like Mons Claudianus and settled towns like Myos Hormos."[165]

Many roads, wells, and forts were related to the exploitation of the state-owned quarries and mines, as just mentioned. Roman gold mining in the Eastern Desert was rather less intense than one might expect given the resources available, but at least six sites on the Koptos–Berenike route surveyed by Sidebotham and Wright were connected to gold-mining activity.[166] The mountains of the Eastern Desert, moreover, hold substantial amounts of other mineral resources. In the northern sections of the Eastern Desert, rich copper veins lie under the northern slopes of Wadi Araba. Beryl and emerald were extracted in the Mons Smaragdus region, and mines at Wadi al

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along the route from Berenike to Koptos reveals that most of the sites contain pottery dated to many Egyptian periods from Pharaonic to Late Roman. Sidebotham and Wright 2019, with map on p. 4 of that volume; see also Sidebotham 2011, 133–135 (table 8.1); for the route to Myos Hormos, Brun 2003; and Sidebotham 2011, 131–132.

162 Rathbone 2002.

163 Cuvigny 2014, 168.

164 Brun 2003; Cuvigny 2015.

165 Reger 2017, 135.

166 Sidebotham and Wright 2019, nos. 7, 30, 37, 40 and 46; see also Paprocki 2019, 49, for Roman gold mining in the area round Wadi Hammamat. Paprocki notes that Roman gold mining came to a relatively early end by the first century and suggests that this too might have been due to the difficulties of protecting the sites from local bandits.

Hudi and Wadi abu Diyeiba yielded plenty of amethyst.[167] Roads and road installations for transporting minerals and metals were not separated from paths along which people, goods, and supplies for forts and harbors moved. Special efforts seem to have been made to merge roads leading to different locations as much as possible, so that the physical infrastructure supporting state-owned mining and quarrying sites also enhanced transport facilities for Indian Ocean trade networks.[168]

The high-value trade witnessed by literary and papyrological sources piggybacked on these local structures. The epigraphic evidence from the Eastern Desert itself is surprisingly silent about the large caravans and luxury goods crossing the desert. The archive of the family-run transport business of Nikanor and his relatives operating on the roads between Koptos, Myos Hormos, and Berenike mentions transport of wheat, barley, fodder crops, local wine, *pharmaka* (medicines), herbs, mats, skins, silver, and some other items in small quantities.[169] Some of these goods were destined for consumption in the *praesidia* and the ports that had no agrarian hinterland of their own. Others, especially wine and *pharmaka*, were likely mostly for export.[170] But none of the transports involved caravans larger than six or seven camels.[171] This is quite remote from the 3,000 camels or so that de Romanis assumes were needed to ship the large cargo arriving from Muziris to Koptos documented in *SB* XVIII 13167.[172] The ostraca from Berenike attest to a customs house writing out let-passes for goods that had paid the road tax at Koptos and were permitted in the customs area. Let-passes were also required for ships and boats moving in and out of the harbor, and only goods in specified amounts assigned to particular ships received such let-passes.[173] The majority of the let-passes from Berenike mention Mediterranean wine for export (*exartismos*), and some are for prepacked bags of *denarii* (*marsippia*), but none of the commodities cleared were spectacular in quantity or value.[174] The Koptos tariff, issued in 90 CE for

167 Paprocki 2019, 49–50.

168 Sidebotham 2011, 127.

169 Ruffing 1993, esp. 7–11. The ostraca of the Nikanor archive, consisting of 95 receipts dated between 18 BCE and 69 CE, are collected and reedited in *O. Petr. Mus*. 112–206.

170 Ruffing 1993 compares them with the goods in markets mentioned in the *PME*; see also below.

171 Average camel loads recorded in a Fayum customs house were 6 *artabas* of grain (= 240 l), see Adams 2007, 80–81. Most of the grain loads recorded in the Nikanor archive are between 1 and 10 *artabas*, with some more exceptional quantities of 24, 36, and 37 *artabas*; in one case, 132 *artabas* are certified to have been transported to Berenike, requiring 20 camels.

172 De Romanis 2020, 200–201. For text and trans., see also Rathbone 1990, and 2021. De Romanis suggests that some state-involvement was required to gather such large numbers of animals; see however the response by Rathbone 2021, 458–461.

173 Cuvigny 2014, 172, with the still-unpublished *O. Myos Hormos* inv. 512, in which a local fisherman (that the Greeks called *ichthyophagoi*) asks for permission from a *paralemptes* to move his boat to the neighboring port of Philotera.

174 Vandorpe 2015, 97–98; Sidebotham 2011, 69–71; Nappo and Zerbini 2011; Rathbone 2002, 184, with *O. Beren.* I and II; for *marsippia* as money pouches containing *denarii* prepacked for export, see Nappo 2018.

maximum fees to be collected on the road from Koptos to Berenike, lists the people, animals, and items liable to taxation and passing vouchers (*pittakia*): sailors, steersmen, guards, workers, prostitutes, women embarking on a journey, camels, and donkeys, as well as wagons, mummified corpses, and sailing masts.[175] There are no merchants, soldiers, miners, donkeys, or camel drivers mentioned in the tariff. We know that workers in the state-owned quarries and mines were exempted from taxation. Members of the army, the imperial household, and the treasury were also exempted, as were veterans from the time of Domitian onward.[176] But the absence of merchants and transporters from the tariff is as striking as the moderate quantities of goods passing on the roads to Myos Hormos and Berenike.

Rathbone has pointed to the rhythms of deliveries to Berenike and Koptos. The peak period for the Nikanor business was May to August, which coincides with the sailing season to India beginning in July. To keep costs down, however, transporters and merchants of larger operations delivered consignments all year round and stockpiled them in the warehouses at Berenike.[177] The large cargos for transimperial shipment were thus integrated into the regional infrastructures designed for more moderate trade. Transporters, moreover, could pay taxes and road tolls at the banks in the towns from where they departed, receiving an *antisymbolon* or *pittakion* as documentation that they had paid the taxes.[178] Behind the locally run businesses and transactions, there were less visible networks active between the Red Sea, Alexandria, and Italy.

IV.3 Fiscal Networks

The fiscal income derived from Indian Ocean trade provided a significant income for the *fisci* in Rome. The most important was the *tetarte* ("quarter-tax" of 25 percent) levied on imperial imports. The quarter-tax of the cargo attested in the Muziris papyrus was worth over 4 million *sesterces*. Comparison to the 400,000 *sesterces* from the annual customs duties preserved from Lykia in Asia Minor gives an idea of the relevance of the Eastern Desert for the Roman treasury.[179] A statement by Pliny implies that the value of the goods imported from India was 50 million *sesterces* per year (*HN* 6. 26. 101), a figure most likely derived from the value of the goods recorded in the customs registers.[180] In this case, the total quarter-tax collected at the customs gates of the Eastern Desert for the years Pliny had in mind was in the order of

175 *I. Portes* 67 (= *OGIS* II 674 = *TM* 88375).
176 Vandorpe 2015, 95; Rathbone 2002.
177 Rathbone 2002, 192.
178 Vandorpe 2015, 98–99.
179 De Romanis 2020, 318.
180 Another Red Sea customs gate was on the eastern bank of the Red Sea in Leuke Kome, for which Weaverdyck, ch. 12.A, this volume.

12.5 million *sesterces* per year. Whether the two figures from the Muziris papyrus and Pliny can be read together is controversial, but the order of magnitude should be clear.[181]

The Roman state collected imperial revenue with the help of local governors and tax farmers (*publicani*) who made a bid for the tax and guaranteed its collection. Indirect and irregular taxes were usually left to *publicani*.[182] Their operations could be substantial, and in the case of the Red Sea tax they were very substantial indeed. In his recent interpretation of the Muziris papyrus, de Romanis has shed new light on the operations of the *publicani* in the Eastern Desert.[183] Here they were called *arabarchs* and usually formed a society of tax farmers.[184] *Arabarchs* came from the wealthiest circles of Alexandria or the Thebaid. Their bids were secured by guarantors who must have been big landowners of similar standing as the *arabarchs* themselves.[185] Because of the wealth and size of guarantees required, but possibly also to avoid tensions with the *praefecti Aegypti*, *arabarchs* were selected in Alexandria rather than in Rome, as was usually the case. *Arabarchs* controlled several subdivisions of the *arabarchia* (comprising the entire Eastern Desert) and had a considerable staff working for them. Their executive officers were the *parale(m)ptai* attested as tax collectors in Leuke Kome, Myos Hormos, Berenike, and Koptos.[186] *Paralemptai,* too, seem to have been wealthy men with several agents and secretaries under them. Taxes paid on goods in kind were stored in warehouses in Koptos and Alexandria. The *arabarchia* comprised a whole network of major and minor officers, as well as buildings and infrastructure, making them powerful enterprises comparable to large agrarian estates.[187]

Arabarchs and the tax administration had competing and converging interests. The Koptos tariff mentioned above, promulgated by the *praefectus Aegypti* and published by the governor of Berenike (*eparachos orous Berenikes*),[188] fixed maximum road taxes that tax farmers were allowed to collect.[189] Such decrees and their renewal at regular intervals were quite common.[190] They show the degree to which local tax farmers were prevented from collecting higher taxes than the state regarded as fair

181 Rathbone 1990 argued that the two figures illustrated each other, whereas de Romanis 2020 is more sceptical.

182 Weaverdyck and Fabian, vol. 2, ch. 8.A, II.2.3, esp. 351–352 for Roman imperial tax collection and the role of the *publicani* in the Roman Empire more general.

183 De Romanis 2020, 277–320.

184 Weaverdyck and Fabian, vol. 2, ch. 8.A, II.2.3, esp. 351.

185 A list is given by de Romanis 2020, 300–302.

186 Vandorpe 2015.

187 Rathbone 2003 for the comparison.

188 Also known as *praefectus montis Berenicidis* or *praefectus praesidiorum et montis Berenicidis*; Pfeiffer 2015, *ad loc*.

189 *I. Portes* 67, 1–5.

190 Compare the Palmyrene tax law, discussed in von Reden, vol. 2, ch. 2, 29–32.

or sustainable. At the toll gate in Berenike, moreover, military personnel made sure that the tolls had been paid and only those goods assigned to boats passed (see below). So, despite farming out the collection of taxes from the Eastern Desert, the state provided infrastructure for their orderly collection.

Road tolls were quite moderate, ranging from a few *obols* for animals to five or eight *drachms* for workers or steersmen to the relatively high charge of 108 *drachms* for prostitutes.[191] There was in addition a charge of one *drachm* for the issue of the *pittakion* that certified that the toll had been paid. Depending on how many people and animals frequented the roads per year, the taxes collected at the Koptos toll gate would have made up a moderate total in comparison to the enormous sums collected from the *tetarte.* And it is likely that they were used just for the upkeep of roads and *praesidia*, that is, they were distributed locally rather than passed on to Rome. Road tolls and internal export and import taxes (payable also on nome borders along the Nile) were part of a local and regional fiscal economy supervised by the prefect of Egypt but controlled by the local governor, who also happened to be in charge of the cavalry unit stationed at Koptos.[192]

More substantial were the checks and balances surrounding the main contract of the *arabarchia* in Alexandria. According to the Muziris papyrus, the *arabarchs* did not just make a bid for the *tetarte* below what they could actually collect (which was the usual bargain of tax farms) but seem to have negotiated a fixed surcharge on the cargo for themselves.[193] This shows that they had considerable bargaining power vis-à-vis the prefect, or even the emperor. De Romanis observes, however, that for the calculation of the export tax on the goods leaving, the official measures used for assessing the cargo were larger than those in Koptos, thus reducing the tax for each unit. This created an advantage for the merchants who passed cargos to more distant markets.[194] The value of goods, furthermore, had to be assessed by the tax collectors according to fixed rates and were likely lower than what could actually be fetched in the markets. Again, this favored merchants vis-à-vis tax collectors. Official prices and the setting of variable weight standards were instruments with which the state could manipulate taxation, creating incentives and favor for those groups they wanted. They also reduced conflicts surrounding tax collection and the definition of fiscal burdens, a frequently observed strategy in premodern societies.[195] Together with the

191 In *O. Krok.* 252, the road toll for a prostitute is stated as eight *drachms*, raising the question whether this rate was for a group of prostitutes.

192 Cuvigny 2014, 168.

193 De Romanis (2020, 299–300) suggests that the *tetarte*, too, was split between the *arabarch* and the treasury, which needs further discussion. It is also not fully confirmed that the export tax for goods leaving Alexandria were taxed again at 25 percent, rather than the 2 percent (*quinquagesima*) or 2.5 percent (*quadragesima*) attested for inner Roman borders, such as in Spain, Asia, and Gaul respectively; see Vandorpe 2015, 92.

194 De Romanis 2020, 295; see, however, Rathbone 2021 for an alternative interpretation.

195 De Romanis 2020, 295 with Kula 1986.

negotiating power of the *arabarchs*, these strategies reveal the politics of taxation in the face of different imperial, regional, and local fiscal and economic interests. The consequences of the negotiations between the Roman government and the *arabarchs* were considerable advantages for the *arabarchs* on whose network knowledge and entrepreneurial spirit the imperial treasury relied. At the same time, there were within that system incentives for merchants who crossed regional and imperial boundaries when trading between the Indian Ocean and the Mediterranean. In total, Indian Ocean trade was a game from which many local, regional, and imperial actors profited.

The Roman state, through its Egyptian prefect and army, also invested in the protection of the tax income. The *praefectus Aegypti* Sulpicius Serenus boasted on an altar he had erected in Wadi Hammamat in 122/3 CE that he himself had pursued the most iniquitous *agriophagoi* (eaters of wild animals), killing most of them and carrying away the booty.[196] Military campaigns, installations at Koptos, *praesidia*, and roads were constructed for the protection of all kinds of cargo, including long-distance trade. Customs checks at the gate of Berenike were in the hands of military personnel (*quintanenseis*).[197] The evidence for *quintanenseis* is thin, but they usually occur in a military context. Etymologically, the office was associated with military markets located at what were called *viae quintanae* or *quintanae portae*.[198] A *quintana* tax, furthermore, is attested in the port of Berenike and in the *praesidia* of Krokodilo and Didymoi.[199] In Berenike, it was a fixed rate of 12 or 16 *drachms* payable monthly by certain people. In Krokodilo and Didymoi, prostitutes were leased at monthly rates "including" or "excluding the *quintana*." Zerbini suggests that the *quintana* was a capitation tax on professional traders who had commercial relationships with the forts, and for prostitutes who also worked in the service of the forts. If the interpretation is correct, and if there was indeed a connection between the *quintanensis* and the *quintana* tax, the forts were regarded as socioeconomic units to which specific tax regulations applied not just to those who resided in them (they were exempt), but also to those trading with them. In addition, military personnel not only staffed the forts but also served as tax controls at the key point of the Berenike customs gate.

IV.4 Business Networks

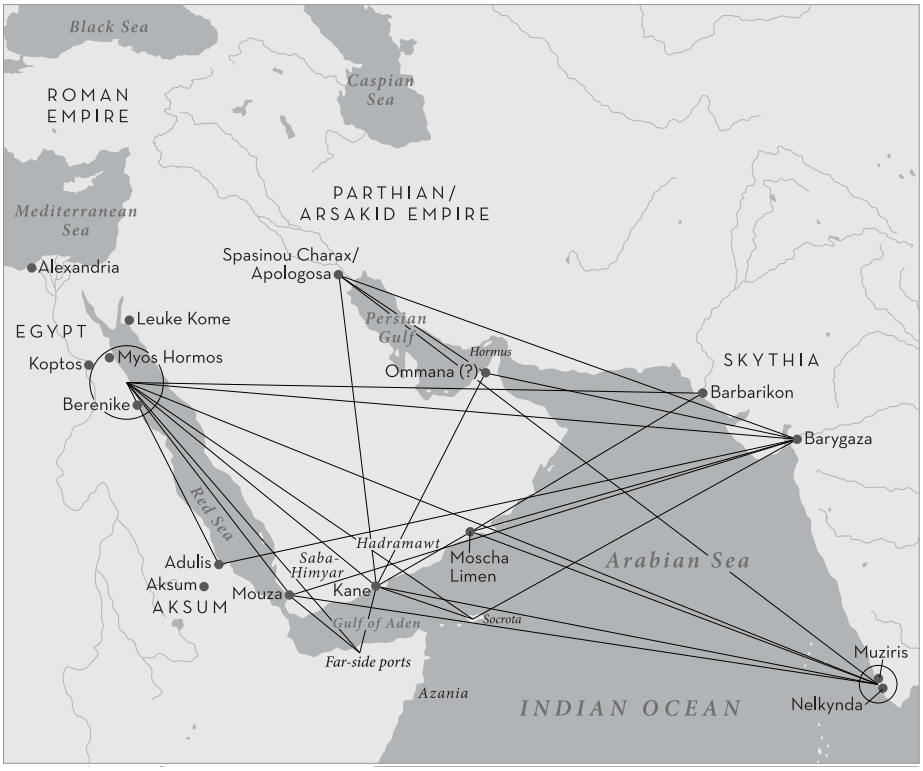
We have seen how road networks and fiscal infrastructure connected the local with the regional and the long-distance scale of fiscal and economic activities. Imperial,

196 *I. Pan* 87, 4–5 (= Bernand 1977), and Reger 2017, 118.

197 Zerbini in Nappo and Zerbini 2011, for this and the following.

198 Polyb. 6. 30.5–6.

199 *O. Beren*. 105, 136–141, 219 for Berenike; for the *quintana* (*kointana*) in connection with prostitutes, *O. Krok*. 252 and 614; *O. Did.* Inv. 430.



Map 3: Map showing Indian Ocean commercial networks based on the *PME* (after Seland 2013, fig. 2). © Peter Palm.

military, and network agents coalesced, partly in competition for revenue, and partly in the protection and generation of that revenue. In this final section, I will turn to the big-business networks in the Eastern Desert. My focus will be again on the interdependence of networks on different scales: long-distance, regional, and local. By local, I mean those operating within the desert itself. By regional, I refer to those active above all in Egypt and along the Red Sea coasts. By long-distance, I refer to those networks that extended transimperially into the Indian Ocean on the one hand and via Alexandria into the Mediterranean on the other. In the space of this chapter, I can touch only briefly on each of these scales. All three network scales had achieved a large degree of coordination by the second century BCE, yet were already by then under the influence of Roman imperial network factors.[200]

Eirvind Seland has visualized the transimperial network relationships of Berenike and Myos Hormos on the basis of the *PME* (map 3). These relationships were regular

200 Rathbone 2007.

and intense, as the presence of foreign cults, residential quarters for foreign traders, and the remains of foreign tableware and foods in the Egyptian ports indicate.[201]

Dedications, religious sculpture, and burial at Berenike show its mixed population. First-century Indian tableware, and cooking pots (predominantly from the east coast of the subcontinent) attest to regular residence of Indian traders in Berenike, while Indian inscriptions and symbols in the hinterland of Myos Hormos show that some merchants moved beyond the harbor towns.[202] Palmyrenes appear in the Eastern Desert in votive and funerary inscriptions from the first century BCE onward. From second-century CE Koptos, we have an inscription in which a group of five Palmyrene merchants thank one of their colleagues for having financed the construction of *propylaia*, *stoai*, and *thuromata* (burial chambers) in the city. Sidebotham suspects there was a headquarters for Palmyrene merchants there, while Cobb hesitates to share this assumption.[203] In the third century, Palmyrene presence became so strong in Berenike that they imported local artistic styles and possibly even their local stonemasons there.[204] It should be noted, however, that Palmyrenes were not just traders, but also served as police and guards. In 269, the Palmyrene queen Zenobia saw herself able to conquer Egypt for a brief period of time.[205] Nabataean graffiti in forts along the Myos Hormos route and Nabataean ostraca found in the fort of Maximianon date to no earlier than the second century, but their late arrival might be an accident of the evidence.[206] South Arabian presence in the ports, desert, Koptos, and along the Nile is plentiful, as one might expect given the role of the maritime trade in aromatics from the time of the Ptolemies.[207] There is plenty of Arabian utilitarian and coarse ware in both ports of Myos Hormos and Berenike, showing the regular and sustained presence of Arabs there. Moreover, two statues of Arabs were erected in Berenike during the reigns of Claudius and Vespasian respectively, suggesting that Arabs marked their particular standing in the port town. The identification of 'Šaqr' (the name of the royal palace at Shabwa in the kingdom of Hadramawt/southern Arabia) on jars in Berenike can be taken as an indication that royal agents from Hadramawt were active in the trade with Berenike. Dealings with kings and capitals in the hinterland of ports are mentioned frequently in the *PME*, showing that very long-distance trade networks connected to royal or imperial centers led not only through the Roman ports, but also others.[208]

201 Thomas 2012; Sidebotham 2014; Cobb 2018, 149–153.

202 Cobb 2018, 152–154.

203 *I. Portes* 103; trans. in Young 2001, 80; Sidebotham 2011, 211–212; Cobb 2015, 371.

204 Sidebotham 2011, 211–212. For Palmyrene sculpture in the Great Temple, Sidebotham, personal communication, with still-unpublished material.

205 Sidebotham 2014.

206 Durand 2012.

207 Cobb 2018, 150, for this and the following evidence.

208 E.g., *PME* 24. 8. 7–9 with Casson 1989 *ad loc.* and further examples.

Long-distance exchange networks of Alexandrians, reaching into Italy and Rome on the one hand and Indian Ocean ports on the other, are notoriously better attested than those involving other imperial actors in the Indian Ocean. We know several of the main players by name. Their wealth, family tradition, and network relationships were grounded in the agrarian economy of Egypt and connections with Rome, which created the financial capacity not only for their own commercial enterprises but also for guaranteeing others'. Some big players were first- or second-generation imperial freedmen, some slaves of the imperial family, showing upward social mobility and the direct economic involvement of the emperors in the Indian Ocean trade. Most individuals and their families are known to us through the combined evidence of the Nikanor archive, where their agents act on their account (*eis ton logon*), the Berenike ostraca, where agents pass goods through the customs gate, through literary evidence that bespeaks their wealth and connections, and through stamped amphora sealings that were attached to wine containers as an identification of ownership.[209] One plaster stopper of a wine amphora, for example, carries the name of Klaudios, son of Aniketos. The name is written in both Greek and Latin characters and identifies Klaudios as an *arabarch*. Aniketos, son of Komonos, slave of the emperor Tiberius, was possibly his father. Aniketos is attested in the Nikanor archive as a person transporting goods through the Eastern Desert and also holding some public office in Berenike.[210] Another person, also known from the Nikanor transport business, was Marcus Iulius Alexander, who was born into one of the richest families of Alexandrian Jews to which the philosopher Philo also belonged. Marcus's father was *arabarch* and his brother governor of the Thebaid at the time when Marcus was active in trade through the desert. Marcus also had close links to the imperial family in Rome and to Puteoli, where he was involved in banking. Eventually, he married the daughter of Herodes II (grandson of Herodes the Great) and died in 44 BCE. We may also mention Tiberius Claudius Serapion, on whose account an agent transported goods to the Red Sea according to the Nikanor archive, and who is known to have owned an estate in the Fayum.[211] We must finally call to mind the creditor of the loan in the Muziris papyrus, who, according to de Romanis, was both *paralemptes* and involved in the Muziris trade journey. Some 30 such big players are known. They were typical portfolio capitalists who combined political posts in Alexandria and the Thebaid with tax-farming, finance, and long-distance trade.

There were more regional players. In the Nikanor archive, grain was the commodity most frequently transported on the roads from Koptos to Myos Hormos and Beren-

209 These business networks have been discussed by, among others, Raschke 1978; Young 2001, 61–69; Rathbone 2003; Denecker and Vandorpe 2007; Messeri and Rathbone 2012; Evers 2016, 83–116; Cobb 2018, 71–83; and de Romanis 2020, 298–321. I follow Denecker and Vandorpe 2007 and Messeri and Rathbone 2012, who list the prosopographical evidence most clearly.

210 Denecker and Vandorpe 2007, 122 with *O. Petr. Mus*. 163 and 166 (33–34 CE); Messeri and Rathbone 2012, 153.

211 *O. Petr. Mus*. 179; Vandorpe 2007, 123; Messeri and Rathbone 2012, 155.

ike. Much of this grain stayed in the ports themselves to feed their residents, but it was also required as rations for crews and as merchandise for marketing in various harbors along the African and Arabian coasts.[212] Yet in contrast to wine, coins, glass, and *pharmaka*, it was not a main export item in the long-distance trade. Denecker and Vandorpe suggest, moreover, that it was the commodity of the networks in which the local (often Hellenized) Egyptian aristocracy was particularly active.[213] One of them was Paminis, son of Parthenios. Nine of the 17 journeys involving such Egyptians and their agents in the Nikanor archive relate to Paminis, two of his sons, and their agents over a period of 25 years.[214] Paminis and his three sons Paniskos, Parthenios, and Psenpnoutis were members of a priestly family. That they were active in a crossover of Egyptian and Graeco-Egyptian spheres of activity is exemplified by the mixture of Greek and Egyptian names by which they called themselves. Hieroglyphic and Demotic steles reveal that Parthenios, one of Paminis's sons, was representative or *prostates* (chief) of Isis, the great goddess of Koptos. In that function, he headed the temple as an economic unit, probably collected its taxes, and together with his father participated in several building activities around it. Paminis and his family were the native Egyptian parallel to the Graeco-Egyptian portfolio capitalists in Alexandria. But their business did not reach as far as Alexandria, nor into Italy. They, too, had their agents working in the desert, and they, too, were rich and influential, but they stayed more firmly connected to the agrarian economy and its most important produce.

Finally, there were the local networks. Evidence related to this level is abundant. They appear in the thousands of ostraca found in forts and the harbor towns, as well as in inscriptions related to dedications in the desert or Koptos. We already mentioned that big business is hardly visible there, as the big players acted through their agents, and commodities for export were moved in moderate units between Koptos and the harbors. But the construction and supply of forts and towns and the courier service and patrols linking the settlements created a local economy in itself. Forts and towns were not the only ones in need of food and water supplied from Koptos or distributed between them. There also grew a life around the forts with garden products circulating between them, women, children, pets, and prostitutes accompanying the soldiers, and merchants contracting the supply of special goods to the forts.[215] This economy was not independent of the long-distance and regional networks, and there was a great degree of overlap between actors involved in all of them: the transport companies, the customs officers, the soldiers, the agents and merchants – all worked as cogs in the wheels of different size. Together, they created the narrow band of desert control on which the success of long-distance trade rested.

212 *PME* 7 (Avalites/Gulf of Aden); 17 (Azania/East African coast); 24 (Muza/al-Mokha on the Red Sea coast of Yemen); 28 (Kane/shortly beyond Hadramawt on the southern Arabian coast); and 56 (Bakare, on the Malabar coast, but only for other crews).

213 Denecker and Vandorpe 2007, 123, for this and the following.

214 Messeri and Rathbone 2012, 158–159 for a list.

215 Reger 2017 for examples.

There was also the local desert population. In the documents of the first and second centuries CE, they mostly appear as hostile troublemakers disturbing the local cogs, if not the wheels. From the fort of Krokodilo, there survive several (though not many) ostraca in which small groups of *barbaroi*, brigands (*lestai*), or Arabs steal small amount of goods or single items. Some attacks were bigger, such as the one reported in 114/115 CE in which 60 desert dwellers were involved, resulting in the death of several people, including a child.[216] Despite the relatively few instances reported, one should not underestimate the danger to be expected from those who rightly or wrongly threatened the invaders of their territory. After all, a fully operative system of patrols and fortifications was installed in response to that danger. Yet some locals also cooperated. The *PME* mentions *ichthyophagoi* bringing tortoise shells to markets on the African coast, and there is no reason to doubt that this was not possible elsewhere.[217] Myos Hormos had a quarter in which pottery and faunal remains suggest the habitation of local fishermen, and again there is no reason to doubt that they supplied the residents with fish. An ostracon from the fort of Xeron Pelagos attests to the sale of oil to *barbaroi* for a certain price. This shows that not only was there exchange between the forts and the locals, but also that the *barbaroi* were integrated into the monetary exchanges of the desert.[218] There also remains the possibility that only local Arabs were able to breed dromedaries successfully, thus supplying the most crucial element of desert logistics.[219] One wonders whether they knew that the rise and fall of Roman luxury trade was in their hands.

The relationships between the forts and the locals changed significantly at the beginning of the third century.[220] The local populations continue to be called *barbaroi* on the ostraca, but now these texts show peaceful relations. *Barbaroi* receive rations in the forts, as was the case in Bi'r Samut during the Ptolemaic period. One *barbaros* appears as a craftsman making a bronze container for the fort. A group of *barbaroi*, accompanied by three children, nine camels, and nine donkeys, is asked to be reported to the local prefect as having stayed in the fort overnight. And in another letter, the writer asks to offer his bedroom to a *barbaros* passing through the fort. These instances are selected and quite isolated. Yet in a dossier of 90 ostraca from Xeron Pelagos dated to the 264 CE, distributions of grain occur in larger numbers and in standard quantities to recipients who for onomastic reasons must have been *barbaroi*.[221] The ostraca seem to have been part of a voucher system, according to which the bearer was entitled to grain rations feeding *dekanoi*, groups of ten. *Barbaroi* had started to work in leading positions, with work groups under them. Cuvigny relates

216 *O. Krok.* 87 (118 CE); Cuvigny 2014, 176.
217 *PME* 4.
218 Cuvigny 2014, 178 with *O. Xer. Inv.* 465 (ca. 115–130 CE).
219 See above, with Cuvigny 2020.
220 Cuvigny 2022c, 185–189.
221 Cuvigny 2014, 187–196; now published and discussed in *O. Blem.* 17–107 (= Cuvigny 2022c).

the dossier to the troubled time in Egypt shortly before the abandonment of the forts. The ostraca show that the residents of the forts had fully integrated *barbaroi* into the workforce – possibly as knowledgeable patrols of the desert roads or other tasks involving work groups. But the regular residents of the forts had changed too. The names of the soldiers were now less Romanized: Egyptian soldiers more often kept their local rather than Romanized names. Soldiers of eastern origin now also served in the *praesidia*: Palmyrenes, Emesenians, even Parthians.[222] In this context, when the imperial hold on the forts started to fall, relationships with the desert dwellers began to change.

V The Transformation of a Frontier Zone

There is some debate over the question when Roman trade in the Indian Ocean trade peaked. Some date this to the end of the first century, others rather later.[223] The Muziris papyrus attesting by far the largest volume of a single journey yet known from the Roman period leaves no doubt that the networks that made this trade thrive were fully functioning in the mid-second century. Yet the Antonine plague that struck Egypt from 166 to about 176 left the country in turmoil. It is possible that the forts in the Eastern Desert were abandoned temporarily during that decade. The country recovered, however, and the agrarian economy and its large estates continued to flourish.[224] Nevertheless, Sidebotham notes significant urban decline and "trade at a greatly reduced scale" in Berenike by the middle of the third century.[225] The forts along the roads to Myos Hormos and Berenike were abandoned around that time. The latest (dated) ostracon from Didymoi is dated to 236. In Dios, the latest dated attestations come from the years between 245 and 249. In Xeron Pelagos, the dossier just mentioned is the latest testimony of the fort.[226] Civil unrest, devaluation of coinages, decline in political stability, and the regionalization of power seem to have been among the reasons why the eastern trade of the Roman Empire declined. Urban activity in Berenike picked up again from the fourth century onward. This is the time when the Blemmyes rose to political power in the *dodekaschoinos*. Other routes and networks were used, and the powerful merchant network between the Eastern Desert,

222 Cuvigny 2014, 169.

223 Cobb 2015 argues for the former; Rathbone 2003 also notes a peak of trade at the end of the first century; Tomber 2018 argues from an archaeological perspective for not significantly changing volumes of trade into the early third century.

224 As witnessed in the Heroninus archive documenting the estate of Appianus; Rathbone 1991; and Rathbone 1996 for continuing prosperity and price stability until the second half of the third century CE in Egypt.

225 Sidebotham 2011, 259; Young 2001, 82–88 for reasons for the decline in Red Sea trade.

226 Cuvigny 2014, 168; Cuvigny 2022c, 113–117 for dating the dossier to the 11th year of Gallienus.

Alexandria, and Italy disintegrated. There remained many continuities in local social and physical infrastructures in the Eastern Desert, but the complex balance of local, regional, imperial, and transimperial networks between the Mediterranean and the Red Sea tipped toward the regional and local scale, allowing new transimperial networks to thrive and new social groups to take over the lucrative trade with the Indian Ocean.

VI Conclusion

In this chapter, I have taken a long-term perspective on the Eastern Desert in order to show the continuities of institutions and networks between Egypt and its frontiers. These partly local, partly regional, and partly imperial networks together were the foundation of the exceptional economic opportunities that the Eastern Desert came to afford. But throughout the millennia, the desert remained a forbidding place. In the final instance, it could only be mastered with the benevolence of Min, whom the Greeks and Romans called Pan. Pan was the god of the wilderness. Workers, gold miners, soldiers, government officials, elephant hunters, and traders left their marks of devotion in the desert to Pan the propitious, the "one who walks the desert," the Helper, the Savior, the Gold-Giver.[227] The local temple of Min and Isis at Koptos benefited from their devotion.

There were other powers in the desert that were almost as unpredictable as Pan: the Blemmyes, whom the Roman scientist Pliny described as having no heads (*NH* 5. 46). Some of them ate wild animals, others never drank, and yet others did not bat an eyelid when their children and women were killed before their eyes.[228] Yet like Pan, they could be made allies and helpers. In spite of the deplorably few references in ancient texts, it is possible to glimpse their role as rulers of the desert and its resources, breeders of animals, middlemen, laborers, and providers of local know-how. The desert dwellers also elicited institutional responses of the Egyptian state, most notably in the form of fortifications, communication, road patrols, and military control that bespeak the power of the Blemmyes over the desert.

The ecological and social frontiers created a third, administrative, frontier that mediated between the desert and the Nile valley. Some forms of mediation and communication remained similar throughout the long history of their relationship, such as infrastructural efforts in the form of road, well, and harbor construction. From the Graeco-Roman period onward, the Eastern Desert came to be integrated into the tax system that, like a network of its own, spread across the Egyptian state. Alongside its function as a source of income and cost compensation for the upkeep of roads and

227 Reger 2017, 131–133.

228 Reger 2017, 118–122 for the list of stereotypes and further references.

wells, taxation also integrated the desert into the Egyptian state, making it part of its institutional set-up. We have seen how surveying distances from the Nile, controlling tax collection, and supplying harbors and forts with food and water were integrating mechanisms through which the Eastern Desert became part of Egypt and its state formation process.

The negotiation of these various frontiers, and the process of mediating between the desert and the state, were the undercurrent of the development of trading networks that connected the Red Sea and the Mediterranean. Urban intermediaries such as Koptos and Alexandria were crucial hubs of network coordination. Forts and port towns became nodes of contact and communication along the long roads between the river and the sea. Long-distance networks were dependent on, and intersected with, small and mid-size local and regional networks that reached deep into the agrarian, military, and religious organization of the Egyptian state. In all these networks, state and private actors and interests were never clearly distinct. Together they made the desert a place of opportunity within their networks. When these networks declined, the opportunities afforded by the desert were exploited by other networks, without the paths that had been built and paved in the sand over millennia ever vanishing.

References

Adams, C. 2007. *Land transport in Roman Egypt. A study of economics and administration in a Roman province.* Oxford: Oxford University Press.

Agut-Labordère, D. and B. Redon, eds. 2020a. *The ships of the desert and the steppes. Camelids in antiquity (Camelus dromedarius and Camelus bactrianus)*. Lyon: Mom Editions.

Agut-Labordère, D. and B. Redon. 2020b. "Introduction. Dromedaries and camels from Central Asia to the Nile in the ancient worlds (IVe millennium BC–early centuries AD)" In Agut-Labordère and Redon (2020a), 9–20.

Andreau, J. 1999. *Banking and business in the Roman world*. Cambridge: Cambridge University Press.

Avanzini, A. 2008. "Notes for a history of Sumhuram and a new inscription of Yashhur'il." In A. Avanzini (ed.), *A port in Arabia between Rome and the Indian Ocean (3rd c. BC–5th c. AD).* Khor Rori Report 2. 609–641. Rome: L'Erma di Bretschneider.

–. 2016. "The port of Sumhuram: Recent data and fresh reflections on its history." In M. F. Boussac, J.-F Salles, and J.-B. Yon (eds.), *Ports of the ancient Indian Ocean*, 111–124. Delhi: Primus Books.

Bagnall, R. S., J. Manning, S. Sidebotham, and R. Zitterkopf. 1996. "A Ptolemaic inscription from Bir 'Iayyan." *Chronique d'Égypte* 71, 317–330.

Bard, K. and R. Fattovich. 2015. "Egyptian long-distance trade in the Middle Kingdom and the evidence at the Red Sea harbour at Mersa/Wadi Gawasis." In T. P. Harrison, E. B. Banning, and S. Klassen (eds.), *Walls of the prince: Egyptian interactions with Southwest Asia in antiquity. Essays in honour of John S. Holladay, Jr,* 1–10. Leiden: Brill.

Barnard, H. 2009. "The identification of ancient pastoral nomads on the north-western Red Sea littoral." In S. Blue, J. Cooper, R. Thomas, and J. Whitewright (eds.), *Connected hinterlands. Proceedings of the Red Sea project IV,* 19–28. Oxford: Archaeopress.

–. 2019. "The Eastern Desert dwellers." In Sidebotham and Gates-Foster (2019), 389–408.

Becking, B. 2017. "Mercenaries or merchants? On the role of the Phoenicians at Elephantine in the Achaemenid period." *Die Welt des Orients* 47.2, 186–197.

Bernand, A. 1977. *Pan du désert* (=*I. Pan*.). Leiden: Brill.
–. 1984. *Les portes du desert* (= *I. Portes*). Paris: Centre National de la Recherche Scientifique.
Boozer, A. L. 2018. "The archaeology of imperial borderlands: A view from Roman Egypt and Sudan." In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*, 206–239. Cambridge: Cambridge University Press.
Briant, P. 2002. *From Cyrus to Alexander: A history of the Persian Empire*. Winona Lake, IN: Eisenbrauns.
Broodbank, C. 2013. *The making of the Middle Sea: A history of the Mediterranean from the beginning to the emergence of the classical world*. London: Thames & Hudson.
Brun, J. P. 2003 "Chronologie de l'équipement de la route à l'époque gréco-romaine." In Cuvigny (2003), vol. 1, 187–206.
–. 2018. "Chronologie des forts des routes de Myos Hormos et de Bérénice durant la période gréco-romaine." In Brun, Faucher, Redon, and Sidebotham (2018), 141–181.
Brun, T., B. Faucher, B. Redon, and S. Sidebotham, eds. 2018. *Le désert Oriental d'Égypte, durant la period gréco-romains: bilans archéologique*. Paris: Collège de France.
Burstein, S. M. 1989. *Agatharchides of Cnidus. On the Erythraean Sea*. London: Hakluyt Society.
Casson, L. 1989. *The Periplus Maris Erythraei: Text with introduction, translation and commentary*. Princeton, NJ: Princeton University Press.
Chaufray, M.-P. 2018. "Les chameaux dans les ostraca démotiques de Bi'r Samut (Égypte, désert Oriental." In Brun, Faucher, Redon, and Sidebotham (2018), 135–170.
–. 2022. "Les Blemmyes dans le desert Oriental égyptien (*O. Blem*. 1–16)." In Cuvigny (2022a), 75–104.
Chaufray, M.-P. and B. Redon. 2020. "Ostraca and tituli picti of Samuth North and Bi'r Samut (Eastern Desert of Egypt): Some reflections." In C. Caputo and J. Lougovaya (eds.), *Using ostraca in the ancient world: New discoveries and methodologies*, 167–182. Berlin: De Gruyter.
Cobb, M. A. 2015. "The chronology of Roman trade in the Indian Ocean from Augustus to the early third century CE." *Journal of the Economic and Social History of the Orient* 58.3, 362–418.
–. 2018. *Rome and the Indian Ocean trade from Augustus to the early third century CE*. Leiden: Brill.
Cohen, G. M. 2006. *The Hellenistic settlements in Syria, the Red Sea Basin, and North Africa*. Berkeley, CA: University of California Press.
Cooper, J. 2021. "Between the Nile and the Red Sea: Medjay desert polities in the third to first millennium BCE." *Old World: Journal of Ancient Africa and Eurasia* 1.1. https://doi.org/10.1163/26670755-01010001.
–. 2022. "Children of the desert. The indigenes of the Eastern Desert in the Pharaonic period and the longue durée." In Cuvigny (2022a), 5–40.
Cuvigny, H. ed. 2003. *La route de Myos Hormos: L'armée romaine dans le desert orientale d'Égypte*. 2 vols. Cairo: Institut français d'archéologie orientale.
–. 2014. "Papyrological evidence on 'barbarians' in the Egyptian Eastern Desert." In J. H. F. Dijkstra and G. Fisher (eds.), *Inside and out: interactions between Rome and the peoples on the Arabian and Egyptian frontiers in Late Antiquity*, 165–198. Leuven: Peeters.
–. 2020. "L'élevage des chameaux sur la route d'Edfou à Bérénice d'après une lettre trouvée à Bi'r Samut (iiie siècle av. J. C.)." In Agut-Labordère and Redon (2020a), 171–180.
–. ed. 2022a. *Blemmyes. New documents and new perspectives. Including O. Blem. 1–107.* Cairo: Institut Français d'Archéologie Orientale.
–. 2022b. "Trogodytes et Blemmyes, entre documents et littérature." In Cuvigny (2022a), 41–60.
–. 2022c. "Les bons de distribution de blé aux barbares." In Cuvigny (2022a), 105–176.
Denecker, E. and K. Vandorpe 2007. "Sealed amphora stoppers and tradesmen in Greco-Roman Egypt: Archaeological, papyrological and inscriptional evidence." *Babesch. Annual Papers on Mediterranean Archaeology* 82, 115–128.
De Romanis, F. 2020. *The Indo-Roman pepper trade and the Muziris papyrus*. Oxford: Oxford University Press.

Durand, C. 2012. “Crossing the Red Sea: The Nabateans in the Egyptian Eastern Desert.” In D. A. Agius, J. P. Cooper, A. Trakadas, and C. Zazzaro (eds.), *Navigated spaces, connected places. Proceedings of the Red Sea project V*, 85–90. Oxford: Archaeopress.

Evers, K. G. 2016. *Worlds apart trading together: The organisation of long-distance trade between Rome and India in antiquity*. Oxford: Archaeopress.

Faucher, T. 2018. “Ptolemaic gold: The exploitation of gold in the Eastern Desert.” In Brun, Faucher, Redon, and Sidebotham (2018), 50–65.

Fischer-Bovet, C. 2014. *Army and society in Ptolemaic Egypt.* Cambridge: Cambridge University Press.

Fraser, P. 1970. *Ptolemaic Alexandria*. Vol. 1. Oxford: Clarendon Press.

Gates, J. E. 2006. “Hidden passage: Graeco-Roman roads in Egypt’s Eastern Desert.” In E. C. Robertson, J. D. Seibert, D. C. Fernandez, and M. U. Zender (eds.), *Space and spatial analysis in archaeology*, 315–322. Calgary: University of Calgary Press.

Gates-Foster, J. 2012a. “The Eastern Desert and the Red Sea ports.” In C. Riggs (ed.), *The Oxford handbook of Roman Egypt*, 736–748. Oxford: Oxford University Press.

–. 2019. “Pottery from the surveys.” In Sidebotham and Gates-Foster (2019), 287–375.

–. 2022. “Third-century BCE supply networks and Ptolemaic transport amphoras from ‘Abbad and Bi’r Samut in Egypt’s Eastern Desert.” In C. Durand, J. Marchand, B. Redon, and P. Schneider (eds.), *Networked spaces: The spatiality of networks in the Red Sea and western Indian Ocean*. Lyon: Mom Editions.

Granovetter, M. 2005. “The impact of social structure on economic outcomes.” *Journal of Economic Perspectives* 19.1, 33–50.

Harris, W. V. 2007. “The Late Republic.” In W. Scheidel, I. Morris, and R. Saller (eds.), *The Cambridge economic history of the Greco-Roman world*, 511–542. Cambridge: University Press.

Herbert, S. C. and A. Berlin. 2003. *Excavations at Coptos (Qift) in Upper Egypt, 1987–1992*. Portsmouth, RI: Journal of Roman Archaeology Supplementary Series 53.

Huzar, E. G. 1962. “Roman–Egyptian relations in Delos.” *The Classical Journal* 57.4, 169–178.

Johannsen, J. 2023. *Imperialer Wandel und ptolemäischer Imperialismus in Syrien: Konflikt, Konkurrenz und Kooperation in hellenistischen Imperien*. Paderborn: Ferdinand Schoeningh Verlag.

Kemp, B. 2018. *Egypt*: *Anatomy of a civilization*. 3rd ed. London: Routledge.

Kula, W. 1986. *Measures and men*. Princeton, NJ: Princeton University Press.

Mairs, R. and C. Fischer-Bovet. 2021. “Reassessing Hellenistic settlement policies: The Seleukid Far East and Ptolemaic Red Sea basin, Egypt and Nubia.” In C. Fischer-Bovet and S. von Reden (eds.), *Comparing the Ptolemaic and Seleucid empires*, 48–85. Cambridge: Cambridge University Press.

Manière, L., M. Crépy, and B. Redon, 2021. “Building a model to reconstruct the Hellenistic and Roman road networks of the Eastern Desert of Egypt, a semi-empirical approach based on modern travelers’ itineraries.” *Journal of Computer Applications in Archaeology* 4, 120–146.

Manning, J. G. 2003. *Land and power in Ptolemaic Egypt: The structure of land tenure 332– 30 BCE*. Cambridge: Cambridge University Press.

–. 2010. *The last Pharaohs: Egypt under the Ptolemies, 305–30 BC*. Princeton, NJ: Princeton University Press.

–. 2011 “Networks, hierarchies, and markets in the Hellenistic economies.” In Z. Archibald, J. K. Davies, and V. Gabrielsen (eds.), *The Economies of Hellenistic societies, third to first centuries BC*, 296–323. Oxford: Oxford University Press.

–. 2014. “At the limits: Long-distance trade in the time of Alexander the Great and the Hellenistic kings.” In V. E. Mair and J. Hickman (eds.), *Reconfiguring the Silk Road. New research on east–west exchange in antiquity*, 5–14. Philadelphia, PA: University of Philadelphia Press.

–. 2018. *The open sea: The economic life of the ancient Mediterranean world from the Iron Age to the rise of Rome.* Princeton, NJ: Princeton University Press.

Marcotte, D. 2016. “The Indian Ocean from Agartharchides of Cnidus to the *Periplus Maris Erythraei*.” In S. Bianchetti, M. R. Cataudella, and H.-J. Gehrke (eds.), *Brill’s companion to ancient geography: The inhabited world in Greek and Roman tradition*, 163–183. Leiden: Brill.

Maxfield, V. A. 2000. “The deployment of the Roman auxilia in Upper Egypt and the Eastern Desert during the principate.” In G. Alföldy, B. Dobson, and W. Eck (eds.), *Kaiser, Heer und Gesellschaft in der römischen Kaiserzeit: Gedenkschrift für Eric Birley*, 407–442. Stuttgart: Franz Steiner.

Messeri, G. and D. Rathbone. 2012. “Archivo di Nicanor.” In M. Funghi, G. Messeri, C. E. Römer (eds.), *Ostraca Greci e bilingui del Petrie Museum of Egyptian Archaeology (O. Petr. Mus.)*, 144–164. Florence: Edizioni Gonneli.

Müller, K. 2006. *Settlements of the Ptolemies: City foundations and new settlement in the Hellenistic world*. Leuven: Peeters.

Nappo, D. 2018. “Money and flows of coinage in the Red Sea trade.” In Wilson and Bowman (2018), 557–578.

Nappo, D. and A. Zerbini. 2011. “On the fringe: Trade and taxation in the Egyptian Eastern Desert.” In O. Hekster and T. Kaizer (eds.), *Frontiers in the Roman world: Proceedings of the ninth workshop of the international network Impact of Empire,* 61–78. Leiden: Brill.

Ogden, J. 2001. “Metals.” In P. T. Nicholson and I. Shaw (eds.), *Ancient Egyptian Materials and Technology*, 148–176. Cambridge: Cambridge University Press.

Pantalacci, L. 2018. “Coptos, porte du Désert Oriental.” In Brun, Faucher, Redon, and Sidebotham (2018), 8–28.

Paprocki, M. 2019. *Roads in the desert of Roman Egypt: Analysis, atlas, commentary.* Oxford: Oxbow Books.

Pfeiffer, S. 2015. *Griechische und lateinische Inschriften zum Ptolemäerreich und der römischen Provinz Aegyptus*. Berlin: Lit Verlag.

Posener, G. 1936. *La première domination Perse en Égypte: Receuil d’inscriptions hiéroglyphiques*. Cairo: Institut Français d’Archéologie Oriental.

Raschke, M. G. 1978. “New studies in Roman commerce with the East.” In H. Temporini (ed.), *Aufstieg und Niedergang der römischen Welt.* Part 2, vol. 9.2, 604–1378. Berlin: De Gruyter.

Rathbone, D. 1990. “The Muziris papyrus (SB XVIII 13167): Financing Roman trade with India.” *Bulletin de la Société d’Archéologie d’Alexandrie* 46, 39–50.

–. 1991. *Economic rationalism and rural society in third-century AD Egypt: The Heroninus archive and the Appianus estate.* Cambridge: Cambridge University Press.

–. 1996. “Monetization not price inflation.” In C. E. King and D. G. Wigg (eds.) *Coin finds and coin use in the Roman world. 13th Oxford Symposium on Coinage and Monetary History.* SFMA 10, 321–339. Berlin: Gebr. Mann Verlag.

–. 2002. “Koptos the *emporion*: Economy and society, I–III AD” *Topoi: Orient-Occident* 3, 179–198.

–. 2003. “The financing of maritime commerce in the Roman Empire, I–II AD.” In E. Lo Cascio (ed.), *Credito e moneta nel mondo romano*, 197–229. Bari: Edipuglia.

–. 2007. “Merchant networks in the Greek world: The impact of Rome.” *Mediterranean History Review* 22.2, 309–320.

–. 2021 “Too much pepper? F. de Romanis, The Indo-Roman pepper trade and the Muziris papyrus. Oxford (2020).” *Topoi* 24.2, 439–465.

Redde, M. 2018. “The fortlets of the Eastern Desert of Egypt.” In Brun, Faucher, Redon, and Sidebotham (2018), 141–181.

Redon, B. 2018. “The control of the Eastern Desert by the Ptolemies: New archaeological data.” In Brun, Faucher, Redon, and Sidebotham (2018), 29–49.

Reger, G. 2017. “Romans in the Egyptian desert: From desert space to Roman place.” In P. Derron and S. von Reden (eds.), *Économie et inégalité: Ressources, échanges et pouvoir dans l’antiquité classique*, 115–144. Vandoeuvres: Fondation Hardt.

Ruffing, K. 1993. “Das Nikanor Archiv und der römische Süd-und Osthandel.” *Münstersche Beiträge zur antiken Handelsgeschichte* 12.2, 1–26.

Schmidt, S. 2021. “Early Roman Syene (1st to 2nd century) – a gate to the Red Sea?” *Journal of Ancient Civilizations* 36.2, 269–298.

Seland, E. H. 2013. “Networks and social cohesion in ancient Indian Ocean trade: Geography, ethnicity, religion.” *Journal of Global History* 8.3, 373–390.

Selvakumar, V. 2011. “Contacts between India and Southeast Asia in the ceramic and boat-building traditions.” In P.-Y. Manguin, G. Wade, and A. Mani (eds.), *Early interactions between South and Southeast Asia: Reflections on cross-cultural exchange*, 197–220. Singapore: ISEAS–Yusof Ishak Institute.

Sidebotham, S. E. 1991. “Ports of the Red Sea and the Arabia–India trade.” In V. Begley and R. de Puma (eds.), *Rome and India: The ancient sea trade*, 12–38. Madison, WI: University of Wisconsin Press.

–. 2011. *Berenike and the ancient maritime spice route*. Berkeley, CA: University of California Press.

–. 2014. “Religion and burial at the Ptolemaic-Roman Red Sea emporium of Berenike, Egypt.” *The African Archaeological Review* 31.4, 599–635.

Sidebotham, S. E. and J. E. Gates-Foster, eds. 2019a. *The archaeological survey of the desert roads between Berenike and the Nile valley: Expeditions by the University of Michigan and the University of Delaware to the Eastern Desert of Egypt, 1987–2015*. Boston, MA: American Schools of Oriental Research.

Sidebotham, S. E. and J. E. Gates-Foster. 2019b. “Introduction.” In Sidebotham and Gates-Foster (2019a), 1–49.

Sidebotham, S. E. and H. Wright. 2019 “Gazetteer of sites.” In Sidebotham and Gates-Foster (2019a), 73–286.

Strootman, R. 2019. “The Ptolemaic sea empire.” In R. Strootman, F. van den Eijnde, and R. van Wijk (eds.), *Empires of the sea: Maritime power networks in world history*, 114–152. Leiden: Brill.

Strootman, R. and S. von Reden. 2021. “Imperial metropoleis and foundation myths: Ptolemaic and Seleucid capitals compared.” In C. Fischer Bovet and S. von Reden (eds.), *Comparing the Ptolemaic and Seleucid empires: Integration, communication and resistance*, 17–47. Cambridge: Cambridge University Press.

Tallet, P. 2012. “Ayn Sukhna and Wadi el-Jarf: Two newly discovered Pharaonic harbours on the Suez Gulf.” *British Museum Studies in Ancient Egypt and Sudan* 18, 147–168.

Terpstra, T. 2019. *Trade in the ancient Mediterranean: Private order and public institutions*. Princeton, NJ: Princeton University Press.

Thomas, R. 2012. “Port communities and Erythraean sea trade.” *British Museum Studies in Ancient Egypt and Sudan* 18, 169–199.

Tomber, R. 2018. “Egypt and eastern commerce during the second century AD and later.” In Wilson and Bowman (2018), 531–556.

Tuplin, C. 1991. “Darius’ Suez Canal and Persian imperialism.” In A. Kuhrt and H. Sancisi-Weerdenburg (eds.), *Achaemenid history.* Vol. 6, 237–283. Leiden: Nederlands Instituut voor het Nabije Oosten.

Vandorpe, K. 2015. “Roman Egypt and the organisation of customs duties.” In P. Kritzinger, P. Schleicher, and T. Stickler (eds.), *Studien zum römischen Zollwesen*, 89–110. Wiesbaden: Wellem.

von Reden, S. 2007. *Money in Ptolemaic Egypt: From the Macedonian conquest to the end of the third century BC*. Cambridge: Cambridge University Press.

–. 2014. “Labour contracts.” In J. G. Keenan, J. Manning, and U. Yiftach-Firanko (eds.), *Law and legal practice in Egypt from Alexander to the Arab conquest: A selection of papyrological sources in translation, with introductions and commentary*, 402–410. Cambridge: Cambridge University Press.

–. 2015. “Fließende Macht: Kanalprojekte und Brunnenbau im hellenistischen Ägypten.” In S. von Reden and C. Wieland (eds.), *Wasser: Alltagsbedarf, Ingenieurskunst und Repräsentation zwischen Antike und Neuzeit*, 49–76. Göttingen: Vandenhoek und Ruprecht.

Wilken, U. 1925. “Punt-Fahrten in der Ptolemäerzeit.” *Zeitschrift für Ägyptische Sprache* 60, 86–102.

Wilson, A. 2015 “Red Sea trade and the state.” In F. de Romanis and M. Maiuro (eds.), *Across the ocean: Nine essays on Indo-Mediterranean trade*, 13–32. Leiden: Brill.

Wilson, A. and A. K. Bowman, eds. 2018a. *Trade, commerce and the state in the Roman world*. Oxford: Oxford University Press.

–. eds. 2018b. “Introduction: Trade, commerce and the state.” In Wilson and Bowman (2018a), 1–26.

Woźniak, M. A. 2018. “Shaping a city and its defences: Fortifications of Hellenistic Berenike Trogodytike.” *Polish Archaeology in the Mediterranean* 26.2, 43–60.

Woźniak, M. A. and J. A. Harrel. 2021. “When the well runs dry: Climatic instability and the abandonment of early Hellenistic Berenike.” *Antiquity* 95.380, 349–366.

Young, G. K. 2001. *Rome's eastern trade: International commerce and imperial policy, 31 BC–AD 305*. London: Routledge.

Part III: **Mountains and Deserts**

Map 1: Armenia and the South Caucasus. © Peter Palm.

Lara Fabian

9 Multifaceted Highlands: The Economy of Armenia and its South Caucasus Context

I Introduction

Starting after the collapse of the Achaemenid Empire, the rugged upland territory of the Lesser Caucasus stretching down into the Zagros mountains developed into the heartland of Armenia (map 1). It was the most geopolitically important of the borderland states that arose at the interstices of the Mediterranean and Iranian spheres in this period, eventually coming to form part of the so-called Parthian Commonwealth, and also briefly becoming a province of the Roman Empire.[1] Alongside its neighbors to the north and northeast, K'art'li and Caucasian Albania respectively, it came to dominate the South Caucasus, the territory between the Black and Caspian Seas, and acted as an important fulcrum connecting both the Mediterranean and Iranian worlds to that of the steppe to the north.

Its place in broader economic systems, however, remains elusive. The difficulty lies partly in the evidence itself, as sources are a challenge in this space. Nevertheless, although often patchy, both texts and material culture speak clearly for wide-ranging interactions that were either explicitly economic or had economic ramifications (e.g., on consumption practices). Rather, the difficulty is largely methodological. On the one hand, the multifaceted nature of the region – sitting as it did along key political, sociocultural, and ecological frontiers – makes it difficult to categorize these interactions, such that the connection between local practices and wider economic systems is often obscured. Moreover, this same character allows Armenia to be interpreted in wildly different ways, depending on the perspective of the researcher.[2] This creates a range of images of the territory – on the question of Silk Roads in Armenia, for example – that are not just contradictory, but indeed mutually exclusive.

I.1 Armenia, Frontiers, and 'Silk Roads'

One of the characteristics of Armenia, at least as it comes to us presented through the lens of classical historiography and modern historical scholarship, is as an entrenched political frontier between the Roman and Iranian worlds. Indeed and more explicitly, the descriptor of Armenia as a 'buffer state' echoes through historical scholarship,

1 On the term "Parthian Commonwealth," see de Jong 2013.

2 Traina 2021a for reflections on the methodological difficulties involved in the study of Armenia, as well as a call to focus on connectivities as the path forward.

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appearing in conceptual pieces such as Luttwak's *Grand strategy of the Roman Empire* and also in focused historical studies such as Sherwin-White's *Roman foreign policy in the East*.[3] The buffer-state model is inappropriate, as it captures neither Armenia's specific political relationships with its neighbors nor the complexity of its internal organization.[4] But more problematic is what the idea connotes about the place of Armenia in broader systems, namely that the territory was a "neutral zone"[5] that lay somehow both at the fringe of but also beyond imperial political space.

Another dominant projection of the space, however, this one found more often in the work of specialists on Armenia, places it not as an imperial fringe, but rather as a central zone of trade and connectivity. These discussions are common in the Armenian and Russian literature, but make their way into English as well, as in the case of the groundbreaking work of Manandyan from the middle of the twentieth century.[6] They are generally anchored in the reconstruction of trade activities and routes based on analyses of texts from the medieval period. Drawing on itineraries that mention urban centers in Armenia and speculate about Armenia's role in the silk trade, scholars developed a vision of the routes in which "a network of cities [were] strung like beads on a string of infrastructure, tautened at either end in accordance with the desires of distant urbanites in Venice and Guangzhou."[7] Such a picture is, to be sure, a stark oversimplification of the complex nature of medieval trade networks in Armenia, which were both less urban and more integrated with local commercial markets than the prevailing picture allows.[8] Nevertheless, the image gleaned from the medieval sources has had currency beyond studies of medieval Armenia. It has also been retrojected into deeper antiquity, where it provides a framework for understanding the economic importance of Armenia as early as the Hellenistic period. Thus, Garsoïan writes, "the considerable number of Greek coins dating from [the Hellenistic period] found on the territory of the Armenian Republic testify to the prosperity brought to this region by its transit trade."[9]

Among scholars specializing in the region, then, there is a tenacious sense that the Armenians must, somehow, have played an important role in trade – even if the precise nature of that role remains hazy. This impression can be traced, in part, to Strabo's descriptions of the South Caucasus, which included the statement that "[the Aorsi in the North Caucasus] were thus enabled to transport on camels the merchan-

3 Luttwak 1976, 24; Sherwin-White 1984, 337. See a fuller perspective on Luttwak in the broader context of Mesopotamia in Gregoratti, ch. 10, I, this volume.

4 On which, see Traina 2021a.

5 Luttwak 1976, 24. Also note the inaccurate geography of Armenia and the rest of the South Caucasus in Luttwak's map 1.2.

6 See the classic work of Manandyan 1954, with its English translation, Manandyan 1965.

7 Franklin 2021, 45–46.

8 See the discussion in Franklin, particularly her case study of local-scale processes in the Kasakh Valley (2021, ch. 4).

9 Garsoïan 1997, 49.

dise of India and Babylonia, receiving it from Armenians and Medes."[10] In the picture painted by Strabo, the Armenians are positioned quite literally as the middlemen who facilitated the movement of goods from the Near East and South Asia into the Pontic Basin and continental Europe. According to Strabo, the Armenians were tremendously wealthy, likely based on this trade as well as access to natural resources including gold mines.[11] But, outside of specialist circles, there has been relatively little attention paid to Armenia's role in trading activity in antiquity, with the region's political role in Roman-Parthian jockeying receiving far more detailed attention.

Of course, however compelling one finds the idea of a centrally networked Armenia, one must also concede that, according to most reconstructions of 'Silk Roads' in antiquity that have been proposed since the time of von Richthofen's early investigations, the routes did not, in fact, pass through Armenia or the South Caucasus.[12] The main routes west of Central Asia are said to have run south of the territory, along the so-called Great Khorasan Road toward Ekbatana and then into Mesopotamia. The 'northern Silk Route' posited in some reconstructions, running from Central Asia and terminating along the coast in the North Pontic, involving steppe pastoralists, is generally conjectured to have passed to the north of the South Caucasus.[13] In this way, the South Caucasus can be understood, from the perspective of western historiography, as a characteristic example of a space that has been excluded from meaningful participation in the Silk Road discourse.[14]

I.2 A Roadmap for Understanding Armenia's Position in Global Systems

What, then, can the case of Armenia add to our contemporary understanding of a connected Eurasian world zone that we try to build, beyond the Silk Roads? This chapter takes as its project to answer that question through an exploration of how these two facets of Armenia – its frontier-ness and its connective potential – were in fact deeply intertwined. In keeping with this volume's theoretical approach to frontier zones as spaces of innovation and opportunity, but also risk, I argue that a unique flexibility emerged in Armenia, at least in part because of the overlapping frontiers.

10 Strabo 11. 5. 8, trans. H. L. Jones.

11 See Strabo 11. 14. 10: "Of the riches and power of this country, this is no slight proof, that when Pompey imposed upon Tigranes, the father of Artavasdes, the payment of 6,000 talents of silver, he immediately distributed the money among the Roman army, to each soldier 50 drachmae, 1,000 to a centurion, and a talent to a Hipparch and a Chiliarch," trans. H. L. Jones.

12 There are of course problems with envisioning a fixed system of such roads, see Weaverdyck, vol. 1, ch. 7, 271–274; Weaverdyck and Fabian, vol. 2, ch. 8.A, 365–366.

13 E.g., the set of connections suggested Yao 2012, fig. 1.

14 In this sense, it is in some ways similar to the wider Eurasian Steppe as discussed in von Reden, ch. 1, this volume.

The contours of this flexibility emerged out of the preexisting local conditions in the space and the networks that developed over time here. With their help, political authorities in Armenia were able to keep their tenuous hold on sovereignty despite tremendous imperial pressure.

In what follows, I build an argument about Armenia within global circuits that considers (economic) connectivity inside of Armenia as well as between the area and its neighbors. Throughout, I loosely use the categories of *economic actors* and *tools* developed in volume 2 to disaggregate this behavior.[15] The examination begins (sec. II) with a brief exposition of the historical development of Armenia as a polity that was deeply entangled with both its Iranian and Mediterranean neighbors, which sets the stage for the patterns of socioeconomic interaction that are reflected in the space's trajectory. To that end, section III considers the most explicit evidence for the region's economic activity, with a particular focus on coinage and the phenomenon of local minting. This exploration demonstrates the multiple roles that coinage could have in both constructing and supporting connectivity, economically and ideologically. Then, in section IV, I turn to local sociopolitical frameworks that both participated in and capitalized on this connectivity, ranging from dynastic elites and the inner 'court' to the phenomenon of urbanism. Next, in section V, we turn our attention to the consumptive and particularly the productive capacity of Armenia itself, which reorients our view on this space to see it not simply as a place through which goods moved, but rather as a hub in its own right. Section VI, then, considers evidence for merchants and trade routes in Armenia, adding a spatial dynamic to our discussion of the various networks of connectivity at play here. And, finally, the chapter ends with a consideration of Armenia's relationships to its northern neighbors – an oft-overlooked component of the regional system.

The result is a treatment of Armenia that stresses its unique position within global networks. This attention to positionality situates the region at the nexus of a number of sociocultural and political spheres, which provided the 'raw materials' for constructing diplomatic, social, and trade relations (to name just a few) that could be exploited as local actors here reached beyond their borders. And 'reach beyond their borders' they most certainly did: Armenia's growing involvement in wide-scale international affairs over the course of the Hellenistic and Roman-Arsakid periods testifies to Armenia's participation in the marked upswing of connectivity that we see across Eurasia in this period.

II Imperial Neighbors and Armenia's Emergence

Since our focus in this chapter lies not with the political dimensions of Armenia's connections, but rather with its economic ones, the following introduction to regional

15 See Fabian vol. 2, 61–62; Weaverdyck, vol. 2, 339–340.

history provides only a cursory treatment of issues that are often both complex and poorly understood. The goal is to provide familiarity with the general historical progression and to set the backdrop for the internal developments discussed in this chapter, as this political history set important conditions for Armenia's development, including economically. At the same time, these political dimensions are also critical for understanding the network positionality of Armenia, as they served as a key factor shaping other dimensions of connectivity.

The most natural starting point for a narrative of Armenia is the rise of the Achaemenid Empire, which spread its power widely across the Zagros, deep into Anatolia, and all the way up to the Greater Caucasus Mountains.[16] This period saw the establishment of long-running patterns of interaction that would shape life in the highlands for centuries to come. After the collapse of the Achaemenid Empire, rule in Armenia can be divided into a series of dynastic periods, as well as several intermediate periods of less solid control. Although the following description, as the chapter more generally, will use the standard dynastic divisions (e.g., Yervandid, Artašēsid, Aršakuni), these descriptions are not without problem.[17] Chiefly, they tend to reflect retrospective perspectives on the development of rule. It is not clear to what degree these were meaningful divisions for residents in the highlands, nor do they reflect the contentious, and often fractious, nature of local authority.

II.1 Sources for the History of Armenia

Before we get to that historical narrative, we need to consider the evidentiary basis that this exploration rests on. In reconstructing the history of the South Caucasus, beyond the material and documentary evidence (including built architecture, numismatics, ceramics, inscriptions, etc.), we have two primary bodies of literary evidence in the form of transmitted texts.

The first come from the Graeco-Roman tradition, and – outside of a small number of ethnographic or natural historical descriptions[18] – tend to detail the place of Armenia in the context of the long-running armed conflicts that unfolded on the Hellenistic and then Roman-Arsakid borders.[19] These present the Mediterranean perspective on this region, and provide an episodic view of the space, leaving us largely in the dark about local events in periods when they did not have bearing on external, primarily Roman, political or military interests.

16 Starting the story with the Urartians is not, however, uncommon; see, e.g., Payaslian 2007, 5.

17 See Khatchadourian 2007, n. 1 on this point.

18 Strabo and Pliny the Elder are both valuable sources for Armenia, see, e.g., Traina 2017. For a comprehensive treatment of Armenian history with detailed discussion of the sources, see Chaumont 1985; 1976.

19 See the contributions in Gazzano, Pagani, and Traina 2016 for an overview of part of this textual tradition.

The second comes from the local chronicle traditions of Armenia and Georgia, particularly the text attributed to Movsēs Xorenac'i's, *History of the Armenians* (MX, *Patmut'iwn Hayoc'*), but a wide range of other texts as well.[20] It is impossible, of course, to use the medieval accounts preserved in MX and other chronicle texts as straightforward historical testimony.[21] Composed far after the events described within and subject to significant layers of editing and rewriting in subsequent periods, they offer only shadowy hints at historical events. Particularly problematically, some of the key passages from MX are riddled with chronological inconsistencies, with some events from the late Hellenistic period projected into the second century CE.[22] Nevertheless, the accounts offer important clues about how local medieval societies understood their own pasts and contain kernels of history that survived their complex transmission chains.[23]

A key difficulty lies in trying to integrate the historical knowledge that can be gleaned from this source tradition with the far more positivistic, but also distant and biased, classical texts. The attempt, however, is worthwhile, particularly when combined with archaeological evidence to give more dimension.

II.2 The Achaemenid Period in the South Caucasus

The rise and spread of Achaemenid power that brought the Armenian highlands into the imperial system occurred in the context of extensive reorganization across the territory in the wake of the collapse of the Early Iron Age Urartian Empire centered around Lake Van in the sixth century BCE.[24] Politically, not just Armenia but also much of the South Caucasus then came to be incorporated to one degree or another into the satrapal system of the Achaemenid Empire.[25] The date of the incorporation of the region into the Achaemenid sphere is not fully clear. There is reason to believe that a victory over Urartu can be dated to 547 BCE,[26] while Darius I's campaign against

20 Thomson 2014 for an overview.

21 For example, see the discussion of the use of a roughly parallel text from the Georgian tradition in Rapp 2014, 1–30 and the brief discussion in Schottky 2012, 242; Traina 2019, 23–24.

22 E.g., Movsēs Xorenac'i (MX) 2.37 and following, on which, Toumanoff 1963, 283–284.

23 See also Traina 2021a for a recent call to reinvigorate interaction with these sources. For an example of this in the context of K'art'li, see the study of Schleicher 2021, especially ch. 1.

24 On the structure of Urartian power, see, e.g., Zimansky 1985.

25 Although the internal and external borders of Achaemenid power are fuzzy, as our reconstructions rest on an eclectic range of sources, chiefly Achaemenid Royal Inscriptions; Herodotus' list of tribes; and later tribe lists written by the Alexandrian historians. The *dahyu* (*satrapy*) of Armenia was of central importance, including much of the Armenian plateau as well as the middle Kura (Khatchadourian 2016, 124), with the lower Kura perhaps forming the northern edge of the neighboring *dahyu* of Media, though there are debates about this: compare the positions discussed in Jacobs 2000.

26 See discussion in Rollinger and Kellner 2019.

the Scythians in 512 BCE would have brought even more Achaemenid presence to the region.[27]

The Achaemenid period brought not only new political structures to the space, but also a range of new material practices. In the areas to the north of Armenia, the markers of Achaemenid spread are particularly visible in the form of massive administrative buildings that find their closest parallels in the Achaemenid heartland.[28] In Armenia, where preexisting models of political authority based on the Urartian Empire perhaps had longer echoes, the quantity of explicitly satrapal architecture is more limited, but the traces of new material practices are nonetheless visible, particularly in the realm of luxury and elite goods.[29] It seems likely, nevertheless, that both the material consequences and the later memory of Achaemenid rule in this territory had significant ramifications for later development.

II.3 Post-Achaemenid Transformations

The two-and-a-half centuries following the collapse of Achaemenid control ca. 330 BCE are a murky period for regional history in the South Caucasus. However, in broad strokes, the collapse sparked a new phase of regional political-authority construction, which would eventually lead to the rise of a number of polities, including most importantly Armenia, centered on the highlands of what is today the Republic of Armenia and southeast Turkey, along with K'art'li (known in the classical corpus as Caucasian Iberia) and Caucasian Albania to the north. The story of local political consolidation is often framed as an immediate post-Achaemenid process, although the tempo of the developments across the region in fact seem to be rather varied, such that it would be incorrect to see all political consolidation as a direct product of the Achaemenid period.[30] Meanwhile, to the south of Armenia, in the Zagros belt and its foothills in Northern Mesopotamia, a similar process was unfolding, although in a context of more direct interaction with Alexander the Great and his successors. Of central importance to Armenia were the polities of Sophene and Kommagene, whose dynasts were often closely related to or direct family members of those in Armenia.

II.3.1 Yervandid Armenia

As noted, the end of the Achaemenid period brought, at first, few changes to internal Armenian power structures: The first dynastic house to rule Armenia in the Hellenis-

27 For this interpretation of the campaign, see Jacobs 2000.

28 Babaev, Gagoshidze, and Knauß 2007; Knauß 2000; Knauß, Gagoshidze, and Babaev 2013.

29 Khatchadourian 2016.

30 For treatments that are cautious about the process of development, see on K'art'i, Meißner 2000; and on Albania, Bais 2001; Fabian 2020.

tic period was, in fact, a continuation of the line that had ruled Armenia as a *satrapy* in the late Achaemenid period, known as the Yervandid (Orontid, Eruandid) dynasty.

The Yervandid dynasty took power in Armenia in the wake of Alexander's victory, led by Mithranes, the pro-Alexander son of the former Achaemenid *satrap* in Armenia, who was given Armenia in recognition of his support of Alexander.[31] A dynastic line for this fairly shadowy family can be traced over the course of the next centuries, but with many points of raw conjecture.[32] Broadly speaking, the local Yervandid rulers appear to have been semiautonomous, but politically tied to the later Seleukid kingdom. However, the formal status of these Armenian dynasts and the nature of their arrangements with their kinsmen in Sophene and Kommagene and the wider Seleukid world is not entirely clear.[33]

II.3.2 Artašēsid Armenia

In any event, we know that Armenia was granted independence after the Treaty of Apamea between the Roman and Seleukid Empires in 188 BCE, and that rule of Armenia was given to a new king, Artašēs.[34] Although Artašēs called himself an Yervandid in inscriptions that will be discussed shortly,[35] following both the classical and Armenian textual traditions, he is seen to have been the initiator of a new dynasty, the Artašēsid (Artashesid) line, which would rule Armenia until 12 CE. The traditional narrative depicts Artašēs as an effective consolidator of Armenian territory, such that under his rule, the territory extended all the way to the Caspian Sea.[36] However, in reality the first century or so of Artašēsid rule is poorly reflected in the classical textual tradition and confusingly telescoped in the Armenian one, while archaeological sources are also sparse, limiting our ability to discuss the developments in detail.

We find firmer footing at the beginning of the first century BCE, when Tigranes II, known as Tigranes the Great (r. 95–56 BCE), came to power. Tigranes, who had been raised at the Arsakid court as a hostage, came to the throne in a period of regional instability, as infighting distracted the Parthian court. Benefiting from the instability, Tigranes II first turned his expansionist eye to neighboring Sophene, which he annexed within the first year of his rule. Through marriage diplomacy, he forged an alliance with and secured peaceful relations with Mithridates VI of Pontos (120–63 BCE), who was consolidating his power around the Black Sea coast. Then, in the wake of the death of the Arsakid king Mithridates II in 91 BCE, Tigranes moved against the Arsakid

31 Lang 1983.

32 Toumanoff 1963, 277 ff.

33 See, e.g., Traina 2021b.

34 Strabo 11. 14. 15: "[Artaxias and Zariadris] joined the Romans and were ranked as autonomous, with the title of king," trans. H. L. Jones.

35 Sec. III.1.1 below.

36 Manandyan 1965, 44.

Empire itself, rapidly conquering territories from the gates of Ekbatana across the Zagros highlands. Having become a regional power broker of considerable scale, he was offered control of Syria in 83 BCE by local authorities, who appear to have seen him as a more stable option than the rapidly fracturing Seleukid Empire.[37] The sources disagree about how deep into the Levant his rule extended,[38] but particularly consequential was the capture of Antiocheia on the Orontes, one of the undisputed capitals of the Hellenistic world.

Tigranes' eventual rapid downfall was rooted in the story of Mithridates VI, whose aggressive expansion attracted Roman attention. Although Tigranes II appears to have tried to stay out of the fighting,[39] he eventually decided to harbor the fugitive king Mithridates at his capital Tigranocerta in 71 BCE.[40] The Romans moved decisively against his royal seat and won a quick victory that ended with Tigranes ejected from Tigranocerta and forced to retreat further into the highlands. By the mid-60s BCE, Tigranes found himself facing not only an emboldened Rome but also a newly aggressive Arsakid Empire. The final blow came in 66 BCE when, having been defeated by Pompey the Great, he was stripped of all of his territorial expansions, although he ruled Armenia itself as a "friend and ally of the Romans" for another decade.[41]

The following half-century was filled with colorful episodes of Armenian triangulation between the Roman and Arsakid Empires. The Armenians, for example, played a role in the disastrous Roman defeat at Carrhae.[42] Later, Armenian hesitancy in supporting military efforts under Marc Antony confirmed the sense that the Armenians were not trustworthy allies, with Artavadzes and his family eventually taken hostage by the Romans and the king executed.[43]

II.3.3 The Rise of the Aršakuni

This was the background that greeted the Roman emperor Augustus. Throughout his rule and into the Julio-Claudian period, the Romans sought repeatedly, and with little

37 Justinus *Epitome* of Pompeius Trogus (Just. *Epit.*) 40. 1. 1–3.

38 Josephus *Antiquitates Judaicae* (Joseph. *AJ*) 13. 16. 41; *Bellum Judaicum* (*BJ*) 1. 5. 3 to Appian *Syriake* (App. *Syr.*) 11. 8. 48.

39 Following the account of Manandyan 1963.

40 E.g., Appian *Mithridateios* (App. *Mith.*) 12. 82, 84; Plutarch *Life of Lucullus* (Plut. *Luc.*) 19. 2; 21. 1–2, 7–9. For a reevaluation of this episode and particularly the subsequent battle, Olbrycht 2021.

41 Cassius Dio (Cass. Dio) 36. 53. 6.

42 The Armenian king, Artavadzes, had promised to send troops to support the Romans, but following a Parthian incursion into Armenia, Artavadzes was unable or unwilling to send his cavalry. Instead, he entered into a marriage alliance with the Parthian king – a marriage that the two kings were celebrating in the Armenian capital when news of the Roman defeat at Carrhae, along with Crassus's severed head, appeared as a stage prop in a performance of Euripides' *Bacchae* (Plut. *Crass.* 33).

43 Cass. Dio 49. 39. 3–5.

long-term success, to install Armenian kings who were favorable to them, often drawing their candidates from local ruling families.[44] Despite some successes, the first half of the first century CE in Armenia was marked by a wildly unstable sequence of kings installed by either the Parthians or the Romans, most of whom ruled for only a handful of years.[45] The first century also saw the start of periodic wide-scale raids perpetrated by North Caucasian populations, generally referred to as the Alans in the texts, who, supported by local allies, carried out attacks on both Roman and Arsakid territories, as well as occasionally the Armenians.[46] Thus, would-be Armenian rulers faced a complicated set of pressures that emanated both from the major Mediterranean and Iranian empires and from their own immediate neighborhood. Out of this confusing period arose the final dynastic family of the pre-Christian period: the Aršakuni (Armenian Arsakid).

The seminal moment of this new phase in terms of international power games came in 66 CE, when Nero crowned the Parthian prince Tiridates II as the king of Armenia.[47] This came after a difficult period for Roman interests in the East[48] and resulted in a unique political situation for Armenia, which has been termed a cosuzerainty of Rome and Parthia.[49] Under this agreement, Arsakid kings had the right to name the Armenian king, who then had to be crowned by the Roman emperor. The result was an Armenia whose connections to the Parthian power structure were no longer mere hints, but had become explicit.

The system was also not entirely successful in maintaining regional stability, evidenced by Rome's short-lived creation of the province of Armenia (114–118 CE).[50] For these few short years under the emperor Trajan, Armenia became a province of the Roman Empire. Despite the generally hands-off Roman approach to the space, this was neither the first nor the last time that a Roman general or emperor set his sights on gaining direct control over Armenia. In the late first century BCE, it was Antony who appears to have begun down to path toward annexing the territory, although he never carried out the plan in full, and his intentions have been debated.[51] Then, in the third century CE, Caracalla also made moves toward an annexation of Armenia, although again it was not actually brought to fruition.[52]

In contrast, Trajan's successful, if short-lived, annexation of Armenia, which is attested in both literary and epigraphic sources,[53] did actually briefly bring the space

44 Ariobarzanes, a prince from Media Atropatene (r. 2 BCE–6 CE) is one such example.

45 Chaumont 1976.

46 On the Alans and their 'incursions,' see Bosworth 1977; Halfmann 1986; Tuallagov 2014.

47 On the symbolism of this, see Clark 2021.

48 E.g., the defeat of Roman troops at Rhandeia.

49 Ziegler 1964, 69–70.

50 Cass. Dio 68. 19. 2–5, 20. 1–3.

51 See Patterson 2015 for an overview of the debate as well as an argument for Antony's intentionality in this matter.

52 Patterson 2013.

53 For the epigraphic evidence, see Speidel 2021.

directly into the Roman system, if only for a moment.[54] After the failure of the province, we find few concrete details about local rulers for most of the rest of the second century CE, except for on the rare occasions when Armenian affairs become central to Roman imperial affairs, for example in the late second century CE, when Roman military action against the Arsakid Empire once again brought troops to the region under the reign of Commodus.[55]

II.4 The Ambiguity of Armenia: Enduring Political Frontiers

As Traina has recently reminded us, the people of Armenia were discussed in the classical corpus as an *ambigua gens*,[56] an 'ambiguous people,' a term which he argues we should understand as reflecting most specifically Armenia's ambiguous allegiance with respect to either Rome or Iran.[57] This *ambigua gens* carved out a space for themselves along a fractious political frontier, and rather than following the course of so many other frontier polities – eventual absorption into the more powerful neighbor – they managed to maintain a tenuous hold on autonomy.

It is truly striking that, throughout this period stretching from the rise of Armenia in the Hellenistic period through the Roman-Arsakid proxy conflict in later centuries, Armenia managed to remain functionally independent with a few brief exceptions, despite the intense interest of both Roman and Iranian authorities in this space. This political ambiguity had a range of consequences for local life, which will be more fully explored in the rest of this chapter. But, put briefly, since the space was never comfortably, durably, and unambiguously integrated into a neighboring system, regional practices can in some cases differ considerably from norms in similar spaces that experienced tighter integration. At the same time, the fact that the Armenians had not just one imperial power to alternately collaborate with or push against, but indeed two, created a high degree of internal diversity, as different segments of society interacted with the 'Iranian' and 'Mediterranean' spheres. This, furthermore, rewarded (and therefore privileged) those who were in a position to develop flexible networks that were both robust enough and diverse enough to react to changing local circumstances. It is precisely these sorts of networks that are likely to be sites of innovation, given their diversity and the need for the constant evolution of new strategies for defending, maintaining, or improving one's position. In this way, Armenia offers a classic example for the broad ramifications of frontier entanglements.[58]

54 See Section VI.4 for some of the consequences of Roman military presence in the region.
55 Cass. Dio 71. 14; *Corp. Inscript. Lat.,* III, 6052.
56 Tacitus *Annales* (Tac. *Ann.*) 2. 56. 1.
57 Traina 2021a, 15.
58 As discussed by von Reden, ch. 1, and Hoo, ch. 2, this volume.

III The Local Economic Framework

Now, having situated the historical development of Armenia within both temporal and spatial contexts, we turn to the question of the economy. The idea of economic strength is inherent in Graeco-Roman perceptions of Armenia: One of the repeated tropes in descriptions of Armenia in the historical corpus concerns the wealth of the territory, which has a long history as a site of gold mining, although the scale of this activity in antiquity is unclear.[59]

Wherever it may have originated, the clearest figures to quantify this wealth in the period under discussion come from the time of Tigranes II and are reported by Plutarch. According to him, Lucullus took 8,000 talents of coin from the treasury when he captured Tigranocerta in 69 BCE,[60] with Tigranes forced to pay another 6,000 talents to Pompey in 66 BCE.[61] Although these episodes both came in the aftermath of Tigranes' expansion of the Armenian state, and likely reflect capital that he himself had captured in the course of his conquests, they nevertheless testify to the considerable raw wealth that could be concentrated in this borderland state.

What, then, were the fiscal systems that surrounded the management of this considerable wealth? There is a lack of evidence for discussing the fiscal regime of Armenia in a meaningful way. The nature of the taxation regime or the mechanisms of its collection are impossible to reconstruct given current evidence. However, if we turn to the more restricted question of numismatic activity, it becomes possible to describe, at the very least, the region's monetary networks. In what follows, I offer a survey of the limited evidence for the economic situation in Armenia generally, beginning by looking at a few tantalizing pieces of evidence for fiscal administration. Then, we turn to the question of coin use in the region. Here, one can consider two types of numismatic activity: the circulation and use of coinage in Armenia generally, and the minting of coinage by Armenian dynasts. This discussion provides direct evidence for the monetary networks in which Armenia was participating, and proxy evidence for the economic priorities that underpinned state production of coinage.

This exploration provides the first concrete example of one of the flexible networks described in the introduction, in this case created by a powerful dynast in this frontier region, Tigranes II. The example demonstrates how even coins – material objects with relatively specific and self-explanatory purposes – could be operationalized in extremely specific ways, and within particular networks, in the frontier.

III.1 Financial Administration in and of Armenia

To speak broadly about the details of financial administration in Armenia in the period discussed in this chapter is nearly impossible. On fundamental issues such as

59 E.g., Kunze et al. 2011; Wolf and Kunze 2013.

60 Plut. *Luc.* 29. 3.

61 Plutarch *Pompey* (Plut. *Pomp.*) 33. 4.

the processes of taxation, the sources are nearly silent. There are, for example, a few faint hints of evidence that suggest the role of the king in the allocation of land as well as the presence of wealthy temple estates, but the mechanism behind these processes and what they meant for tax/rent income is fully unclear.

Little more can be said for periods when Armenia became part of the Roman Empire, although it is clear that, following Trajan's conquest and as was typical in the Roman world, a financial administrator was assigned to bring the territory into the Roman system. The clearest evidence for this comes in the form of a single inscription concerning the career of a Roman official whose name has been lost, but who is believed to have been the later prefect of Egypt, T. Haterius Nepos. According to the inscription, he had also acted as the procurator of "Armenia maior" during its brief existence.[62] No further information exists concerning the nature of his work in the highlands, but his appointment demonstrates that Rome was following the general course of affairs concerning newly incorporated territories in this period and suggests that taxes collected locally were being redirected to Rome, for this short interlude in any event. A possible echo of this system is recalled in MX 2. 48, where the Armenian king is said to have had to pay double tribute to the Romans, who arrived on the borders of Armenia.[63]

Land and Record Keeping

Considering the broader issue of landholding in Armenia, we find some earlier evidence for the active role of Armenian kings in land-right issues. The evidence comes in the form of Aramaic border stele from the time of Artašēs I, which may correspond to a practice attested in MX, whereby the king delineated the borders of specific towns and estates with stone markers.[64] This has been interpreted as a way of minimizing border conflicts between those with claims to the lands.[65] Other possible evidence for the continuation of this practice comes from a Greek-language inscription from either the first or third century CE, which describes how a king Tiridates (thought to be either Tiridates I or Tiridates III) granted a certain territory to a particular family.[66] Much about the inscription is unclear, but for our purposes, it is sufficient to note that it continues and expands on the formulation of the older Aramaic boundary markers, adding in the further dimension of a local (elite) family as the recipient.

62 *CIL* XI 5213 = *ILS* 1338 (Fulginiae). See discussion in Speidel 2021, 137–139.

63 This is part of the passage of MX that contains significant chronological confusion, such that the king named is Artašēs.

64 On the stele, Perihanân 1971; Khatchadourian 2007. MX 2. 56.

65 Russell 1987, 96.

66 SEG 40.1316. There are significant problems surrounding this inscription. See Canali de Rossi 2004; Trever 1953, 273; Vinogradov 1990, 558–559.

Excavations at the site of Artašat (one of the capital cities of Armenia discussed at more length in sec. IV.3.2) have also uncovered a tremendously large cache of between 6,000 and 8,000 bullae, which deserve mention here.[67] The bullae come from several areas of the site, but the largest concentration comes from a structure near one of the city gates, which was dated to between the second century BCE and the first half of the first century CE. Recent work on this material suggests that it was likely related to a public archive of some sort.[68] The use of seals in recording administrative transactions was widespread in both the Seleukid and the Arsakid Near East, and the practice is also attested in the eastern Caucasus.[69] The presence of a public archive of this significant scale at Artašat is one small, but meaningful, data point to demonstrate the clear Armenian understanding of the details of normative administrative practice in the broader Near East and – more than that – their adoption of these practices. Unfortunately, until the corpora of sealings are studied more completely, the precise economic relevance of this material remains unclear.

III.2 Coin Use

Turning now to our best body of evidence for Armenia's economic structures, we consider numismatic material. In order to understand the developments in the Hellenistic period, we must first take a step back and consider coinage in Armenia in preceding centuries. There is clear evidence for the circulation of, and indeed the minting of, coinage in the parts of the South Caucasus dating back to the sixth to fifth centuries BCE, although the activity was largely limited to the Black Sea circulation network, for instance in costal Kolchis, several types of silver issues were minted, while imported coins also are attested.[70]

In contrast, from the inland highland reaches, and from the territory of modern Armenia specifically, a single poorly attested Achaemenid coin find from the city of Yerevan[71] as well as a small handful of Athenian *tetradrachms* and silver fractions from Miletus[72] represent the only coinage known from the area from before the fourth century BCE. When we think of the economy of the Achaemenid Empire, where both coined and weighed silver were used in state transactions, the *satrapy* of Armenia appears to have been aligned more closely to the weighed-silver than coined-silver tradition, despite its proximity to Asia Minor, a center of coined transactions.[73]

67 Khachatryan 1996; Manoukian 1996.

68 Schreiber 2021.

69 Babaev 1966.

70 Fabian 2019. For detail on the early coinages of the coast, see Tsetskhladze 1993; Dundua and Lordkipanidze 1983.

71 Pakhomov 1926, vol. 1, n. 1.

72 Mousheghian, Mousheghian, and Depeyrot 2000, 60, 69.

73 A better parallel for the Armenian situation comes from Media, where hoard evidence suggests a similar reliance on weighed silver; see Vargyas 2008. On Armenia, see Khatchadourian 2016, 128–135.

III.2.1 Imported Coinage in the Hellenistic Period

As with so much else in the Armenian highlands, the rise of the Hellenistic world and Armenia's increasing involvement with this *oikoumene* brought changes, in this case, a slow but steady surge of coinage into the region. Nevertheless, the number of finds of imported Hellenistic coins dating to the first century and a half or so after Alexander the Great in the Armenian highlands remains rather limited.[74] Evidence for the gradually widening scope of monetary interactions comes from Seleukid *tetradrachms* of the second century BCE, which appear in the territory of modern Armenia in hoards as well as stray finds and other archaeological contexts.[75] The gradual increase of imported coinage over the third and second centuries BCE suggests that the rise of coin use in Armenia was not an immediate consequence of contact with the Hellenistic states, but rather the product of a longer process of adoption and reconfiguration.

III.2.2 Artašēsid Minting Activity

Clear evidence for the internalization of the idea of coinage and its intentional deployment can be seen in the decision of Armenian Artašēsid dynasts to begin minting their own coinage, a development that occurred in the late second century BCE. Artašēsid coinage is quite recognizable on account of the specific type of tiara worn by the monarch and has been studied in a series of publications since the 1960s. These fundamental publications, however, have relied mostly on unprovenienced finds and coins from 'hoards' assembled by dealers for the market and which therefore do not reflect actual patterns of coin cocirculation, a fact which complicates our ability to date and understand the coinage.[76]

There are controversies about the date of the first Artašēsid coinage. In earlier literature, scholars generally attributed the earliest known Artašēsid coinage – a series of four silver types – to Tigranes I, a figure of unclear historicity, but according to the traditional chronology, said to have ruled ca. 123–96 BCE.[77] This attribution,

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74 See references in Mousheghian, Mousheghian, and Depeyrot 2000.

75 The closing dates of the hoards containing these second-century coins (e.g., the Sarnakounk and Artašat 1972 hoards) are often considerably later, however, complicating our understanding of the monetary situation on the ground in the second century BCE.

76 This is true, for example, for the material that Bedoukian worked with in assembling his groundbreaking publications on Artašēsid coinage, Bedoukian 1978; 1987.

77 See Foss 1986, 48–50 on some of the issues surrounding the coins attributed to Tigranes I. There are, furthermore, two coins that are debated in the scholarship, which have been used to argue for an even earlier start of Artašēsid minting, before the time of Tigranes I. These include a gold coin attributed to Zariadres, a Seleukid *satrap* who ruled in Sophene, and a silver one of Artaxias I (e.g., Marciak and Wójcikowski 2016, 89 n. 92). The former has, however, has been considered by other scholars to have been a forgery (Bedoukian 1964), while the attribution of the second is unclear.

however, has recently been questioned quite extensively, with a range of later dates suggested, generally in the end of the first century BCE.[78]

In any event, the most complete and best understood numismatic evidence for coinage minted by an Armenian dynast comes from the time of Tigranes II (r. 95–55 BCE), when Armenian territorial control reached its maximum extent, stretching all the way from the Caucasus to Phoenicia. In the course of his conquests in Syria and Phoenicia, Tigranes came to rule over cities such as Antiocheia and Damascus. These cities, with their own active mints and coin-production traditions, appear to have had an influence on the physical coins produced under the Armenian dynast, from iconography to denomination systems. Moreover, the interaction also appears to have affected practices of coin use within Armenia, such that not just the form of coins but also their social functions changed. One particular example of this comes from the increasing use of copper coinage in the Armenian heartland, although the phenomenon is difficult to accurately date.[79] The silver and bronze issues of Tigranes II therefore provide a particularly interesting opportunity to consider the ramifications of state expansion on the use and deployment of the economic tool of coinage within Armenian space.

Tigranes minted a variety of coins at a range of mints, both in his Armenian heartland and in the newly conquered territory of Northern Mesopotamia and Anatolia. An examination of a few of those coins gives some purchase on the roles that they played in Tigranes' fast-expanding state. One type (fig. 1) is a *tetradrachm* of the so-called Royal Title type (ΒΑΣΙΛΕΩΣ ΤΙΓΡΑΝΟΥ).[80] These coins are generally believed to be from the mint of Antiocheia and are the most common of Tigranes' *tetradrachms*. It is worth noting the extremely distinctive portrait style that Tigranes used for his self-presentation, wearing the Armenian Tiara, despite the many features of these coins that represent continuations from earlier Hellenistic models. Based on the large number of dies known for this type, it seems clear that it was struck in very large quantities.[81] We can compare this tetradrachm to one of Tigranes' *drachms* (fig. 2), once again with the characteristic portrait style. This is of the Imperial Title type with the legend ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΤΙΓΡΑΝΟΥ, as are the vast majority of *drachms*; most speculate this means they were minted in Armenia, but see also discussion on overstrikes below. Many of the *drachms* have series of letters of contested meaning, which might have been regnal years. Based on findspots of the coins, it is thought that the *drachms* were more popular in Armenia itself, whereas the *tetradrachms* were more popular in the Levant.[82]

78 Nurpetlian 2010, 134–137 suggests Tigranes III; see also Foss 1986; Nercessian 2006.

79 See discussion below on the civic issues of Artašat and the controversies surrounding their chronology.

80 As opposed to the Imperial Title type ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΤΙΓΡΑΝΟΥ, which are quite rare and are often associated with mints in Armenia itself; see Nurpetlian 2010, 123; Bedoukian 1968, 53–54.

81 Nurpetlian 2010, 124.

82 Nurpetlian 2010, 125–126.

Fig. 1: Silver *tetradrachm* of Tigranes II, 83–69 BCE, Antiocheia. Obv. Head of the king, facing right. Rev. Tyche seated right, holding palm over figure of Orontes. Diameter 26 mm, 15.79 g. ANS 1977.158.723. © American Numismatic Society.

Fig. 2: Silver *drachm* of Tigranes II, Tigranocerta. Obv. Head of king, facing right. Rev. Tyche standing right, holding a palm over figure of Orontes. 4.128 g. ANS 1944.100.62299. © American Numismatic Society.

Fig. 3: Bronze coin of Tigranes II, 83–69 BCE, Antiocheia. Obv. Head of king, facing right. Rev. Nike walking left, holding wreath. Diameter 19 mm, 6.38 g. ANS 1944.100.76970. © American Numismatic Society.

Fig. 4: Bronze coin of Tigranes II, 83–69 BCE, Damascus. Obv. Head of king, facing right. Rev. Tyche standing left, holding cornucopia. Diameter 18 mm, 4.6 g. ANS 1944.100.78025. © American Numismatic Society.

Next, we have the bronzes (figs. 3 and 4). There are a variety of reverse images, which are thought to correspond to denominations, although this question remains complicated.[83] Of particular interest are the bronze coins of Tigranes II that are overstruck on issues of Aradus. The undertypes on the Aradian coins date at the earliest to 146 BCE and at the latest to 69 BCE, strongly indicating that Tigranes acquired these coins during his conquest, as his withdrawal from Syria took place in 69 BCE.[84] Why did he overstrike, rather than reminting? One theory is that they were minted in the course of military campaigns to pay soldiers, explaining the need for expediency. Interestingly, however, these coins bear the so-called Imperial Title, which has often been associated only with coins minted in the Armenian heartland. Thus, either that legend was used in a broader geographic area, or Tigranes transported a significant

83 Evidence for this comes from the bronzes minted at the Damascus mint, which seem to have been minted under fairly centralized control. The three types known each fall into a specific weight-band, suggesting that the type helped the user to identify the denomination, on which see especially Foss 1986.

84 Nurpetlian 2010, 156 for an overview of the issues surrounding the overstrikes.

number of these relatively low-value coins across many hundreds of kilometers of mountainous terrain, only to countermark them there.

Considered broadly, Artašēsid coinage shows the gradual expansion of the numismatic habit in Armenia, while Tigranes' multitude of issues pinpoints a particular period in which it came to the fore. Through this, one can demonstrate that, certainly from the first century BCE onward, Armenia was able to sustain a monetary economy. This entire process has recently been described by Nurpetlian as Tigranes introducing "the concept of coinage to Armenia."[85]

III.2.3 Coinage after the Artašēsids

One of the striking features of local coinage patterns is just how quickly the flourishing of Artašēsid minting drops off. There is a decline in the volume of minting of imperial issues in the late Artašēsid and early Aršakuni periods, with a near-complete cesura between the late 70s CE and the early third century.[86] Foreign coins, however, continued to circulate in large numbers, including two types that came to dominate across the South Caucasus more broadly: early Roman Imperial *denarii* (chiefly the Gaius and Lucius [G-L] type of Augustus) and Parthian *drachms* of the so-called Gotarzes type, currently attributed to Artabanus II (ca. 10–23 CE), Gotarzes II (ca. 40–51 CE), and Artabanus III (ca. 80–90 CE).[87]

III.2.4 Coins as Connectivity

Above, I told an explicit story about the spread of the numismatic habit in Armenia and the expansion of this practice. However, there is another story that this coinage can tell, which has less to do with monetary practice itself, and more to do with the ways that coins *themselves* came to serve as a tool of connectivity in late Hellenistic Armenia.

In thinking about Tigranes' coins, we can identify a series of groups of individuals with whom the coins interacted. Through the choice of portrait iconography, we can understand him addressing a group who recognized and accepted this particular, and quite non-Hellenistic, representative style as an indicator of political authority.[88] On

85 Nurpetlian 2010, 147.

86 Kovacs 2016 for an overview; see Bendschus 2018 for recent discussion of some of the post-Artašēsid period.

87 For a recent overview of these coins and argument about the functions of the G-L *denarii* and Gotarzes-type *drachms*, see Sherozia 2008, 240.

88 On the frequency of this image across the Armenian and Anatolian highlands, see Marciak and Wójcikowski 2016.

the other hand, the features of the coins that are more conservative and connected to the cities in the Levant where we believe them to have been minted attest to the fact that these coins were also meant to communicate with people who knew and accepted that numismatic vocabulary. Finally, the fact that so many of these coins, minted in the Levant, ended up back in the South Caucasus attests to a local population in the highlands who was familiar enough with the idea of coinage to readily integrate this material.

What emerges, then, is a different understanding of the work that coins were doing: not just instruments for conducting transactions, but rather material objects that, because of their physical form, played a role in both defining and supporting the very network across which transactions occurred.

IV Sociopolitical Networks and Administrative Structures

We now move one step forward in the question of what those networks looked like and how they functioned outside of the restricted realm of coinage. To that end, the following examination of local social and political organization gives us a wider angle to consider the question of how these communities interacted with their neighbors, and what ramifications those choices had for the shape of economic behavior in the space. We begin with a consideration of dynastic families and the inner 'court,' move on to elite culture more broadly, and finally address the role of urbanism and other forms of infrastructural development.

IV.1 The Armenian Kings and the Court

We start our investigation at the top of local hierarchy, with the dynastic monarchs and their associated court system. As discussed in volume 2, political elites in premodern states assumed a number of central economic roles in the deeply personal bureaucracies of the time.[89] Sovereign rulers of course set the terms for high-level connectivity. But they also exerted considerable rule-setting pressure within the larger circle of elites.

As with many other elements of life in the highlands, the court culture that developed in Armenia appears to have drawn on a combination of local traditions, Achaemenid innovations, and Hellenistic patterns, eventually incorporating Arsakid devel-

89 Fabian and Weaverdyck, vol. 2, ch. 3.A: 72–73 for an introduction to this topic in the context of the Hellenistic and Roman worlds. On these themes generally in the Iranian space, see Taasob, vol. 2, ch. 3.B and Fabian, vol. 2, ch. 12.B.

opments as well. Of the myriad 'external influences,' the fundamental role of those emanating from Iran should be emphasized. In a paradigmatic statement, Thomson framed the relationship this way: "Originally the Armenians were not so much permeated by Iranian culture as examples of it."[90] This was perhaps nowhere more clear than among dynastic elites, and it shaped the fundamental conditions of the Armenian dynastic world.

IV.1.1 Dynastic Marriages in the Historical Record

At the very top of the administrative system, and helping to set broad conditions for Armenian political relationships, we find an aggressive practice of marriage diplomacy that appears to have been normal in the space. This practice tied the ruling family of Armenia into a tight network of peer aristocrats drawn both from major imperial contexts and from the pool of local authorities in the polities ringing Armenia.[91] We have a range of mentions of dynastic marriages from the Armenian historical tradition that may refer to the Hellenistic period, but they are very difficult to date. Most concretely, MX notes that King Artašēs gave one of his sisters to a King Mithridates, described as the *bdeašx*[92] of the K'art'velian marshlands, but who was probably one of the Pontic Mithridates,[93] demonstrating Armenia's close relationships with the Pontic space.

We are on firmer historical ground by the first century BCE, when a variety of foreign sources report Armenian–Iranian dynastic intermarriage, through which the Artašēsid dynasty came to be closely entwined with various Parthian Kings of Kings. A clear instance of this is attested in one of the Avroman parchment documents found in 1909, which mentions in passing that one of the wives of a Parthian king was Aryzate, the daughter of a king of Armenia.[94] She is thought to be one of the daughters of Kleopatra of Pontos and Tigranes, whose marriage had occurred in the context of the alliance between the Armenians and Mithridates.[95] Another of their daughters is said to have married into the Atropatenian ruling family.[96]

90 Thomson 2004, 373, discussed in de Jong 2015, 125.

91 For general treatments of this phenomenon, see Dąbrowa 2018. See also Schleicher 2021, 488–496 for the situation in K'art'li. An expanded discussion of the following section can be found in Fabian 2021.

92 Often translated as 'viceroy,' or following Rapp, as 'toparch,' this was an office attested in both Georgian and Armenian as well as in the Sasanian world. On the institution, Garsoïan 1989, 516–517; Hewsen 1988–1989, 1990–1991; Rapp 2014, 62–71; Sundermann 1989.

93 MX 2. 11. On the misunderstandings and conflations of the Mithridates in this passage of MX, see also Gazzano 2016; Mari 2016. The question of South Caucasus interaction with the Pontic kingdom deserves more consideration.

94 Dąbrowa 2018, 77–78 on debates surrounding the dating of this parchment. Luther 2018 proposes a later dating of the parchment.

95 Just. *Epit*. 38. 3. 2, 5.

96 Cass. Dio 36. 14.

A range of classical sources document a later Artašēsid–Parthian dynastic marriage between Tigranes the Younger and the daughter of Phraates III of Parthia (r. 69–57 BCE), which occurred in the context of internecine fighting between Armenian factions.[97] A later Armenian–Parthian union was between the sister of the Armenian king Artavasdes (r. 55–34 BCE) and Pacoros, the son of the Parthian king Orodes II (r. 57–37 BCE).[98] The wedding of these two was the staging ground for one of Plutarch's most striking scenes: the decapitated head of the defeated Roman M. Licinius Crassus used as a prop in a production of Euripides' *Bacchae*.[99]

Artavasdes had earlier betrothed one of his daughters to Deiotarus I, sitting on the throne in Armenia Minor.[100] There were also other Armenian–Anatolian dynastic unions, as between Archelaos I Sisines of Kappadokia (r. 36 BCE–15/16 CE) and an unnamed Armenian princess.[101] Their daughter Glaphyra went on to marry into the Herodian dynasty and passed along a claim to the Armenian throne to her son Tigranes V.[102] In the tumult of the Roman–Parthian struggle for supremacy in Armenia, claimants to the throne, including Tigranes V and his nephew Tigranes VI, invoked these dynastic ties – but others, like Zeno Artašēs (r. 13 BCE–34 CE) assumed the throne without such ties.

Although dynastic struggles continue throughout the first and second centuries CE, the frequency of dynastic marriage in the classical sources declines, although the Georgian tradition describes this as a time of ongoing Armenian–K'art'velian unions. There is some mention of dynastic politics among the Armenian leading families,[103] although use of MX for this period is complicated by the telescoping of much of the relevant material.[104] However, in MX 2. 83, for example, we find a hint of later intermarriage between the Armenian dynastic family and their neighbors to the north, in the story of the marriage of the late third-century King Trdat the Great to a certain Ašxēn. Although her heritage was not named in MX, she was understood by later authors in the Armenian tradition to have been Alan, from the North Caucasus.[105]

Thus, throughout the entire period under investigation, we find intense high-level ties binding families across this space. For our purposes in thinking about economic processes, these networks had two fundamental effects. They established channels for formal political agreement, which stabilized cross-border relations. The multilateral nature of these ties is suggestive of a foreign policy that aimed to keep Armenia

97 Plut. *Pomp*. 33. 6; App. *Mith*. 104; Cass. Dio 36. 51. 1; 37. 6. 4.
98 Plutarch *Life of Crassus* (Plut. *Crass*.) 33. 1.
99 Plut. *Crass*. 32–33.
100 Cicero *Epistulae ad Atticum* (Cic. *Att*.) 5. 21 .2.
101 Cass. Dio 49. 39. 2.
102 Augustus *Res gestae* 27. 2. Sullivan 1990, 300.
103 MX 63.
104 See sec. II.1.
105 On this connection, see Thomson 1978, 233, n. 2.

balanced between its neighbors. At the same time, these connections would have also influenced local consumption patterns, as will become clearer in the discussion of urbanism below.

IV.1.2 Social Structures of the Local Elite

Below the level of the dynasts and their kin existed a structure of elite families whose organization appears to owe much to Iranian influence, although it is unclear whether these should be understood as practices that date back to the Achaemenid period or whether they were new innovations adopted under the Parthians. MX discusses the origin of the structure of the Armenian court explicitly in relation to a King Valaršak, who is presented as the founder of the Armenian Aršakuni dynasty, but whose chronology is confused and who is largely regarded as legendary or at minimum a composite.[106] The information is, therefore, entirely impossible to date, and it is impossible to identify concrete developments in the court system over time. It also remains possible that some of what is described in MX reflects later developments that came about after the arrival of Christianity in Armenia and unfolded in the Sasanian period.[107]

Some general observations are, however, possible based on this later evidence. The most important sociopolitical structure within the Armenian space by the fourth century CE, and likely predating this, was the *naxarar* system, which was a particular type of 'feudal' organization based around prominent families, the *naxarars*.[108] The word *naxarar* is itself a borrowing from Parthian (*naxvadār*) and was in wide use in Armenian texts.[109] These extraordinarily powerful families held the rights to specific offices within the administrative system[110] and also held, collectively as a family, unalienable control over specific tracts of land.[111]

The families were a spatially dispersed phenomenon and were not connected to urban centers – or more precisely, actively avoided urban centers in favor of their own fortified rural estates with control over associated territories.[112] The classical

106 In MX, Vałaršak would have ruled at some point in the second century BCE, long before the accepted beginning of the Aršakuni dynasty. On the general scholarly consensus of Vałaršak as a legendary composite, see, e.g., Chaumont 1986.

107 The most detailed information about this system comes from a fifth-century source from P'awstos Buzand. See Garsoïan 1976; Adonts 1970 for discussions.

108 For skepticism concerning continuity, Chaumont 1986. For a favorable view that sees the *naxarar* system as present throughout the Hellenistic period, see Russell 1987, 93–94.

109 On the term and its Parthian roots, see Schmitt et al. 1986, sec. 7c.

110 E.g., the commander-in-chief of the army, the *sparapet*, which belonged to the Mamikonean family, Bedrosian 1983.

111 Garsoïan 1976, col. 183.

112 Garsoïan 1984–1985. For more on the relationship of this structure to urbanism, see sec. IV.3.

texts hint at a similar system of distributed land control at several places. Most clearly, in Pliny, there is a description of the territory as comprising 120 administrative districts termed *strategoi*.[113] While some reject an association between this system and that of the *naxarars*, it seems likely that this reflects a durable pattern of sociospatial organization in the highland zone, where control of specific valleys is a logical structural choice, although the precise spheres of activity of the *naxarars* almost certainly did evolve over time.

Beyond the elite families, there were additional layers of hierarchy within the elite, at least in some periods. Chief, but also subject to considerable debate, is the office of the *bdeašx*, often translated as viceroy. This hereditary institution was said by Toumanoff to have evolved under Tigranes the Great, who it is noted was accompanied by four officials who have often been interpreted as *bdeašx*.[114] The term is common not only in Armenian sources, but also in K'art'velian ones, where it is attested epigraphically from the first centuries CE. Although it is hard to be more specific about the function of these individuals in pre-Christian Armenia, it seems to point to hazy evidence for at least some stratification within a broader landscape of distributed power spread between a fairly wide class of elite families, who furthermore were closely tied to specific land claims.

IV.2 Elite Culture

Elite actors in a given society exert significant influence over the behavior and particularly consumption patterns of the wider community. In that sense, it makes sense to consider what we know of elite life in Armenia, although one must stress how restricted this sphere was. The material lays the groundwork for understanding the social landscape across which this type of taste-setting flowed, as it echoed beyond the realm of the upper elites and into society more broadly.

IV.2.1 Religion

One place where the impact of this Iranian orientation is particularly strong (even if the evidence itself is faint) is in the role of Zoroastrianism in Armenia and across the South Caucasus.[115] Pre-Sasanian Zoroastrianism, a religion with roots in the Iranian plateau, is, however, a slippery subject that raises a host of interpretive problems in its

113 Pliny *Naturalis historia* (Plin. *HN*) 6. 27.

114 Toumanoff 1963, 155.

115 For a recent review of the evidence, de Jong 2015. The key work on the subject remains Russell 1987.

own right,[116] and it would, of course, have existed alongside other more local religious traditions which are often fairly slippery.[117] Turning to the physical evidence for religious practice in the territory of Armenia, we find a scarcity of material. With the exception of a massive Ionic building, often called a temple but of uncertain function, from the site of Garni, discussed below (sec. V.1), we have limited evidence for other evidence of ritual structures in this period.[118] Elsewhere in the South Caucasus, particularly in the territory of K'art'li, the evidence is somewhat more convincing. Here, a series of structures have been uncovered that can be connected to fire-temple traditions, although the precise association is not certain.[119]

Nevertheless, the Armenian textual tradition provides some references to Zoroastrianism in religious practice in the pre-Christian period, although the temporal complexities inherent in working with this body of material do not allow for convincing descriptions of changes over time. The sources describe the most important deity of the pre-Christian period as one Aramazd, who is understood as the Armenian instantiation of the Zoroastrian Ahura Mazda and who also became syncretized with Zeus.[120] According to Armenian sources, this Aramazd was worshipped at a temple at Ani, where, at least in one period, the brother of the king was the chief priest.[121] Other oblique references to Iranian echoes in Armenian religion of this period come, for example, from repeated references to the sun and sun imagery in descriptions of the Artašēsid kings, with the sun serving as central in Zoroastrian belief systems.[122] The Zoroastrian orientation of Armenia's elites, and particularly of its dynastic families, is also spelled out explicitly in several places in the Graeco-Latin textual tradition. Cassius Dio reports that, upon his visit to Rome to be crowned during the rule of Nero, Tiridates I (r. ca. 52–58, 62–88 CE) of Armenia announced himself as follows:

> Master, I am the descendant of Arsaces, brother of the kings Vologaesus and Pacorus, and your slave. And I have come to you, my god, to worship you as I do Mithras. The destiny you spin for me shall be mine; for you are my Fortune and my Fate.[123]

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116 For the complexity of Arsakid-period Zoroastrianism, see de Jong 2008. On the issue of both Zoroastrianism and other concurrent religious traditions in K'art'li, see Schleicher 2021, 376–406.

117 See, e.g., Vardumian 1991 for an approach that stresses local characteristics of Armenian religion in this period.

118 See the description of Artašat below, where a temple precinct has been excavated, but not published, in recent years. The inscriptions from Armavir, which may have related to an oracular temple known from the literary tradition, also deserve note; see sec. IV.2.2.

119 The 'fire temples' are four-columned structures known from a variety of post-Achaemenid contexts (see Plontke-Lüning 2009), although their interpretation remains unclear and deserves additional work. In the K'art'velian context, the largest and best-published of these is from Dedop'lis Mindori, on which Gagoshidze 1992; 2001; Furtwängler et al. 2008. On the phenomenon in K'artl'i more broadly, K'imšiašvili and Narimanišvili 1995.

120 Russell 1987, ch. 5. As with other questions of the Iranian 'influences' on local religion, this association is not accepted by all scholars.

121 Agathangelos §785; MX 2. 14, 53.

122 See, e.g., Russell 1987, 59, 67, 76, 104.

123 Cass. Dio 63. 5. 2, trans. E. Cary with minor adaptions.

This Mithras, who eventually entered the Roman world through the mystery religion of Mithraism, was in his origin a Zoroastrian divinity who was invoked as the witness of contracts, and it is to that divinity that Tiridates was referring.[124] Further reports of this same visit recorded by Pliny the Elder mention that Tiridates was a mage who introduced Nero to "magian feasts."[125] A final elliptical piece of epigraphic evidence supporting the importance of beliefs associated with Zoroastrianism among the Armenian dynastic families comes from a Greek inscription found at the cliff-top site Garni, which will be discussed in more detail shortly. In the long-accepted reading of this inscription, a King Tiridates – often thought to be Tiridates I – refers to himself as the sun (*Helios Tiridates*), an uncommon title with echoes of Zoroastrian beliefs although a recent reconsideration of the piece and new edition of the text throws this reading and its association to Tiridates I into doubt.[126]

The religious life of the court in Armenia was, nevertheless, steeped in Iranian vocabulary and likely behavior, and cultural practices such as Zoroastrianism appear to have played a role in the religious life in the dynastic family, even if they occured alongside other local religious systems. It is difficult to estimate how wide the reach of these practices would have been within Armenian society outside the dynastic family, although MX states that the dynasts placed religious obligations on the *naxarars*, which suggests that the system likely had a broad reach across elite society.[127] Although the precise implications of this for patterns of elite consumption area are difficult to sketch, based on scattered reports about the wealth of these Armenian temple precincts[128] and what we understand about the close relationship between these places and ruling families, we might speculate that they acted as significant economic nodes – and ones that were closely embedded within aristocratic power structures.

IV.2.2 Literature, Learning, and Language at the Armenian Court

At the same time, the world of the Armenian court as described by classical sources was a place suffused with the literary and artistic traditions of the Greek world, and indeed a space that participated in that world. Of course, it must be noted that Greek learning of this type was also familiar from the Arsakid court, where cultural 'Hellenism' was at times widespread. In the complex cultural space of Hellenistic-period

124 On the association of this moment with the Zorostrian Mithra, see Beck 2000, 167, n. 95. On the relationship between Mithra and contracts in the Iranian tradition, see Russell 1987, ch. 8.

125 *magicis etiam cenis initiaverat*, Plin. *HN* 30. 6.

126 On the inscription, *SEG* 45.1873 = Canali De Rossi 2004, 14 (no. 17). For the new reading see Bresson and Fagan 2022.

127 MX 2. 14.

128 See particularly Cicero *Pro lege Manilia* 9.23 on the temple precinct of Anahit.

Mesopotamia particularly, such overlapping adoptions were likely the norm rather than the exception.[129]

Looking to earlier days of the Armenian dynasts, in the first half of the second century BCE, under the Artašēsids, we find deployments of both Greek and Aramaic inscriptions in official contexts, demonstrating the range of acceptable linguistic possibilities in the context of this kingdom. On the one hand, the Aramaic language was clearly strategically deployed in the context of Armenian royal messaging. The clearest evidence comes from the inscribed boundary steles erected by Artašēs I particularly in the territory around Lake Sevan, testifying to the control of the territory.[130]

But Aramaic was not the only language in use. There is one group of seven Greek inscriptions, generally dated to the second century BCE, that deserve consideration here.[131] Inscribed on boulders near the site of Armavir, both the form and the contents of the inscriptions are curious.[132] They preserve fragments of Hesiod and other elegiac poetry, a calendar that lists the months in the official Seleukid format, and a series of what might be understood as excerpts of official correspondence or accounts, including the description of a death of an Armenian king.[133] One interpretation of these inscriptions is that they represent some excerpts from a royal archive. Beyond these curious rock inscriptions, there is evidence for the epigraphic use of Greek in both royal and other elite contexts not just from Armenia, but even from more northern reaches of the South Caucasus.[134] Latin, in contrast, appears in far more restricted contexts relating to the Roman military.[135]

By the first century, evidence for Armenian participation in this literary/cultural world is fairly considerable, given the general paucity of information. We learn from Plutarch, for example, that the king Artavasdes "actually composed tragedies, and wrote orations and histories, some of which are preserved."[136] According to Plutarch, the Armenian court also hosted Greek intellectuals, although it proved to be a dangerous place for some of them. He accounts the fates of two anti-Roman Greek thinkers, Metrodoros of Scepis and Amphikrates of Athens, who ended up at the Armenian court, but who fell out of favor and met untimely ends.[137] Armenia continued to play

129 Mairs 2014.

130 MX 2. 56, n. 64.

131 Russell 1987, 54–58.

132 See sec. IV.3.3 below, as well as fig. 6.

133 Russell 1987, 74–75; Santrot and Badalian 1996; Mahé 1996.

134 From K'art'li T. Qauxč'išvili 1999–2000; and the single Greek inscription from Albania, Trever 1959, 340–341, pl. 36.

135 E.g., Speidel 2021, or the Latin inscription found near the Caspian coast, on which Braund 2003. See also Kéfélian 2016 on the possible role of the Roman Army in the transmission of loan words from Latin into Armenian.

136 Plut. *Crass.* 33. 2, trans. B. Perrin.

137 Plut. *Luc.* 22. On which episode, Traina 2016, 115.

host to intellectuals through the Aršakuni period, as testified by the presence of Iamblichus in the late second century CE.[138]

IV.3 Urbanism and Infrastructure

Now, we turn from relatively intangible elements of elite society to a manifestly physical representation of social organization: the city. As already discussed, narratives of Armenia's place within the Silk Roads on a conceptual level are often connected with the idea of thriving urban centers, which were said to serve as the hubs for both craft production and long-distance trade. And, as discussed in volume 2, urban centers were often key actors in economic activity.

We face something of a challenge, however, when we begin to examine the evidence for urbanism in the Armenian highlands, and across the South Caucasus more generally, in the period under discussion. In short, the evidence is contradictory. Although there is some archaeological evidence for considerable urban agglomerations, in particular at the site of Artašat, the broader South Caucasus seems to have a rather thinner patina of urbanization than we find in other areas of the ancient world. And, as described above, the elite *naxarar* system was decided nonurban in its orientation. At the same time, both the classical and the Armenian textual corpora describe the region's cities in fairly grand terms. In the following section, we will consider the balance of evidence for urbanism in the area and seek to understand the role that these urban centers played, whether as economic hubs in the classical sense, or in some other specifically local way.

IV.3.1 A "Caucasian Model" of Urbanism in the Bronze and Early Iron Ages

Considering the longer history of the South Caucasus, we find that local patterns of urban settlement were often quite different from those in other regions of the ancient world. This has been noticed in the later Sasanian period, where Armenia seems to stand as an exception to the general drive toward urbanization.[139]

However, in earlier periods, the absence of cities is much more marked. This absence of urbanism, even in the face of clear indications of political consolidation, has led to speculation about a so-called Caucasian model of urbanism, in which a nonurban populace was ruled over by a military aristocracy who dwelt in hilltop fortresses.[140] More recent analyses have pointed out the shaky evidentiary basis of these theories, and we would be right to carry this concern into our own much

138 On Iamblichus and the Armenian connection, Connors 2017.
139 Garsoïan 1984–1985.
140 Masson 1997.

later period.[141] At the same time, detailed archaeological work in the region of the Tsaghkahovit Plain in Armenia has demonstrated that political complexity in the Late Bronze Age there did not coalesce through consolidation of settled populations, but rather from the cyclical spatial practices of pastoralist populations.[142] This provides at least some hints of a different underlying social structure in this region, which may have had ramifications in later periods.

IV.3.2 An Urban Boom? Artašat and the Phenomenon of the Capital City

If the textual sources are to be believed, however, the Armenian highlands saw an uptick in urbanism in the Hellenistic and Arsakid-Roman periods. The trope of city foundation is embedded deeply in the local textual traditions, with both the Armenian and Georgian sources associating city foundation with kingship in a direct way. The classical sources, too, speak explicitly about Armenia's cities and more specifically position the cities of Armenia as one of the features that linked this 'distant' corner of the world to 'normative' (from the perspective of the texts) Hellenistic and South-west Asian patterns.

Under the Yervandid dynasty in Armenia, the first capital city had been Armavir, a foundation with roots in the still earlier Urartian Empire,[143] whose physical reality was connected to that of the Urartian fortress that had once occupied the site.[144] With the rise of the new Artašēsid dynasty, a new capital city appears to have arisen, Artašat. The foundation of this city is granted something of an etiological myth in the classical tradition. Plutarch explains:

> It is said that Hannibal the Carthaginian, after Antiochus had been conquered by the Romans, left him and went to Artaxas the Armenian, to whom he gave many excellent suggestions and instructions. For instance, observing that a section of the country which had the greatest natural advantages and attractions was lying idle and neglected, he drew up a plan for a city there, and then brought Artaxas to the place and showed him its possibilities, and urged him to undertake the building. The king was delighted, and begged Hannibal to superintend the work himself, whereupon a very great and beautiful city arose there, which was named after the king, and proclaimed the capital of Armenia.[145]

Strabo, repeating the story about Hannibal, also stresses the beauty of the city and its ideal location.[146] The connection to Hannibal, as well perhaps as the nature of the

141 E.g., Hammer 2014, 758–759.
142 Lindsay and Greene 2013.
143 Hewsen 1986.
144 On this overlapping, see Khatchadourian 2007.
145 Plut. *Luc.* 31. 3–4, trans. B. Perrin.
146 Strabo 11. 14. 6.

city (neither Greek nor Roman),[147] earned the city the moniker "the Armenian Carthage" in Plutarch, which evokes a fairly grand image.[148]

Modern scholars have been skeptical about the historical accuracy of the city's foundation account,[149] and indeed the version of the city's foundation preserved in the Armenian tradition does not include the participation of any outsiders. In this account, Artašēs built the city atop a hill that pleased him, where he also built a temple to Artemis (i.e., Anahit) and transferred the cult statue from the previous temple. Then he populated the city with "Jewish captives," along with the riches of the former capital of Armavir, and further developed the city into a worthy royal seat.[150] It is worth noting that, as with Armavir, Artašat was also built on a site that held connections to the earlier local dynastic power in the region. Khatchadourian has described the city as being "grafted atop the Urartian citadel that had been abandoned for over four hundred years."[151]

The city became a durable seat of power for Armenia, serving as the capital throughout both the Artašēsid and Aršakuni dynasties, with the exception of a brief period under Tigranes the Great, who founded a short-lived capital, Tigranocerta.[152] It also became known to Roman audiences. Although not explicitly named, it was also likely the city in which the defeated Crassus's severed head was said to have appeared as a stage prop in a production of Euripides' *Bacchae*,[153] suggesting that it must have had fairly grand public accommodations such as a theater. Unsurprisingly, it shows up repeatedly in historical accounts of Roman military activity in the region.[154] According to these accounts, it was apparently destroyed by Corbulo[155] and then rebuilt.[156] Later, it was destroyed again under Nero but rebuilt again with the help of a gift from the Roman emperor to King Tiridates of 200,000,000 *sesterces*, upon the occasion of his visit to Rome. He reportedly used part of the payment to entice Roman craftsmen to return with him to Armenia to help in the reconstruction efforts.[157] In the end, the city was recognizable enough to earn a place in one of Juvenal's satires.[158]

Located on a number of hills near the Aras river, the site of Artašat has been the focus of long-running archaeological excavations in both the Soviet and post-Soviet

147 On this point, see Russell 1987, 101.
148 Plut. *Luc.* 32. 3.
149 See however Russell 1987, 101, who leaves the question open.
150 MX 2. 49.
151 Khatchadourian 2007, 60.
152 App. *Mith.* 67; Plut. *Luc.* 25. 4. The location of Tigranocerta is not certain; for more, see below, sec. V.3.3.
153 Plut. *Crass.* 33. 1–4.
154 E.g., passing mentions at App. *Mith.* 15. 104; Cass. Dio 36. 51. 1, 36. 52. 1, 49. 39. 3; Florus 1. 40; Eutropius 6. 13.
155 Tac. *Ann.* 13. 41; Cass. Dio 62. 20. 1.
156 Cass. Dio 63. 7. 2.
157 Cass. Dio 63. 6. 6.
158 Juvenal 2. 170.

Fig. 5: Main hills of Artašat, showing areas excavated in earlier Soviet-period campaigns. (Tonikyan 1992, 170, fig. C)

period, although the publication of the site has been uneven.[159] In Western scholarly literature, the site is most famous for the two Latin inscriptions that have been discovered at the nearby site of Pokr Vedi, including a large dedicatory inscription dating to ca. 116 CE, or the period of Roman direct control of Armenia.[160]

The areas of the site that were most excavated in the Soviet period – hills 1, 5, and 8 – have however yielded a variety of material for thinking about life in Armenia's capital, although the chronological precision of the available information does not currently allow for a phased reconstruction or much in the way of a developmental narrative (fig. 5). Hill 1 appears to have been mostly military, while hills 5 and 8 contained evidence of domestic activity, craft production, and possibly administrative

159 See Khatchadourian 2008, 266, 270–271 for a history of work at the site. For starting points for past work, see Arakelyan 1982; Khachatryan 2005; and also reports of recent fieldwork, e.g., Gyulamiryan et al., 2021.

160 AE 1968, 0510.

contexts as well. The structures on these hills are built in a new architectural style previously unknown from the region, with the details of the masonry techniques indicating familiarity with practices in the Hellenistic world more broadly.[161] The presence of hypocaust structures and a likely bathhouse on hill 8 speaks to the adoption of this specific cultural practice of bathing and its embedding within the urban fabric. More recent work in the lower town has uncovered a large temple complex along with elaborate bathing facilities,[162] as well as tentative indications of a possible aqueduct, which potentially dates to the period of Roman direct control.[163] Materials such as the marble statue of Aphrodite and small finds from the site of metal vessels, glass, and gold jewelry point to a rich material landscape and the presence of considerable wealth, at least among some segments of the population. Graffiti from the newly discovered bathhouse, furthermore, find close parallels from the Northern Mesopotamian site of Dura-Europos.[164]

What we find, then, is a significant and wealthy urban center that displays clear familiarity with both cultural and material practices from neighboring territories. At the same time, the site in its entirety remains somewhat enigmatic. Consider, for instance, its very layout: although it has been argued that the plan of this site has Hellenistic overtones,[165] the quixotic fortified hilltops of Artašat appear to rest uneasily within the corpus of Hellenistic urban planning, seeming in some sense to find better parallels in the world of local fortified hill sites known from earlier periods in the South Caucasus, where dense military infrastructures were packed into contour-hugging fortifications.

IV.3.3 Other Cities: Capitals and Otherwise

Beyond Artašat, there is some other evidence for urban settlements in Armenia, a number of which are named in texts or appear on the Peutinger Table, an itinerary map thought to be based on a fourth-fifth century original. Zarehewan and Zarišat, for example, are two cities known from later periods that have been said to have Hellenistic roots, which have been associated by some with the rise of caravan trade.[166] However, the best evidence for exploring the phenomenon of urbanism comes from the other capital cities of the period.

Other than Artašat, the archaeologically best-attested city from the period is the preceding capital of the Yervandid dynasty: Armavir. Here, a complicated stratigraphy

161 Invernizzi 1998; Tiratsyan 1979.

162 Khachatryan 2007.

163 Lichtenberger, Zardaryan, and Schreiber 2021.

164 The current state of publication precludes a closer analysis of these; see Khachatryan 2010, 46–47, 49–50.

165 Tonikyan 1992.

166 Eremian 1953, 11–14.

Fig. 6: Greek inscriptions #4 and #5 from Armavir (Trever 1953, fig. 75).

makes the interpretation of the Hellenistic-period layers exceedingly complicated. However, both some scattered architectural traces and more abundant small finds, including imported ceramics, attest to the special status of the place.[167]

A series of seven rock-cut Greek inscriptions already mentioned deserve note here, as they were carved on the cliffs near Armavir (fig. 6). Although both the language of the inscriptions and the content of some of them display considerable familiarity with the Hellenistic world, the overall practice of placing inscriptions on natural cliff faces is one that has parallels (though imperfect) in the Iranian world, rather than the Mediterranean one, and which is also attested locally in the Urartian period. The relationship between these inscriptions and the city itself is not entirely clear, although they have been frequently associated with a oracular temple that is believed to have been at the site.[168]

167 Khatchadourian 2007.
168 Trever 1959, Russell 1987.

The third capital of Armenia to discuss is Tigranocerta, founded according to the literary sources as the monumental new center of Tigranes the Great's expanded Armenia and captured nearly as quickly. In contrast to the other two capitals, which are attested both textually and archaeologically, the identification of Tigranocerta is the subject of more debate. One association that has become standard in recent years connects the city with the site of Arzan, located in southwestern Turkey,[169] although other candidates still have their adherents.[170] While the physical location of this city remains inconclusive, there is a passage concerning it in Strabo that deserves consideration, as we think about the transformation of Armenia under Tigranes the Great:

> But Tigranes, the Armenian, put the people in bad plight when he overran Cappadocia, for he forced them, one and all, to migrate into Mesopotamia; and it was mostly with these that he settled Tigranocerta. But later, after the capture of Tigranocerta, those who could returned home.[171]

The idea of a brand-new city, inhabited by those captured from adjacent territories, brought along with their wealth and skills into the new royal seat, and then just as quickly destroyed and scattered, seems to capture something about urbanism in these highlands more generally.

It is not that cities did not exist in this space: they assuredly did; and as the evidence from Artašat demonstrates, they could be quite grand. Evidence of the presence of temple centers that grew into cities in their own right provides further evidence for the range of urbanism that existed in this space.[172]

And yet, this was not a world of cities in the same way that much of southwest Asia was. Everything from the shape of urban fabrics to the rapid building of new capitals in quick succession suggests a certain amount of experimentation. Nevertheless, the recurring Armenian textual accounts of urban foundations as a prerogative of kingship – and indeed, as an expectation associated with the office – perhaps give a clue about how urbanism was functioning in this space. We might best see urbanism as an outgrowth of political power, rather than the more frequent formulation, whereby political power emerged from cities.

Finally, in this discussion of cities and urbanism, it is important to end with a note about nonurban settlements. The majority of the population, of course, comprised neither the upper elite group discussed before, nor even a more general urban elite. They were, instead, a dispersed rural population spread across the region's valleys and highland plateaus. Given the scarcity of archaeological work on these spaces, however, we can say little about how they would have lived.

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169 Several sites have been proposed, but for the association with Arzan, see Sinclair 1995; 1996; Marciak 2017.

170 Particularly a site between the Kura and Aras rivers excavated by Petrosyan, see Petrosyan 2021.

171 Strabo 12. 2. 9, trans. H. L. Jones.

172 On which, see sec. VI.I below.

IV.4 Foreign Militaries and Their Innovations

In considering the sociopolitical networks operating in Armenia, I have concentrated on those developing out of local, homegrown actors. But in thinking about the forces swirling in the highlands, it would be a mistake to forget about those brought by foreign powers, and particularly their militaries. Particularly in the realm of infrastructure, there are some hazy indications of significant developments during the brief period of Roman direct control in Armenia, which are in keeping with the pattern in other areas that came under Roman auspices. There is, for example, a single Roman milestone found in the foothills of Mount Ararat that dates to this three-year period, and that is suggestive of rapid movement toward the expansion of Roman road systems into the highland territory.[173] Another much-discussed Latin large-scale inscription attests to the participation of Legion IV Scythica in the construction of some large structure near the site of Artašat during precisely the same period.[174]

IV.5 Social Flexibility in the Highlands

This section has covered significant territory. I began with two of the most powerful actor categories in the region: dynasts and the upper elite. Using the vector of 'elite culture,' I considered how social practices inside these groups testify to their patterns of connectivity. Then, using the idea of cities and urbanism, I painted a picture of an Armenia that was at once conversant with, but also distinct from, the world of cities that stretched across the Mediterranean and southwestern Asia. Finally, I briefly noted specific evidence from periods of intense Roman interest in this space to consider how the imperial power sought to leverage infrastructural power to bring Armenia into closer alignment with Roman norms.

When we combine the elements of this story, we see is that local political authorities were interacting widely and forming long-lasting connections with their neighbors but were nevertheless performing power, authority, and culture in their own often quite divergent way. This duality – the familiarity with external norms, but the divergent choices made here – is a clear consequence of the geopolitical positionality of Armenia. It furthermore demonstrates how Armenia could have played an active part in these multiple worlds, without ever quite seeming to have done so, thus enabling the diverse historical projections that have been applied to the region, as noted at the start of this chapter.

173 Speidel 2021, 146–149.

174 *AE* 1968, 510. See recent discussion in Speidel 2021, 139–141.

V Production and Consumption

Next, we come to a more concrete question: What was produced and consumed in this space? And particularly, what was being produced and consumed in ways that tied Armenia into regional networks? In the following discussion on consumption, I wish to focus on several examples that demonstrate the variety of local and 'foreign' products that were being consumed. Rather than seeing these products as indices of foreign trade and contact, as they are often interpreted, I rather used them to demonstrate the choices that were available to consumers in Armenia, and the choices they themselves made as producers.

V.1 Elite Consumption

In considering the question of the consumption behavior of Armenia's elite, our evidentiary material is fairly limited. Systematic excavation of domestic sites has been limited, precluding our ability to discuss the material indicators of elite life in this context, and textual sources are short on material detail. There are, however, several categories of material that we can bring to bear on the question. In principle, what follows considers architectural spaces that can be connected to local elites, and particularly to dynastic families, giving us a sense of the vocabulary of local power as expressed through the built environment.

An important piece of evidence in this discussion is the Ionic structure at Garni (fig. 7), one of the few archaeological monuments of the South Caucasus from the period under discussion that has made its way into mainstream textbooks of classical archaeology, no doubt in part on account of its strikingly Mediterranean appearance: The building with a likely connection to the dynastic family ruling the highlands is noteworthy for its clearly classical character. Besides its unique-for-the-region form, the structure is also important as it is one of a very small number of structures that we can associate with the dynastic family of Armenia, although the Armenian texts reference and hint at palaces that undoubtedly must have existed.[175] The absence of other examples of royal architecture is made more striking by the fairly widespread presence of structures that can be credibly associated with state power in the Achaemenid period.[176]

The Ionic structure from Garni, located atop a dramatic cliff, has aroused interest for centuries.[177] Many details about this structure – from its identification as a temple

175 MX 2. 49.

176 Ter-Martirossov 2001. On the presence of similar structures across the South Caucasus, Knauß 2000; Knauß, Gagoshidze, and Babaev 2013.

177 It attracted, for example, the attention of foreign travelers Porter and de Montpéreux, who sketched its ruins in the nineteenth century. Ambitious plan for its reconstruction later lay at the heart of the work of the Russian Imperial Archaeological Commission in the South Caucasus in the

Fig. 7: Reconstructed Ionic temple from Garni. © De Agostini Picture Lib., W. Buss, akg-images.

to its date of construction – have been debated. Leaving aside the question of its function, stylistic analysis suggests a date in the first or second century CE, and it shows many affinities to stone-working traditions in Roman Asia Minor.[178] The richly decorated hexastyle peripteral building is generally termed a temple dedicated to Mithras, but it may in fact have been a funerary monument connected perhaps to the Armenian royal family, in parallel with similar funerary monuments from Anatolia.[179] The site of Garni has strategic importance. It is considered to be that of Castellum Gorneas, mentioned by Tacitus as a well-protected fortress that served as a place of refuge for Armenian kings and their allies.[180] It furthermore served as the summer residence for the kings of Armenia, according to the medieval textual tradition.[181]

The structure was not alone atop the cliffs of Garni. A bath complex that might date to the third or perhaps fourth century CE sits near the Ionic building. This complex is small, but richly decorated, featuring a water-themed mosaic sporting Nereids

1880s, although the actual reconstruction of the building remains did not proceed until the mid-twentieth century. On this history, see Khatchadourian 2008, 251–258.

178 Wilkinson 1982 suggest a date in the last third of the second century CE. See also the brief treatment of this structure by Maranci 2018, 26–27.

179 For the interpretation as a funerary monument, see Wilkinson 1982.

180 Tac. *Ann*. 12. 45.

181 MX 2.51.

and other maritime tropes, along with a Greek inscription.[182] Although the Ionic structure is unique in the architectural repertoire of the South Caucasus, the bathhouse is not. A series of bathhouses have been uncovered from near the royal seat of K'art'li in the north, which display clear associations between bath complexes and key sites of dynastic power.[183] As in the case of the Ionic structure, the bathhouses of the South Caucasus demonstrate clear familiarity with Roman architectural practices. Research on the mosaic from Garni as well as another bathhouse mosaic from K'art'li, meanwhile, has identified some similarities to the mosaic tradition know from the site of Antiocheia, but also idiosyncratic characteristics.[184]

The point to emphasize in considering the site of Garni, and what it says about hyperelite consumption practices in Armenia, is that it reflects deep *familiarity with* and *access to* Anatolian and Northern Mesopotamian craft traditions and architectural practices. We must imagine that the construction of these structures required the presence of craftsmen either brought in from abroad or with significant experience and training in these spaces. And yet, at the same time, the site as a whole does not sit entirely neatly into either a Hellenistic or Roman paradigm, at least insofar as we might generally understand these terms. As pointed out by Versluys, this type of eclecticism in combining elements from Mediterranean and Iranian cultural vocabularies is a feature of Armenia's neighbor, Kommagene.[185] Although the evidence is less plentiful in the case of Armenia, it would be logical to expect a similar general process. Rather than seeing buildings such as the Garni Ionic building as clear markers of intensive Roman presence in the region, then, we should understand them as indicators of the profound Armenian familiarity with the world beyond its borders, and as the product of intentional decision-making about how to construct an architectural metaphor for expressing royal power.

Although the dramatic structures of Garni attract our attention, it is also important to think about what is missing from this picture, namely either royal residences or any evidence for the built environment of the *naxarar* families. As Garsoïan has convincingly argued, the normative world of these lordly families was not the city, but rather "fortresses, forests and mountains."[186] The image of elite life as depicted in the later textual tradition rested heavily on images that are reminiscent of the Persian ideal of the 'paradise': a rural ideal with a long history in the Iranian tradition, and in fact with archaeological antecedents in the South Caucasus in the form of the Achaemenid palace complexes, which seem to have drawn on this mode.[187] Architectural traces of these structures in our period are not yet known, but when

182 For an accessible English-language introduction to this building and its excavation, see Arakelyan 1968. See also Wilkinson 1982.

183 A royal necropolis at the site of Armazis-q'evi and the apparent royal complex at Armazis-c'ixe.

184 Odišeli 1995; Eraslan 2015; Wages 1986.

185 Versluys 2017.

186 Garsoïan 1984–1985, 76.

187 Canepa 2018, 350–351.

we think about consumption systems as a whole, we should not forget about these spaces, which must have served as distributed, rural hubs of elite performance strewn across the highlands.

V.2 Non-elite Consumption

Given the extremely limited scope of domestic archaeology in the South Caucasus, the object-scape of Armenia as reflected in finds from archaeological excavation from mortuary contexts provides our most direct evidence for the shape of Armenian local consumption patterns beyond the hyperelite. Inside of this object-scape, identifiable imports have always received particular attention, particularly among Western scholars.[188] Prestige items such as signet rings, glass vessels, and metal vessels have been used to demonstrate the expansion of luxury goods in the space. This attention is, to a certain extent, both understandable and justified. And yet it also sets up a problematic dichotomy between 'local' and 'import' when, in fact, there is considerable evidence for the local production of some categories of material that, based on autopsy alone, would be judged to be imports.

One tangible example of this can be found in a type of pottery known from archaeological excavations in the region, a red-slipped ware that is reminiscent of eastern *sigillata* from the Mediterranean world. On the basis of visual autopsy, vessels made of this fabric would perhaps be classified as imported, but we now know, thanks to petrographic analysis, that there was local production of this ware type in the territory around Artašat.[189] Although the scale of this production activity is impossible to judge, it acts as a cautionary reminder about the significant gaps that still exist in our interpretation of local material culture, which have particular ramifications for our examination of nonelite consumption patterns.

V.3 Extraction and Production for Export

In addition to the consumptive potential of the Armenian highlands, which would have made the space a draw for regional trade in its own right, we ought to also think about what the Armenians could have offered to regional and transregional markets: the products of this territory that could have traveled outward.

The classical texts provide evidence for a number of natural resources that were exported from Armenia into the wider ancient world, and it is on those that we now focus. The list includes a broad array of primary products, ranging from gold, to a specific stone type used in polishing, to an alkaline clay used medicinally, Armenian

188 E.g., Knauß 2006 on the Achaemenid and early Hellenistic periods.
189 Fishman 2016.

bole. In order to understand the economic impact of local primary production in wider systems, we will examine two specific products from Armenia in more detail: natron, a salt used in the production of glass as well as other types of commercial processing, and horses, specifically a particularly prized breed of horse known as the Nisaean horse. Unfortunately, we know very little about the specifics of how these products might have moved out of Armenia. So, to complement these two explorations, we will then consider a detailed example of a trading process concerning Armenia's eastern neighbors on the shores of the Caspian, the Caspii. Here, we learn details about the production of isinglass, a product derived from the swim bladders of sturgeon that was used as a surgical glue, giving us a glimpse into how complex these trading chains could be.

I do not select these examples because I believe that they were the central export products from Armenia or the South Caucasus in terms of quantity; this is a question that we cannot answer on the basis of available data. Rather, inherent characteristics of these very different products, as well as the type of supply chains they participate in, provide an interesting pair for thinking about the ramifications of local resource extraction in broader economic systems, despite the fact that the scale of the extraction and export may in fact have been quite low.

V.3.1 Horses

Horses were a resource that was widely available in the ancient world, and especially in the broader Black Sea space and of course the Steppe. And yet, despite the multitude of horses theoretically available, Armenia came to be associated in the classical corpus with a specific, and specifically wonderful, type of horse, the so-called Nisaean horse.[190] There is some substantial mythology around these horses, which are associated in the textual tradition with Central Asia, Media, and the highlands more broadly. Furthermore, a connection between the Graeco-Latin and Chinese sources has often been made, whereby the Nisaean horses of the classical texts are associated with the "heavenly horses" prized in ancient China.[191]

Whatever the truth of these associations, Strabo clearly notes that the territory of Armenia is well suited to rearing horses in general, and one of the possible homelands of the Nisaean horses. These horses, as Strabo explains, had once played an important role in international economic ties between Armenia and the Achaemenid kings: The Armenians used to send 20,000 foals a year as tribute to the Achaemenid

190 Strabo 11. 14. 9. About the question of whether these were actually the same Nisaean horses as known from elsewhere in the ancient world, there has been much debate; see Anderson 1961, 22–23. This debate existed also in antiquity, Strabo 11. 13. 8. See also discussions of these horses in Morris, vol. 2, ch. 4, sec. VII.1.2; Fabian, vol. 2, ch. 12.B, sec. II.

191 Strabo 11. 14. 9.

Empire.[192] Xenophon provides an even more specific explanation of how the Achaemenid horse-tribute collection system in Armenia functioned. In this account, one particular Armenian village that Xenophon passed through was responsible for raising 17 horses a year that were to be passed on to the Persian king.[193] The fact that both a horse and riding clothing appear in the canonical representations of the Armenian delegation on the Apadana reliefs from the Achaemenid capital of Persepolis[194] – reliefs generally interpreted as depicting tribute-bearers – suggest that the broad contours of this association are likely correct.

Thus, we can speculate that, in the Achaemenid period at least, horses served a political-economic function for the Armenians, articulating their relationship with the Achaemenid central authority and serving as a medium of transaction for meeting their tribute requirements. But also from an internal perspective, horses and horse culture appear to have held considerable social importance. Horse trappings are a frequent grave good across the South Caucasus broadly speaking and diachronically. Even more striking, one finds a scattered practice of horse burial present in the South Caucasus even in the Hellenistic period,[195] in a tradition that stretches back to the Bronze Age.[196] This speaks to a position of privilege for the horse within local belief systems – a logical state of affairs for a space where military power and horse power were intimately connected.

We do not have direct evidence for the role of the horse in either tribute or trade after the Achaemenid period. However, the fact that cavalry from the region is cited as a decisive feature in regional conflicts into the Arsakid-Roman period attests to the continued relevance of these animals in international affairs.[197] Whether the Arsakid dynasty took over the Achaemenid pattern of importing horses from this territory is not known. It is also possible the shift in military organization ushered in under the Arsakids led to the levying of mounted warriors rather than steeds themselves: that is, the focus may have shifted rather to the 'export' of mounted fighters. The same might have been true in the Roman case. We see, for example, the importance of Armenian cavalry during Marc Antony's 37 BCE ill-fated Parthian campaign. However, we hear nothing more about Armenian mounted fighters until the early second century CE, when Arrian describes the role that these troops had in defending Kappadokia from steppe pastoralists surging westward.[198] Despite the many points of uncertainty, we do know from Strabo, but also from later accounts, that the Armenians continued to be associated with these horses throughout antiquity. This association

192 Strabo 11. 14. 9.
193 Xenophon *Anabasis* (Xen. *Anab.*) 4. 5. 24, 34–36.
194 Khatchadourian 2016, 217, n. 4.
195 Nachmias et al. 2021.
196 Pogrebova 2003.
197 Plut. *Ant.* 8.
198 Arrian *Acies contra Alanos*.

should be understood as a faint echo of the role that these animals could, and occasionally did, play in equipping regional armies.

V.3.2 Natron

The second example treated here concerns a very different type of resource: natron. Natron, a critical ingredient in the production of glass and other industries that used vitrified materials such as glazed ceramics, is a fascinating commodity because of its extremely limited availability. Unlike horses, which could in principle be raised in a great variety of environmental zones, natron salts are known from a relatively limited number of sites in the ancient world, most notably Wadi Natrun in Egypt.[199] However, another natron source is mentioned by Strabo, who, in the course of a passage on the natural resources of Armenia, cites the waters in and around Lake Van (located in eastern Turkey) as "natron-producing" (*nitritis*).[200]

The dominance of Egyptian natron in the ancient glass industry has been widely accepted. Glass production in the ancient world was a complex and segmented production process, with the primary production of raw glass – the energy-intensive process whereby sand was transformed into glass ingots – occurring at a relatively restricted number of sites, concentrated largely in the Eastern Mediterranean.[201] The glass ingots were then shipped far and wide to local workshops, where finished vessels were produced. A well-developed supply chain appears to have emerged to supply natron, used as a flux to lower the melting point of silicates, to primary glass-production facilities in the Eastern Mediterranean.[202]

However, that dominance of Wadi Natrun natron does not preclude the exploitation of the alternative Anatolian natron source mentioned by Strabo and known from other later sources.[203] One hint at the possible exploitation of these sources comes from investigations of glass production from northern Mesopotamia and Anatolia in the Late Bronze and Iron Ages. Of particular interest is the glass from Urartian fortresses, located in the Armenian highlands and with a significant center of power around Lake Van. It was long assumed that this locally made glass was produced not with natron, but rather with another possible flux derived from plant ash. Recent investigations, however, have demonstrated that an alkaline flux was, indeed, used.[204] Given the extraordinarily close proximity of these Urartian sites to Lake Van, it is very tempting to hypothesize that they were relying on the local natron resources.

199 On Wadi Natrun, Shortland et al. 2011.

200 Strabo 2. 14. 8.

201 Jackson et al. 2018 for a discussion of the Roman glass industry. See also Weaverdyck and Fabian, vol. 2, ch. 8.A, sec. VI.3 for a brief discussion of the unusual characteristics of this production system.

202 Shortland et al. 2006.

203 Strabo 11. 14. 8.

204 Dardeniz 2015, 196–197.

Indeed, the alternative hypothesis – that they were importing natron from far-distant Egypt – seems rather unlikely.

Thus far, there is no concrete proof that the Lake Van natron was being used in glass production either in the Bronze or Iron Ages or in the period we consider here.[205] However, the ability to recognize different natron sources chemically or isotopically is still relatively new, and only a narrow range of vessels have been studied to date. One wonders, for example, about the famous Parthian green-glazed ceramics: Could Anatolian natron possibly have played a role in this major Iranian ceramics industry?

V.3.3 Isinglass

Expanding our vision from Armenia to the east, along the banks of the Caspian, we find a range of both material and textual sources that suggest that there was organized trade activity in that space as well. One particularly valuable testimony, which describes both a trade route and a specific trade product – isinglass – is found in Aelian's *De natura animalium*, a collection and compilation of anecdotes about natural history written in Greek in the third century CE. In this passage, likely derived from a Hellenistic source, Aelian details trade between the Caspii, one of the peoples located on the Caspian coast in the eastern Caucasus,[206] and Ekbatana:

> I have heard that in the land of the Caspii there is a lake of very wide extent, and that in it there occur large fishes which are called Oxyrhynchi. Now the Caspii hunt them and after salting, pickling, and drying them, pack them on to camels and transport them to Ecbatana.[207]

The passage goes on to describe the process of producing an extremely valuable secondary product from the internal organs of the "large fishes," i.e., Caspian sturgeon. Once dried and processed, sturgeon viscera, and particularly their air bladder, can be processed to create a 'fish glue' made from isinglass. This substance has a wide range of medical and pharmacological uses that were known in the ancient world, where it was a valuable commodity.[208]

Thus, this passage provides a general description of (1) a group of traders; (2) a commodity; and (3) a shipping destination. Although it does not enumerate the precise route along which the goods moved, and our inability to locate the Caspii with any

205 And indeed, there is good reason to believe that many of the finished glass vessels found from the South Caucasus were produced in Levantine workshops, see Shortland and Schroeder 2009.
206 The Caspii appear in a number of accounts of the eastern Caucasus, beginning with that of Herodotus, 3.92–93. See Bais 2001, 51–52 for an overview of the sources that mention this group.
207 Aelian 17. 32, trans. A. F. Scholfield.
208 Scarborough 2015.

accuracy prohibits much speculation, the passage is helpful in thinking about both the patterns and the scale of regional trade activity.

The transport of fish is, of course, difficult to substantiate archaeologically, so we are unlikely to find evidence of this particular activity in material culture. However, assuming that the general flow of materials from the eastern Caucasus into northwestern Iran was not limited to fish, we can search for other, more durable, materials moving along these channels. On this point, recent research on early Sasanian glass from Gilan has posited a South Caucasus source for some of the material.[209] This material postdates the period under discussion here and relates to the relatively isolated corner of Gilan, rather than the far more central Ekbatana. However, it does demonstrate the possibility of fairly extensive and specialized trade networks and production processes centered on the South Caucasus, serving northwest Iranian markets.

VI Trading Centers and Routes in the South Caucasus

Having considered a few classes of objects that were moving in this space, we next turn to the question of loci for trading activity, and routes along which the materials may have moved. Unfortunately, our ability to talk about merchants who would have been active in these spaces is hampered by the sources we have available. However, we can interrogate the physical spaces that facilitated the connectivity necessary for the movement of objects in the territory. This serves to connect the discussion thus far in this chapter back to fundamental questions about the place of Armenia within Eurasian systems.

VI.1 Trading Centers

In the classical literary corpus, there are a handful of brief references that explicitly situate the Armenians within long-distance commercial networks. Our earliest detailed source on the region who includes such information is Strabo, who, because of his own familial ties to the Black Sea region, should be understood as a unique reference. He speaks of the involvement of the Armenians in trade in several places, although always in passing.

One interesting reference places Armenian merchants in the sanctuary city or "temple state" of Komana Pontika located in Pontos and dedicated to Artemis, which

209 Simpson 2015.

is called a "noteworthy *emporion*" for the Armenians.[210] The city was compared by Strabo to Corinth, since its lures – and presumably particularly the practice of temple prostitution – attracted "merchants and soldiers" who spent profligately, as well as large crowds who gathered for temple festivals. We know nothing more about which Armenians were operating here or the details of their activities,[211] but Strabo's association of such a sanctuary city with mercantile activities finds parallels in descriptions of other sites in Anatolia, for example Pessinous.[212] The site of Komana, located on routes leading to the Anatolian heartland as well as the Black Sea, would furthermore have made a logical staging point for mercantile traffic moving across the Armenian highlands.

Another similar wealthy temple precinct is associated with Armenia itself, the temple of Anahit (syncretized with Artemis) at Eriza, which is attested in both the classical and Armenian traditions.[213] The texts make an explicit connection here between Iranian traditions and their practice in Armenia, as well as the mention of temple prostitution – making it quite similar to Komana. This temple precinct grew over time into a veritable city in its own right, and one with tremendous riches.[214] One scholar of pre-Christian religion in Armenia, in his consideration of this type of temple, notes the explicit relationship between the religious and trade functions of this site and credits the expansion of trading activity for the flourishing of the site.[215]

Broadening our scope from the Armenians themselves to their neighbors in the South Caucasus, we find a handful of other references to *emporia*. In particular, two sites associated with the coastal territory of Kolchis come to mind. Dioskourias is noted as the "the common emporium of the tribes who are situated above it and in its vicinity," while Phasis is, more explicitly, called the "emporium of the Kolchi."[216] These sites were integrated into a system of Black Sea trading hubs, many of which have roots in the Greek colonial period.

In his discussion of the cities of Kolchis within this system, and of their economic basis, Tsetskhladze has commented on the prominent – nearly exclusive – focus on trade among ancient descriptions of Kolchian population centers.[217] While it seems

210 Strabo 12. 3. 36. On the vocabulary of temple states in the context of Asia Minor, see Dignas 2002, 227.

211 Beyond the word *emporion*, Strabo provides little further description of trade activities at the site.

212 Strabo 12. 5. 3.

213 Strabo 11. 14. 16; Agathangos § 779–781; MX 2. 49.

214 Agathangos § 786.

215 Vardumyan 1991, 123–124.

216 Dioscurias: Strabo 11. 2. 16; Phasis: 11. 2. 17. For another mention of an *emporion* at Phasis, see Hippocrates *Peri Aeron, Hydaton, Topon* (*Airs, Waters, Places*) 15.

217 Tsetskhladze 1992, 238–239. The comparison here is drawn between cities of the Bosporan kingdom, which are described as multifaced hubs of different sorts of economic activities, and those of Kolchis, where the singular focus is on trade.

unwise to read too much into this feature of the textual corpus, it is entirely fair to note the uncommonly explicit connection that is drawn between urban hubs and trade in this space. We cannot speculate on what role the Armenians themselves might have played in these cities, but their presence would have come as no surprise. Beyond our general understanding of the close relations between local communities, evidence for Armenian interaction with Kolchian populations comes from another passage of Strabo. Here, he describes the existence of a temple precinct in the mountainous Moschian territory of the South Caucasus, which was "divided into three parts: one part is held by the Kolchians, another by the Iberians, and another by the Armenians."[218] Such shared cult sites could well have also served as the sites of periodic markets or other organized economic activity, as testified at Komana. One tantalizing, but entirely unclear, hint of the involvement of cult sites in economic transactions from the South Caucasus comes from the site of Vani, a settlement interpreted as a religious center in western Georgia. There is a bronze coinage associated with the city of Vani that seems to be minted in the broad pattern of bronze issues from the territories of Mithridates of Pontos, like issues from Dioskourias.[219] Although it would be an exaggeration to argue that the cities discussed earlier did not play a role in trade systems, it nevertheless seems fair to point out that religious centers appear to have featured prominently in these networks.

VI.2 A Route to India? A Route to the North?

I end here with a discussion of several explicit references to the routes for traveling through this space. The first comes in Strabo's extended description of the people dwelling in the South Caucasus and near the Caspian Sea in book 11, mentioned at the start of this chapter. Here, the Armenians are named as one of the participants in a long-distance trading system that brought "Indian and Babylonian" merchandise through Media, Armenia, and eventually to the Aorsi, a mobile pastoralist confederation living near the Caspian, likely in the North Caucasus.[220]

This passage of Strabo, along with a handful of other references to India, raises the tantalizing prospect that Armenia were not just active in trade in a regional way, but actually participated in a specific long-distance trade network stretching from India to the Pontic Basin/North Caucasus, which we might consider a discrete spur of the 'Silk Road' in the classical sense. The existence of such a route in the South Cauca-

218 Strabo 11. 2. 18, trans. H. C. Hamilton.

219 However, whereas those coins circulated broadly, the bronze issues from Vani did not, but instead appear to have been used almost exclusively at the single site; Dundua and Lordkipanidze 1983, 22–41. For discussion and bibliography of these coins, see Tsetskhladze 1989. On the phenomenon of Mithridatic coinage more generally, see Saprykin 2007.

220 Strabo 11. 5. 8.

sus has, unsurprisingly, attracted considerable excitement and been long debated in the specialist scholarship.[221]

This connectivity is theorized by many to have occurred via a link between the South Caucasus and the western reaches of Central Asia in the form of a shipping channel across the Caspian Sea. This is a prospect that is explicitly noted by Strabo, who describes the route as follows:

> Aristobulus says that the Oxus [Amu Darya] was the largest river, except those in India, which he had seen in Asia. He says also that it is navigable with ease, (this circumstance both Aristobulus and Eratosthenes borrow from Patrocles,) and that large quantities of Indian merchandise are conveyed by it to the Hyrcanian Sea [the Caspian Sea], and are transferred from thence into Albania by the Cyrus [the Kura River], and through the adjoining countries to the Euxine.[222]

The route was allegedly 'discovered' by Patrocles, a Macedonian general and representative of Seleukos I who supposedly circumnavigated the Caspian Sea. And Strabo's is not the only mention of such connection. Pliny reports the following:

> Varro further adds that exploration under the leadership of Pompey ascertained that a seven days' journey from India into the Bactrian country reaches the river Bactrus, a tributary of the Oxus, and that Indian merchandise can be conveyed from the Bactrus across the Caspian to the Cyrus [the Kura River] and thence with not more than five days' portage by land can reach Phasis in Pontus.[223]

In both cases, the path noted for the movement of goods does not actually pass through the heartland of Armenia, instead traveling along the Kura River, then through Armenia's northern neighbor K'art'li, to the coastal port city of Phasis. And yet, in broad strokes, the supposed path would put the movement of these goods within close reach of the Armenians.

This transportation system, under the name the 'Oxo-Caspian trade route,' was first seriously discussed in the early twentieth century by Tarn, who viewed its existence as unlikely. Tarn's thoughts on this route are worth discussing in some detail, as they set the tone for much later scholarship.[224] His argument against the existence of such a route is based, on the one hand, on the fact that he saw no evidence for the existence of navigable rivers flowing from Central Asia all the way into the Caspian. He argued that the lack of frictionless riverine transportation would have made the route essentially useless, given the easier overland options.[225]

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221 For recent discussions, see Braund 2002; Callieri 2001; Rtveladze 2010.

222 Strabo 11. 7. 3, trans. H. C. Hamilton. See also Strabo 2. 1. 15 for another account of this general route: The Oxus, which divides Bactriana from Sogdiana, is said to be of such easy navigation that the wares of India are brought up it into the sea of Hyrkania, and thence successively by various other rivers to the districts near the Euxine.

223 Plin. *HN* 6. 50 trans. H. Rackham.

224 Tarn 1901.

225 Tarn 1901, 25–26.

Leaving aside the question of the existence of a comprehensive path of navigable riverine routes in Central Asia, which remains a complicated one, one might note that the same general point about the difficulty of riverine transport could also be made for the South Caucasus. Here, Braund has argued that seamless east–west movement was interrupted by the Surami Ridge, which divided the coastal territory of the western Black Sea lowlands from the mountainous interior.[226] We will return to the question of riverine transport in a moment.

In arguing against such a route, Tarn furthermore points to another passage of Strabo, in which it is noted that there were "no vessels upon the [Caspian] sea, nor is it turned to any use."[227] The discussion of the route is therefore entangled with the question of whether the Caspian Sea saw maritime transport in this period. Strabo's mention of the lack of ships on the Caspian, however, appears within a description of the Hyrkanians and other local populations near the Caspian that has a strong overtone of allegory – e.g., describing the bountiful harvest of local agricultural products that grew without any work from the residents. This context should shape our reading of this particular passage and makes it likely that the mention of lack of maritime exploitation was also part of this topos. There is considerable evidence for slightly later Sasanian-period maritime exploitation of the Caspian, and there is no reason to believe that this was a new innovation in the Sasanian period.[228]

Beyond the textual material, there is also some fairly limited archaeological evidence for such connections, with more coming to light in recent decades. The most obvious evidence includes a small number of Bactrian coins found at several sites in the South Caucasus: a single coin from a large hoard from the territory of modern Azerbaijan,[229] and a hoard of six coins found in construction work in the city of Tbilisi in Georgia.[230] Beyond this, there are from the region of modern Georgia a small number of glass beads that, based on their chemical signature, appear to be of South Asian manufacture, as well as some very limited evidence for silk textiles.[231]

Tarn ends his article on the Oxo-Caspian route by saying the following: "It appears to me that we are safe in saying that whatever trade came down the Oxus and across the Caspian was entirely in native hands during the whole period of Greek knowledge of this river; and that it was of no great extent." On the first point – that the trade was conducted by local actors rather than by Greeks – one would be inclined to agree. On the question of extent, however, we would do well to be more cautious. It is not clear that one can argue that there was mass-scale movement of goods from Central

226 Braund 1994, 40–41.

227 Strabo 11. 7. 2.

228 See this argument in Callieri 2001, 540–541. On recent work on Sasanian harbor infrastructure, see also Rckavandi et al. 2008.

229 Babaev and Kaziev 1971; Thompson, Mørkholm, and Kraay 1973, no. 1737.

230 Pakhomov 1938, n. 319.

231 On the beads, Shortland and Schroeder 2009, 961–962; on the silk fibers, Kvavadze and Gagoshidze 2008. See also evidence presented in Schneider 2017, addendum 2.

Asia into the South Caucasus. Rather, as our understandings of the complexity and segmented nature of 'Silk Road' trade has developed over the last century, we have come to realize that mass-scale mobilization of trade goods was likely more the exception than the rule. This was a system in which smaller-scale, but habituated, trade relationships played a central role. It is for precisely this reason that the lack of a complete riverine path either in Central Asia or in the South Caucasus should not bother us unduly. From the Eastern Desert, through Northern Mesopotamia, and across the Iranian Plateau, we find examples of movement of goods across harsh landscapes. Reframing our expectations within the context of this understanding, it becomes possible to see how the South Caucasus generally may well have served as an important segment within this larger system.

Finally, there is an important point that is often overlooked from the passage of Strabo cited at the beginning of this chapter. The end point for the goods that moved through Armenia was not the Pontic, but rather the Aorsi, a mobile pastoralist group holding sway along the north Caspian coast:

> ... for they [the Aorsi] held dominion over more land, and, one may almost say, ruled over most of the Caspian coast; and consequently they could import on camels the Indian and Babylonian merchandise, receiving it in their turn from the Armenians and the Medes, and also, owing to their wealth, could wear golden ornaments.[232]

Thus, in contrast to all of the discussion about east–west routes across the South Caucasus, Armenia actually serves in this reference as part of a system running south–north from Mesopotamia into the Eurasian Steppe. It is to this question – the northward connectivities of Armenia, that I now turn.

VII On the South and North Caucasus

In most of this chapter, I have focused on the web of connectivity stretching between Armenia and its imperial neighbors, first in the Hellenistic world and then later in the Arsakid and Roman ones. It would be a mistake, however, to overlook the neighbors to the north, dwelling along the northern slopes of the Greater Caucasus and their steppe frontiers. These patterns of connectivity are even more tenuous and are often missed for precisely this reason. They nevertheless deserve mention, as they likely represent an important component in regional dynamics.

There are two core reasons for the lack of recognition of these patterns of connectivity. The first can be explained by another passage from Strabo, who states that there was a clear boundary between the nomads of the north and the sedentary polities of the Armenians, K'art'velians, and Albanians to the south:

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232 Strabo 11. 5. 8, trans. H. L. Jones.

> As for the Armenians, and the peoples who are situated above Colchis, both Albanians and Iberians, they require the presence only of men to lead them, and they are excellent subjects, but because the Romans are engrossed by other affairs, they make attempts at revolution ... whereas the nomads, on account of their lack of intercourse with the others, are of no use for anything and only require watching.[233]

But the more pervasive cause is an overly deterministic interpretation of landscape factors, with many generations of scholars seeing the Greater Caucasus range as a fundamental barrier to motion – a wall blocking paths of connectivity. This is, however, a mistaken impression that is poorly grounded both theoretically and materially, with the mountains acting as a far more porous 'barrier' than imagined.[234]

VII.1 Neighbors to the North

Who, then, were these northern neighbors with whom the South Caucasian political authorities came in contact? The truth is that, despite significant advances in archaeological research in recent decades, our understanding of the communities of the steppe and steppe fringe in the North Caucasus remains exceedingly hazy. In our confusion, we are not alone: As Pliny the Elder noted in his discussion of the steppe around the Caspian Sea, "in no other part [of the world] is there greater incontinency among the authors, I think that it is because of the immense number of peoples and their nomadism."[235]

Despite the bewildering number of discrete ethnonyms that appear concerning this space, there is a standard schematization that has been long used by both Soviet archaeologists and ancient historians more generally, which suggests a (relatively linear) sequence of successive steppe peoples inhabiting the zone. This process is said to start with the Scythians, an Iranian-speaking group with their heartland in the North Pontic, but thought to be present into Mesopotamia and Anatolia in the first half of the first millennium BCE, alongside the Cimmerians. They were then, according to the standard description, displaced and replaced by Sarmatians, another group of East Iranian-speaking pastoralists who came to dominate the Western Steppe in the second half of the first millennium BCE while also maintaining ties further to the east.[236] Then, finally, the Alans emerged, who are considered a late-stage Sarmatian community or federation, from whom the modern Ossetians trace their descent.[237]

This sequence of development has been criticized by scholars in recent years as being largely a modern invention, and the contours of variation inside of these groups

233 Strabo 6. 4. 2, trans. H. L. Jones.

234 Fabian 2017.

235 ... *nec in alia parte maior auctorum inconstantia.* Plin. *HN* 6. 18.

236 Mordvintseva 2013b, 2013a, 2015 and Dan 2017 offer theoretical-historiographic perspectives on Sarmatian developmental narratives.

237 Shnirelman 2006 with reservations about the Ossetian-Alan identity discourse.

remain highly debated.[238] For our purposes here, it is enough to point out that the North Caucasus and the steppe that it bordered was the home to a diversity of interconnected steppe populations who shared many linguistic and cultural commonalities, above all reliance on pastoralism and (semi)mobile lifeways based on stock-raising.[239]

VII.2 A Mythological Dynastic Marriage

We have already considered a range of dynastic marriages that shaped the course of Armenia's elite, and which were recorded in a range of historic and documentary sources. There is one critical one that has not been mentioned yet, which bears on the question of North–South Caucasus relationships: that of Artašēs I (the eponymous founder of the dynasty) to an Alan princess from the North Caucasus, Sat'enik.[240] This story is not recounted in the Graeco-Latin historical tradition, but instead comes to us through MX (*Patmut'iwn Hayoc'*), as part of the emic Armenian chronicle tradition.[241] Despite the mythological nature of parts of this narrative, and a related one from the Georgian chronicle tradition discussed momentarily, the accounts are noteworthy for the worldview that they present – a worldview that reflects local understandings of regional relationships and history from the point of view of the late antique and medieval chroniclers.

The MX recounts how Artašēs and Sat'enik met during an Alan incursion across the Kura River, after the Alans had already made their way through K'art'velian territory. Artašēs's army launched a successful campaign to repel the Alans and in the process captured an Alan prince, the brother of Sat'enik. The princess, while attempting to negotiate for the release of her brother, caught the attention of Artašēs, who decided he wanted to take her as his wife. After an unsuccessful attempt to win over her father, Artašēs abducted the princess, lassoing her across the Kura. He subsequently paid a hefty bride price to the Alan king and was wed to the princess in a lavish ceremony, and they went on to have six sons.

Intriguingly, a very similar story of a North–South Caucasus dynastic marriage sits at the heart of the etiological narrative of the first dynasty of Armenia's northern neighbor, K'art'li, in the Georgian chronicle tradition. Here, the *Lives of Georgia* (KC

238 For an analysis of the constructed nature of much of the discourse, Dan 2017; Mordvintseva 2013b.

239 There is, however, a great degree of diversity within pastoralist practice: 'Nomads' is an oversimplification. For longue-durée perspectives on mobile pastoralist adaptation, Hammer and Arbuckle 2017; Honeychurch 2014.

240 MX 2. 50. On the chronological confusion and projection of this passage into the second century CE, see sec. II.1 above. See Fabian 2021 for a deeper exploration of this episode and related evidence explored in sections VII.2 and VII.3.

241 Sec. II.1.

[*K'art'lis Cxovreba*]) recounts how the first king of the P'arnavazad dynasty in K'art'li, P'arnavaz (r. ca. 299–234 BCE according to the chronicle tradition),[242] marrying a woman from the region of Durżuket'i (mod. Ingushetia/Chechnya).[243] Although the KC is not as detailed about the events surrounding this union, the testimony is direct about the benefits of this alliance for P'arnavaz's son and successor, Saurmag. When Saurmag faced problems with other elite K'art'velian families, he was able to withdraw to his mother's people in the north, and with their help and that of Alan kinsmen on his father's side, defend his claim to the throne.[244]

Put directly, these two accounts present (from the perspective of their medieval authors) a picture of the ancient world in which marriages across the Greater Caucasus watershed sat at the heart of dynastic political authority in the South Caucasus.

VII.3 Other Evidence for North–South Connectivity

There are several other lines of evidence suggesting that local communities and political authorities in the South Caucasus were more closely interwoven with the steppe in the north than is generally acknowledged. Much of this evidence, however, relates to Armenia's northern neighbor K'art'li, which seems to have been a central mediator in these relationships, and likely more tightly networked than Armenia itself. This evidence is, nevertheless, relevant for our understanding of the broader system in the highlands.

I begin by briefly introducing two lines of evidence: (1) onomastics of elites from K'art'li, and (2) a small number of *tamgas* (symbols common in the steppe world) found in elite contexts/objects from K'art'li. I then conclude with an analysis of the role of steppe populations in the geopolitics of the South Caucasus based on the Graeco-Latin textual corpus.

VII.3.1 Onomastics and Tamgas

In the first case, there are several key names of political authorities in the Georgian chronicle tradition, like Saurmag and K'art'am, that have possible East Iranian (i.e., Sarmato-Alanic) associations.[245] These individuals appear in parts of the tradition that concern the Hellenistic/classical-period history of the kingdom (insofar as material

242 Following the regnal dates of K'art'velian dynasts proposed in Toumanoff 1969; see also Rapp 2009, 652, n. 18. Some argue for a later date for the consolidation of Hellenistic K'art'li, e.g., Meißner 2000, 188; Schottky 2012, 245–246, cf. Gagoshidze 2008, 3.

243 KC, ed. S. Qauxč'išvili 1955, 24, 26–27.

244 KC, ed. S. Qauxč'išvili 1955, 26, Z. 19–23, trans. Thomson 1996, 38–39.

245 See the discussion in Rapp 2014, 226–227.

from the chronicles can be dated). Documentary evidence for similar onomastic connections comes from a small number of inscriptions from K'art'li. We find the name Zewaḫ on several large Armazian–Greek bilingual or Armazian inscriptions, and beyond this on at least three other smaller objects from graves in the region, as well as on an inscription at Tanais in the North Pontic.[246] Even more explicit in its northern connection is an inscribed intaglio from Žinvali that likely dates to the third century CE, bearing a Greek inscription reading BAKOYR ALANA, generally read as "Bakour the Alan."[247] The name Bakour appears elsewhere in the Georgian tradition, where two kings called Bakour and Bak'ar ruled between the early third and early fourth centuries respectively. This onomastic material should not be taken as clear evidence of ethnic affiliation. Firstly, names can mark a range of other identity formulations, such as political ties.[248] And secondly, the timeframe of the scattered names is very broad. Nevertheless, it is notable that these names appear repeatedly in close connection to ruling families.

In addition to this onomastic evidence, I also briefly mention the few *tamgas* that have been found in the South Caucasus. *Tamgas* and *tamga*-like signs are associated with Sarmatian contexts, where they seem to have served a range of functions including the marking of presence and of property ownership.[249] Despite their steppic associations, finds of *tamgas* are also known from outside of the steppe proper, in settlements in the North Pontic for example, where they seem to have retained an associated with authority and administrative power.[250] From the South Caucasus, symbols that seem to be *tamgas* appear above the top line of text one Armazian–Greek bilingual inscription from the site of Armazis-q'evi.[251] Although it is not entirely clear

246 From Mtskheta: on gemstone set into a belt (Apakidze et al. 1958, pl. XLV 3); on a gold ring (Apakidze et al. 1958, 79, fig. 135.16); and more ambiguously in an abbreviated form on a second ring (Apakidze et al. 1958, 48–49, fig. 19). The name, this time in Armazian, was also inscribed on a spoon found in later excavations at Bagneti (Apakidze 1973). For the name at Tanais, see Latyshev 1885–1901, no. 2.447, l. 17. For discussions of the name, see Abaev 1949, 190; Chaumont 1975, 107; Wheeler 1977, 85; Braund 1994, 215. Another name from the monolingual inscription bearing a possible East Iranian etymology, Asparug (Gr. Aspauroukis), appears in a Greek form on a signet ring found during excavations at Mc'xeta, where Asparug was named as the *pitiaxēs* (Apakidze et al. 1958, 29, fig. 4). See discussions of this name in Abaev 1949, 157–158; Duichev 1953; Schmitt 1985; Rapp 2014, 65, n. 162; Schottky 2016, 215–216. Following Schmitt and Schottky, this individual should not be connected with the later king Asp'agur.

247 Ramishvili and Dzhorbenadze 1976. See also Braund 1994, 247; Balakhvantsev and Nikolaishvili 2010; Perevalov 2003.

248 For Roman names as a sign of political afiliation among the Caucasian elite, see, e.g., Braund 1993; Linderski 2007, 267, and also Linderski 2007, 273–276.

249 For surveys of *tamgas* in steppe contexts, see Iatsenko 2001; Drachuk 1975; Kuznetsov 2007; Solomonik 1959. For more recent overviews, see Kozlovskaya and Ilyashenko 2018; Voroniatov 2009; Muratov 2017, 187–190.

250 Kozlovskaya and Ilyashenko 2018, 172–173.

251 For assessments that see the marks as *tamgas*, see Preud'homme 2019, 1; Altheim and Stiehl 1963, 250; Wheeler 1977, 82–84. These symbols have, however, been read in different ways, with early interpretation suggesting their connection to an early Georgian alphabet, Apakidze et al. 1958, 72.

that these are in fact *tamgas*, the association is supported by the presence of unambiguous *tamgas* below the text on a lesser-known inscription found in western Azerbaijan, bearing a Greek funerary epitaph.[252] Here, there is no doubt about the nature of the symbols; they find precise parallels in the North Caucasus.[253] This stele had been reused in a later grave, just like the Armazis-q'evi example.

Tamgas have also been identified on a range small finds from across the northern South Caucasus: on ceramics from the eastern Caucasus;[254] and accompanying an inscription in Greek on a silver vessel from Mc'xeta.[255] The association of these *tamgas* with Greek or Armazian inscriptions mirrors the context of some *tamgas* in the North Pontic.[256] Such an association suggests that one function of the *tamgas* may have been to increase the legibility of the inscriptions in the South Caucasus.

VII.3.2 Historical and Ethnographic Accounts

Beyond the material evidence, textual accounts from the classical tradition furnish evidence about the social and military frameworks in the region, and in this context for the relationship between the North and South Caucasus. Despite the many missing or muddled details in these accounts, they provide important evidence for social networks in the space.

One clear example of this comes from the question of how 'nomadism' is handled by the ethnographies. I have already cited the programmatic passage of Strabo, which draws a clear difference between the South Caucasus polities and their nomadic northern neighbors. But this dichotomy dissolves when Strabo considers ethnic or cultural dimensions of society, particularly in the northern reaches of the South Caucasus. For example, noting the many varied peoples in the mountains above the Black Sea, Strabo says, "the greater part of them are Sarmatians (*Sarmatae*), but they are all Caucasian (*Caucasii*)."[257] Moving to the east, he describes the highland inhabitants of K'art'li and Albania as kinsmen of their Sarmatian neighbors to the north.[258] And

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This argument echoes the recurrent association between *tamgas* and various other alphabets and protoscripts: see discussion in Manassero 2013.

252 Trever 1959, 340–341, pl. 36.

253 Iatsenko 2001, 76.

254 Iatsenko 2001, 76 n. 19.

255 Two possible *tamgas* appear at the center of a silver plate bearing an inscription marking its transfer from a king Flavius Dades to a *pitiaxēs* Bersouma; Apakidze et al. 1958, 60–63, pl. LIV. On the identity of Flavius Dades, there has been disagreement, see Balakhvantsev 2005; Braund 1993; Linderski 2007; Melikishvili 1959, 56–58. For a recent argument for a late (fourth century) date, see Coert and Schmitt 2019. The Greek text below Bersouma, reading MAKEDONI, also deserves note, Linderski 2007, 270.

256 Kozlovskaya and Ilyashenko 2018, 177–180 discuss *tamgas* found with inscriptions.

257 Strabo 11. 2. 16, trans. H. L. Jones 1917–1932.

258 Strabo 11. 3. 3; 11. 4. 5.

these genetic ties were not merely curiosities, but instead provide the justification for military collaboration between communities, particularly when faced with outside pressures.[259]

Beyond Strabo, the classical corpus offers descriptions of Alan/Sarmatian military actions unfolding in the South Caucasus, which are often characterized by a combination of close collaboration and fierce infighting. In particular, there were three episodes of North Caucasian forces moving into the South Caucasus in the first two centuries CE, one in 35 CE, a second in ca. 72 CE, and a third in 135 CE,[260] echoes of which can also be found in the Georgian tradition.[261]

To see this, it is worth spending a moment on the earliest episode of 35 CE. Accounts of this episode are preserved in Tacitus and Josephus, describing the chaotic aftermath of the death of the king of Armenia, Artašēs III, in 34 CE. The accounts agree that the Roman emperor Tiberius, looking to slow Arsakid expansion, wanted to set proxy fighters against the Arsakid interests in Armenia. He gained local support for this plan through the offer of enticements to various parties. In Josephus's less detailed version, bribes are offered to the kings of both the K'art'velians and the Albanians. Although the two monarchs refuse to fight themselves, they open the "Caspian Gates" (passes through the Greater Caucasus mountains), allowing the "Alans" to pass through their territory and fight on side of the Romans. Tacitus' account, in contrast, describes a more complicated political situation. Here, Tiberius convinces the K'art'velian king, P'arasmanes, to go out and rally support to fight against the Arsakids. P'arasmanes then brings both the Albanians and the nomads (described here as "Sarmatians") to his side and launches an attack on the Arsakid positions, again facilitated by K'art'velian control of key routes south. Tacitus notes, however, that not all of the Sarmatians were allied with P'arasmanes, as the group in fact took bribes from multiple sides. The dynamic nature of alliances that one can glimpse in this final historical account offers a bit of insight into how complicated the intraregional relationships must have been in this space, and how much energy it must have taken to manage these relationships.

Thus, when we add the northern factor back in to the story, we find another axis of political negotiation in which Armenian dynasts would have been involved. There was not a sharp, clear dividing line between the various groups that constituted local societies – it was instead a more intertwined story of collaboration and conflict. If we combine this observation with the role of northward trade activity discussed above, it becomes one with economic relevance. In this case, however, evidentiary biases make it temptingly easy to ignore this story, despite its significance. The intensely

259 Strabo 11. 4. 5.

260 35 CE: Tac. *Ann.* 6. 33–35; Joseph. *AJ* 18. 96–97. Ca. 72 CE: Joseph. *BJ* 7. 244–251. 135 CE: Cass. Dio 69. 15. 1–3.

261 Although it is difficult to relate this episode to a specific period: KC, ed. S. Qauxč'išvili 1955, 33–54, also Toumanoff 1969, 2–3, 12–13.

local and ephemeral nature of these relationships has rendered them largely invisible in the classical authors, who present a picture on a rather more global scale; but also in the archaeological record, where a host of issues concerning both the categorization and the interpretation of available data hampers the development of a holistic understanding. The dual observation – of the importance of these connections, and of their near invisibility in the historical and archaeological record – must give us pause as we think about the project of telling the story of a connected antiquity.

VIII Conclusion

I began this chapter with a discussion about the multiple scholarly perspectives that can be brought to bear on the question of Armenia in the period under discussion: Was it a 'neutral' buffer state? Or was it a central space of trade? I have taken the view that what sits under both of these interpretations is, fundamentally, a story of the multiple axes of connectivity that can develop new types of infrastructure – and then create meaning in complex, new ways – particularly in frontier spaces such as Armenia.

The word 'frontier' is of course problematic: The ancient residents of this space are unlikely to have understood their homeland as a frontier – they would rather have seen it as the center of their world. However, following a theoretical approach developed in the course of this project that articulates a model of the frontier as heuristic, one finds that there is much benefit to be drawn from this framing.[262] The heuristic understanding of frontiers calls attention to issues of dynamic, relational interactions in spaces where difference meets. These are spaces of opportunity, but with that opportunity comes risk and often danger. In the case of Armenia, local authorities and residents more broadly had to contend with the intersection of overlapping frontiers that converged in their area. In this case, that situation led to the development of a type of flexibility that local residents and especially political authorities leveraged to cope with the changes the buffeted their homeland.

When viewed this through these dual facets of frontier-ness and its connective potential, Armenia's place within Eurasian systems becomes clearer. Armenian actors were extraordinarily well networked within their local systems, maintaining diverse and wide-ranging ties with neighbors that furthered political, social, and economic goals. Over the course of the Hellenistic period, this led to the development of a variety of infrastructural developments that fostered economic ties joining Armenia into broader networks. And yet, despite the profundity of these interactions, and despite the wider taste-setting that developed within this environment and which brought Armenia into supraregional systems, it also maintained its uniqueness in

262 Weaverdyck and Dwivedi forthcoming.

ways that confound traditional approaches to imperial integration. This is most explicit in the social structure and particularly the *naxarar* system that it developed over the course of time, but it also applies to the question of urbanism and even religion.

Rather than seeing this as an exception, it is better to understand this sort of particularism as one of the benefits of life along imperial interstices, where there was a plurality of choice. Life in such a space, moreover, created unique opportunities for trade activity, both in terms of the products that moved and the routes along which they moved. In this way, the frontier context of Armenia and the story of its economic connectivities are so deeply entangled that one cannot be understood without the other, and they provide a powerful counterpoint to the more traditional narratives of economic development through integration that are pervasive across studies of ancient Eurasia.

References

Abaev, V. I. 1949. Осетинский язык и фольклор [*Ossetian language and folklore*]. Vol. 1. Мосвка: Издательство АН СССР.

Adonts, N. 1970. *Armenia in the period of Justinian: The political conditions based on the Naxarar system*. N. G. Garsoian (trans.). Lisbon: Calouste Gulbenkian Foundation.

Altheim, F. and R. Stiehl. 1963. *Die aramäische Sprache unter den Achaimeniden*. Vol. 1. Frankfurt: Klostermann.

Anderson, J. K. 1961. *Ancient Greek horsemanship*. Berkeley, CA: University of California Press.

Apakidze, A. M., G. F. Gobedzhishvili, A. N. Kalandadze, and G. A. Lomtatitdze. 1958. Мцхета. Итоги археологических исследований. Археологические памятники Армазис-хеви по раскопкам 1937–1946 гг. [*Mtskheta. Results of archaeological research. Archaeological monuments of Armzis-Khevi excavated in 1937–1946*]. Тбилиси: Издательство Академии Наук Грузинской ССР.

Apakidze, G. 1973. “ბაგინეთის კლდეკარის სარკოფაგი” [A sarcophagus of Baginet‘i, Kldikari] ძეგლის მეგობარი 33, 59–65.

Arakelyan, B. N. 1968. “Excavations at Garni, 1949–50.” In H. Field (ed.), *Contributions to the archaeology of Armenia.* Cambridge, MA: Peabody Museum.

– [Arakelian]. 1982. Арташат I. Основные результаты раскопок, 1970–1977 гг. [*Artašat I: The main results of excavations, 1970–1977*]. Ереван: Издательство АН АрмССР.

Babaev, I. A. 1966. “Глиняная булла, найденная в Мингечауре” [A clay bulla found at Mingəçevir] In *Azərbaycan tarixi məsələləri: Aspirant məqalələri külliyyatı*, 5–10. Bakı: Azərbaycan SSR Elmlər Akademiyası nəşriyyatı.

Babaev, I. A., I. Gagoshidze, and F. S. Knauß. 2007. “An Achaemenid «palace» at Qarajamirli (Azerbaijan). Preliminary report on the excavations in 2006.” *Ancient Civilizations from Scythia to Siberia* 13.1, 31–45.

Babaev, I. A. and S. M. Kaziev. 1971. “Кабалинскии клад монет эллинистической эпохи” [The Gabala hoard of coins of the Hellenistic Era]. Нумизматика и Эпиграфика IX, 16–32.

Bais, M. 2001. *Albania caucasica: Ethnos, storia, territorio attraverso le fonti greche, latine e armene*. Milan: Mimesis.

Balakhvantsev, A. S. 2005. “Царь Флавий Дад” [King Flavius Dades]. Нумизматика и эпиграфика 17, 44–55.

Balakhvantsev, A. S. and V. Nikolaishvili. 2010. "'Алан Бакур' из древней Иберии" ["Alan Bakour" from ancient Iberia]. Российская археология, no. 4, 130–135.
Beck, R. 2000. "Ritual, myth, doctrine, and initiation in the mysteries of Mithras: New evidence from a cult vessel." *The Journal of Roman Studies* 90, 145–180.
Bedoukian, P. Z. 1964. "Gold forgeries of Tigranes the Great of Armenia." *Museum Notes (American Numismatic Society)* 11, 303–306.
–. 1968. "A classification of the coins of the Artaxiad dynasty of Armenia." *Museum Notes (American Numismatic Society)* 14, 41–66.
–. 1978. *Coinage of the Artaxiads of Armenia*. London: Royal Numismatic Society.
–. 1987. *Armenian coin hoards*. Los Angeles, CA: Armenian Numismatic Society.
Bedrosian, R. 1983. "The Sparapetut'iwn in Armenia in the fourth and fifth centuries." *Armenian Review* 36.2, 6–46.
Bendschus, T. 2018. "Tigranes V. und seine Münzen. Armenische Herrscherlegitimation des frühen 1 Jhdts. n. Chr. im Spiegel der numismatischen Zeuginisse." *Numismatische Zeitschrift* 124, 9–54.
Bosworth, A. B. 1977. "Arrian and the Alani." *Harvard Studies in Classical Philology* 81, 217–255.
Braund, D. 1993. "King Flavius Dades." *Zeitschrift für Papyrologie und Epigraphik* 96, 46–50.
–. 1994. *Georgia in antiquity: A history of Colchis and Transcaucasian Iberia, 550 BC–AD 562*. Oxford: Clarendon Press.
–. 2002. "Indian traders at Phasis: Neglected texts on ancient Georgia." In M. Faudot, A. Fraysse, and E. Geny (eds.), *Pont Euxin et commerce: la genèse de la "route de la soie,"* 287–295. Besançon: Presses universitaires franc-comtoises.
–. 2003. "Notes from the Black Sea and Caucasus: Arrian, Phlegon and Flavian inscriptions." *Ancient Civilizations from Scythia to Siberia* 9.3, 175–91.
Bresson, A. and E. Fagan. 2022. The Greek inscription from Garni (Armenia) and King Tiridates the Great. Part I. Вестник древней истории n. 3, 597–622.
Callieri, P. 2001. "La presunta via commerciale tra l'India e Roma attraverso l'Oxus e il Mar Caspio: nuovi dati di discussione." *Topoi. Orient-Occident* 11.1, 537–546.
Canali de Rossi, F. 2004. Iscrizioni dello estremo oriente greco: un repertorio. Habelt: Bonn.
Canepa, M. P. 2018. *Iranian expanse: Transforming royal identity through architecture, landscape, and the built environment, 550 BCE–642 CE*. Oakland, CA: University of California Press.
Chaumont, M.-L. 1975. "États vassaux dans l'Empire des premiers Sassanides." *Acta Iranica*, no. 4, 89–156.
–. 1976. "L'Arménie entre Rome et l'Iran, 1. De l'avènement d'Auguste à l'avènement de Dioclétien." *Aufstieg und Niedergang der römischen Welt*. Part 2, vol. 9.1, 71–194. Berlin: De Gruyter.
–. 1985. "A propos des premières interventions Parthes en Arménie et des circonstances de l'avènement de Tigrane le Grand." *Acta Antiqua Academiae Scientiarum Hungaricae* 31, 13–25.
–. 1986. "Armenia and Iran II. The pre-Islamic period." *Encyclopaedia Iranica*. Vol. 2.4, 418–438.
Clark, T. 2021. "Processing into dominance: Nero, the crowning of Tiridates I, and a new narrative of Rome's supremacy in the east." *Journal of Ancient History* 9.2, 269–296.
Coert, J. and T. Schmitt. 2019. "Wer war Fl. Dades? Überlegungen zum Verständnis einer Inschrift aus dem kaukasischen Iberien." In V. Cojocaru, L. Ruscu, T. Castelli, and A.-I. Pázsint (eds.), *Advances in ancient Black Sea studies: Historiography, archaeology and religion*, 347–390. Cluj-Napoca: Phoibos.
Connors, C. 2017. "Babylonian stories and the ancient novel: Magi and the limits of empire in Iamblichus' *Babyloniaka*." In M. P. Futre Pinheiro, D. Konstan, and B. D. MacQueen (eds.), *Cultural crossroads in the ancient novel*, 39–50. Berlin: De Gruyter.
Dąbrowa, E. 2018. "Arsacid dynastic marriages." *Electrum* 25, 73–83.
Dan, A. 2017. "The Sarmatians: Some thoughts on the historiographic invention of a west Iranian migration." In F. Wiedemann, K. P. Hofmann, and H.-J. Gehrke (eds.), *Vom Wandern der Völker: Migrationserzählungen in den Altertumswissenschaften*, 97–134. Berlin: Edition Topoi.
Dardeniz, G. 2015. "Was ancient Egypt the only supplier of natron? New research reveals major Anatolian deposits." *Anatolica* 41, 191–202.

De Jong, A. 2008. “Regional variation in Zoroastrianism: The case of the Parthians.” *Bulletin of the Asia Institute* 22, 17–27.

Dignas, B. 2002. *Economy of the sacred in Hellenistic and Roman Asia Minor.* Oxford: Oxford University Press.

Drachuk, V. S. 1975. Системы знаков Северного Причерноморья: тамгообразные знаки северопонтийской периферии антич. мира первых веков нашей эры [*Systems of signs of the North Black Sea: Tamga-like symbols of the North Pontic periphery of the ancient world in the first centuries of our era*]. Киев: Наук. думка.

Duichev, I. 1953. “Имя Аспарух в новооткрытых надписях Грузии” [The name Asparukh on a newly discovered inscription of Georgia] *Archiv Orientálni* 21, 353–356.

Dundua, G. F. and G. A. Lordkipanidze. 1983. Денежное обращение центральной Колхиды V–I вв. до н. э. (по материалам Ванского городища) [*Monetary circulation of central Colchis 5th c.–1st c. BCE (based on material from Vani settlement)*]. Тбилиси: Издательство Тбилиского Университетаю.

Eraslan, S. 2015. “Tethys and Thalassa in mosaic art.” *Art-Sanat Dergisi* 4, 1–13.

Eremian, S. T. 1953. “Развитие городов и городской жизни в древней Армении.” [The development of cities and urban life in ancient Armenia]. Вестник древней истории, no. 3, 11–31.

Fabian, L. 2019. “The meanings of coins in the ancient Caucasus.” *Historische Anthropologie* 27.1, 32–51.

–. 2020. “Albania in Greek and Latin texts: The use and utility of ‘views from the west’.” In R. Hoyland (ed.), *Caucasian Albania*, 13–30. Piscataway, NJ: Gorgias Press.

–. 2021. “Bridging the divide: Marriage politics across the Caucasus.” *Electrum* 28, 221–244.

Fishman, S. G. 2016. “The space between: Ceramic production and exchange in Roman-Parthian period Oğlanqala, Azerbaijan.” *Journal of Archaeological Science: Reports* 9, 12–24.

Foss, C. 1986. “The coinage of Tigranes the Great: Problems, suggestions and a new find.” *The Numismatic Chronicle* 146, 19–66.

Franklin, K. 2021. *Everyday cosmopolitanisms: Living the Silk Road in medieval Armenia*. Oakland, CA: University of California Press.

Furtwängler, A. E., I. Gagoshidze, H. Löhr, and N. Ludwig, eds. 2008. *Iberia and Rome: The excavations of the palace at Dedoplis Gora and the Roman influence in the Caucasian kingdom of Iberia*. Langenweissbach: Beier & Beran.

Gagoshidze, I. 1992. “The temples at Dedoplis Mindori.” *East & West* 42.1, 27–48.

–. 2001. “A royal palace in first-century Iberia, according to the archaeological material from Dedoplis Gora, Georgia.” In I. Nielsen (ed.), *The royal palace institution in the first millennium BC: Regional development and cultural interchange between East and West*, 259–279. Aarhus: Aarhus University Press.

–. 2008. “Kartli in Hellenistic and Roman times. General aspects.” In Furtwängler, Gagoshidze, Löhr, and Ludwig (2008), 1–40.

Garsoïan, N. G. 1976. “Prolegomena to a study of the Iranian aspects of Arsacid Armenia.” *Handês Amsorya* 90, cols. 177–234.

–. 1984–1985. “The early-medieval Armenian city: An alien element?” *Journal of the Ancient Near Eastern Society* 16–17, 67–83.

–. 1989. *The epic histories. Attributed to P’awstos Buzand (Buzandaran Patmut’iwnk)*. Cambridge, MA: Harvard University Press.

–. 1997. *The emergence of Armenia*. R. G. Hovannisian (ed.). New York, NY: St. Martin’s Press.

Gazzano, F. 2016. “Croesus’ story in the history of Armenia of Movsēs Xorenacʻi.” In Gazzano, Pagani, and Traina (2016), 83–114.

Gazzano, F., L. Pagani, and G. Traina, eds. 2016. *Greek texts and Armenian traditions: An interdisciplinary approach*. Berlin: De Gruyter.

Gyulamiryan, H., S. Muradyan, M. Zardaryan, A. Lichtenberger, and T. Schreiber. 2021. “The Armenian-German archaeological project: Results from the excavations in Artaxata 2018–2021.” Գիտական աշխատություններ 24, 5–18.

Halfmann, H. 1986. “Die Alanen und die römische Ostpolitik unter Vespasian.” *Epigraphica Anatolica* 8, 39–50.

Hammer, E. L. 2014. “Highland fortress-polities and their settlement systems in the southern Caucasus.” *Antiquity* 88.341, 757–774.

Hammer, E. L. and B. S. Arbuckle. 2017. “10,000 years of pastoralism in Anatolia: A review of evidence for variability in pastoral lifeways.” *Nomadic Peoples* 21.2, 214–267.

Hewsen, R. H. 1986. “Armavir.” *Encyclopaedia Iranica*. Vol. 2.4, 415–416

–. 1988–1989. “Introduction to Armenian historical geography IV: The Vitaxates of Arsacid Armenia. A reexamination of the territorial aspects of the institution (part one).” *Revue des Études Arméniennes* 21, 271–319.

–. 1990–1991. “Introduction to Armenian historical geography IV: The vitaxates of Arsacid Armenia. A reexamination of the territorial aspects of the institution (part two).” *Revue des Études Arméniennes* 22, 147–183.

Honeychurch, W. 2014. “Alternative complexities: The archaeology of pastoral nomadic states.” *Journal of Archaeological Research* 22.4, 277–326.

Iatsenko, S. A. 2001. Знаки-тамги ираноязычных народов древности и раннего средневековья [*Symbol-tamagas of the Iranian-speaking peoples of antiquity and the early middle ages*]. Москва: Восточная литература.

Invernizzi, A., ed. 1998. *Ai piedi dell’Ararat: Artaxata e l’Armenia ellenistico-romana*. Florence: Le lettere.

Jacobs, B. 2000. “Achaimenidenherrschaft in der Kaukasus-Region und in Cis-Kaukasien.” *Archäologische Mitteilungen aus Iran und Turan* 32, 93–102.

Jones, H. L. 1917–1932. *Strabo’s Geography*. Cambridge, MA: Harvard University Press.

Jong, A. de. 2013. “Hatra and the Parthian commonwealth.” In L. Dirven (ed.), *Hatra. Politics, culture and religion between Parthia and Rome*, 143–160. Stuttgart: Franz Steiner.

–. 2015. “Armenian and Georgian Zoroastrianism.” In M. Stausberg and Y. S.-D. Vevaina (eds.), *The Wiley Blackwell companion to Zoroastrianism*, 119–129. Malden, MA: Wiley-Blackwell.

Kéfélian, A. 2016. “The Roman army and the transmission of Latin loan words in Old Armenian.” In Gazzano, Pagani, and Traina (2016), 143–162.

Khachatryan [Khachatrian], Z. 1996. “The archives of sealings found at Artashat (Artaxata).” In M.-F. Boussac and A. Invernizzi (eds.), *Archives et sceaux du monde hellénistique*. BCH Supplement, Vol. 29, 365–370.

–. 2005. “Archaeological research in Artaxata. Preliminary report 2003–2004.” *Parthica* 7, 19–28.

–. 2007. “Քաղաքամայր Արտաշատը պատմահնագիտական հետազոտությունների լույսի ներքո” [City of Artašat in the light of historical and archaeological research]. Համար, no. 2, 3–36.

–. 2010. “Հին Հայաստանի մայրաքաղաք Արտաշատը շարունակում է անակնկալներ մատուցել” [Artašat, the ancient capital of Armenia, continues to offer surprises]. Էջմիածին no. ԺԲ, 36–53.

Khatchadourian, L. 2007. “Unforgettable landscapes: Attachments to the past in Hellenistic Armenia.” In N. Yoffee (ed.), *Negotiating the past in the past: Identity, memory, and landscape in archaeological research*, 43–75. Tucson, AZ: University of Arizona Press.

–. 2008. “Making nations from the ground up: Traditions of classical archaeology in the South Caucasus.” *American Journal of Archaeology* 112.2, 247–278.

–. 2016. *Imperial matter: Ancient Persia and the archaeology of empires*. Oakland, CA: University of California Press.

K’imšiašvili, K. and G. Narimanišvili. 1995. “A group of Iberian fire-temples (4th cent. BC–2nd cent. AD).” *Archäologische Mitteilungen aus Iran* 28, 309–318.

Knauß, F. 2000. “Der Palast von Gumbati und die Rolle der Achaimeniden im transkaukasischen Iberien.” *Archäologische Mitteilungen aus Iran und Turan* 32, 119–130.

–. 2006. “Ancient Persia and the Caucasus.” *Iranica antiqua* 41, 79–118.

Knauß, F., I. Gagoshidze, and I. A. Babaev. 2013. “Karačamirli: Ein persisches Paradies.” *ARTA: Achaemenid Research on Texts and Archaeology* 4, 1–29.

Kovacs, F. L. 2016. *Armenian coinage in the classical period*. Lancaster, PA: Classical Numismatic Group.

Kozlovskaya, V. and S. I. Ilyashenko. 2018. “Tamgas and tamga-like signs from Tanais.” In W. E. Keil, S. Kiyanrad, C. Theis, and L. Willer (eds.), *Zeichentragende Artefakte im sakralen Raum. Zwischen Präsenz und UnSichtbarkeit*, 167–198. Berlin: De Gruyter.

Kunze, R., A. Bobokhyan, K. Meliksetian, E. Pernicka, and D. Wolf. 2011. “Archäologische Untersuchungen zur Umgebung der Goldgruben in Armenien mit Schwerpunkt Sotk, Provinz Gegharkunik.” In H. Meller and P. Avetissyan (eds.), *Archaeology in Armenia, Ergebnise der Kooperationsprojekte 2010 – Ein Vorbericht*, 17–49. Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt.

Kuznetsov, V. D. 2007. “Тамга Савромата II из Фанагории” [A tamga of Savromat II from Phanagoria]. Древности Боспора 11, 225–234.

Kvavadze, E. and I. Gagoshidze. 2008. “Fibres of silk, cotton and flax in a weaving workshop from the first century A.D. palace of Dedoplis Gora, Georgia.” *Vegetation History and Archaeobotany* 17, 211–215.

Lang, D. M. 1983. “Iran, Armenia and Georgia.” In E. Yarshater (ed.), *The Cambridge history of Iran:* Vol. 3.1, 505–536. Cambridge: Cambridge University Press.

Latyshev, V. V., ed. 1885–1901. *Inscriptiones antiquae orae septentrionalis Ponti Euxini graecae et latinae*. 4 vols. Saint Petersburg: Tipografia Imperatorskoi akademii nauk.

Lichtenberger, A., M. H. Zardaryan, and T. Schreiber. 2021. “Failed Roman imperialism. An unfinished Roman aqueduct at Artaxata in Armenia.” *Archäologischer Anzeiger* no. 1, https://doi.org/10.34780/8f82-fyw2.

Linderski, J. 2007. “How did King Flavius Dades and Pitiaxes Publicius Agrippa acquire their Roman names?” In J. Lindersky (ed.), *Roman Questions II*, 262–276. Stuttgart: Franz Steiner.

Lindsay, I. and A. Greene. 2013. “Sovereignty, mobility, and political cartographies in Late Bronze Age southern Caucasia.” *Journal of Anthropological Archaeology* 32.4, 691–712.

Luther, A. 2018. “Zu den Dokumenten aus Avroman.” *Gymnasium* 125.2, 155–177.

Luttwak, E. 1976. *The grand strategy of the Roman Empire from the first century AD to the third*. Baltimore, MA: Johns Hopkins University Press.

Mahé, J.-P. 1996. “Le site arménien d’Armawir: d’Ourartou à l’époque hellénistique.” *Comptes rendus des séances de l’Académie des Inscriptions et Belles-Lettres* 140.4, 1279–1314.

Manandyan [Manandian], H. A. 1954. О торговле и городах Армении в связи с мировой торговлей древних времен (в V. до н. э.–XV в. н. э.) [*The trade and cities of Armenia in relation to ancient world trade (from the 5th c. BCE to the 15th c. CE)*]. Ереван: Издательство Ереванского университета.

–. 1963. *Tigrane II et Rome*. H. Thorossian (trans.). Lisbon: Livraria Bertrand.

–. 1965. *The trade and cities of Armenia in relation to ancient world trade*. N. G. Garsoïan (trans.). Lisbon: Livraria Bertrand.

Manassero, N. 2013. “Tamgas and literacy among the ancient Iranians.” *Re:marks, Journal of Signum* 1, 43–61.

Manoukian, H. 1996. “Les empreintes d’Artachate (Antique Artaxata).” In M.-F. Boussac and A. Invernizzi (eds.), *Archives et sceaux du monde hellénistique*. BCH Supplement, Vol. 29, 371–373.

Maranci, C. 2018. *The art of Armenia: An introduction*. Oxford: Oxford University Press.

Marciak, M. 2017. “The site of Arzan.” *Ancient West & East* 16, 305–324.

Marciak, M. and R. S. Wójcikowski. 2016. “Images of kings of Adiabene: Numismatic and sculptural evidence.” *Iraq* 78, 79–101.

Mari, F. 2016. “Cyrus the Great in Movsēs Xorenacʻi, Patmutʻiwn Hayocʻ: Telescoping the king.” In Gazzano, Pagani, and Traina (2016), 115–142.

Masson, V. M. 1997. “Кавказский путь к цивилизации: вопросы социокультурной интерпретации” [The Caucasian road to civilization: Issues of socio-cultural interpretation]. In Древние общества Кавказа в эпоху палеометалла (ранние комплексные общества и вопросы культурной трансформации), 124–134. Санкт-Петербур: Институт истории материальной культуры РАН.

Meißner, B. 2000. “A belated nation: Sources on ancient Iberia and Iberian kingship.” *Archäologische Mitteilungen aus Iran und Turan* 32, 177–206.

Melikishvili, G. A. 1959. К истории древней Грузии [*On the history of ancient Georgia*]. Тбилиси: Издательство Академии наук Грузинской ССР.

Mordvintseva, V. 2013a. “Исторические сарматы и сарматская археологическая культура в Северном Причерноморье” [The history of the Sarmatians and Sarmatian archaeological culture in the North Black Sea]. In I. N. Khapunov (ed.), Крым в сарматскую эпоху (II в. до н. э.–IV в. н. э.). Vol. 1, 14–43. Симферополь: Бахчисарай.

–. 2013b. “The Sarmatians: The creation of archaeological evidence.” *Oxford Journal of Archaeology* 32.2, 203–219.

–. 2015. “Сарматы, Сарматия и Северное Причерноморье” [Sarmatians, Sarmatia and the North Black Sea]. Вестник древней истории, no. 1, 109–135.

Mousheghian, K., A. Mousheghian and G. Depeyrot. 2000. *History and coin finds in Armenia: Antiquity*. Wetteren: Moneta.

Muratov, M. 2017. “The language(s) of images in the arts of the Bosporan Kingdom.” In V. Kozlovskaya (ed.), *The Northern Black Sea in antiquity: Networks, connectivity, and cultural interactions*, 169–191. Cambridge: Cambridge University Press.

Nachmias, A., G. Bar-Oz, D. Nadel, I. Petrosyan, and B. Gasparyan. 2021. “A monumental horse burial in the Armenian highlands.” *Archaeology, Ethnology & Anthropology of Eurasia* 49.3, 41–50.

Nercessian, Y. T. 2006. *Silver coinage of the Artaxiad dynasty of Armenia*. Los Angeles, CA: Armenian Numismatic Society.

Nurpetlian, J. 2010. “Ancient Armenian coins: The Artaxiad Dynasty (189 BC–AD 6).” *Berytus: Archaeological Studies* 51, 117–167.

Odišeli, M. D. 1995. *Spätantike und frühchristliche Mosaike in Georgien.* Vienna: Verlag der Österreichischen Akademie der Wissenschaften.

Olbrycht, M. J. 2021. “The Battle of Tigranokerta, Lucullus, and Cataphracts.” Mnemosyne, 75.6, 946–981.

Pakhomov, E. A. 1926. Монетные клады Азербайджана и Закавказья [*Coin Hoards of Azerbaijan and Transcaucasia*]. Vol. 1. Ваку: Издание Овщества Обследования и Изучения Азербайджана.

–. 1938. Монетные Клады Азербайджана и других республик и краев Кавказа [*Coin Hoards of Azerbaijan and other republics and regions of the Caucasus*]. Vol. 2. Ваку: Издательство Азербайджанского филиала Акедемии наук СССР.

Patterson, L. E. 2013. “Caracalla’s Armenia.” *Syllecta Classica* 24.1, 173–199.

–. 2015. “Antony and Armenia.” *Tapa*, 77–105.

Payaslian, S. 2007. *The history of Armenia.* New York, NY: Macmillan.

Perevalov, S. M. 2003. “Бакур-алан из древней Иберии” [Bakur-Alan from ancient Iberia]. *Nartamongæ* 2.1–2, 47–56.

Perihanân, A. G. 1971. “Les inscriptions Araméennes du roi Artachès:(A propos d’une récente trouvaille épigraphique en Arménie).” *Revue des Études Arméniennes* 8, 169–174.

Petrosyan, H. 2021. “Politics, ideology and landscape: Early Christian Tigranakert in Artsakh.” *Electrum* 28, 163–187.

Plontke-Lüning, A. 2009. “Iranische Feuertempel: Genese, Entwicklung und Funktion.” *Ancient West & East* 8, 203–221.

Preud’homme, N. J. 2019. “La stèle des victoires du piṭaḫš Śargas et la réaffirmation de la domination royale en Ibérie du Caucase.” *Camenulae* 22, 1–20.

Qauxč‘išvili, S., ed. 1955. ქართლის ცხოვრება [K‘art‘lis c‘xovreba]. თბილისი: საბჭოთა საქართველო.

Qauxč‘išvili, T. 1999–2000. საქართველოს ბერძნული წარწერების კორპუსი [Corpus of Greek Inscriptions]. 3 vols. თბილისი: ლოგოსი.

Ramishvili, R. M. and V. A. Dzhorbenadze. 1976. “Археологические исследования в зоне строительства Жинвальского гидротехнического комплекса” [Archaeological research in the construction zone

of the Zhinvali hydraulic complex]. In Археологические исследования на новостройках Грузинской ССР, 30–44. Тбилиси: Мецниереба.
Rapp, S. H. 2009. “The Iranian heritage of Georgia: Breathing new life into the pre-Bagratid historiographical tradition.” *Iranica Antiqua* 44, 645–692.
–. 2014. *The Sasanian world through Georgian eyes: Caucasia and the Iranian commonwealth in Late Antique Georgian literature*. Farnham: Ashgate.
Rckavandi, H. O., E. W. Sauer, T. Wilkinson, G. A. Abbasi, S. Priestman, E. S. Tamak, R. Ainslie, M. Mahmoudi, N. Galiatsatos, and K. Roustai. 2008. “Sasanian walls, hinterland fortresses and abandoned ancient irrigated landscapes: The 2007 season on the great wall of Gorgan and the wall of Tammishe.” *Iran* 46.1, 151–178.
Rollinger, R. and A. Kellner. 2019. “Once more the Nabonidus Chronicle (BM 35382) and Cyrus’ campaign in 547 BC.” *Ancient West & East* 18, 153–176.
Rtveladze, E. V. 2010. “The great Indian road: India-Central Asia-Transcaucasia.” *Anabasis. Studia Classica et Orientalia* 1, 80–96.
Russell, J. R. 1987. *Zoroastrism in Armenia*. Cambridge, MA: Harvard University Press.
Santrot, J. and R. S. Badalian, eds. 1996. *Arménie: trésors de l’Arménie ancienne: des origines au IVe siècle*. Paris: Somogy and Musée Dobrée.
Saprykin, S. Ju. 2007. “The unification of Pontos. The bronze coins of Mithridates VI Eupator as evidence for commerce in the Euxine.” In V. Gabrielsen and J. Lund (eds.), *The Black Sea in antiquity. Regional and interregional economic exchanges*, 195–208. Aarhus: Aarhus University Press.
Scarborough, J. 2015. “Fish glue (Gr. ΙΧΘΥΟΚΟΛΛΑ) in Hellenistic and Roman medicine and pharmacology.” *Classical Philology* 110.1, 54–65.
Schleicher, F. 2021. *Iberia Caucasica. Ein Kleinkönigsreich im Spannungsfeld großer Imperien*. Stuttgart: Kohlhammer.
Schmitt, R. 1985. “Asparuch und Konsorten im Lichte der Iranischen Onomastik.” *Linguistique balkanique* 28, 13–38.
Schmitt, R., M. L. Chaumont, J. R. Russell, M. V Esbroeck, and H. Papazian. 1986. “Armenia and Iran.” *Encyclopaedia Iranica.* Vol. 2.4–5, 417–478.
Schneider, P. 2017. “From India to the Black Sea: An overlooked trade route?” hal-01376630v2 f.
Schottky, M. 2012. “Vorarbeiten zu einer Königsliste Kaukasisch-Iberiens. 1. Anfänge der Pharnabaziden.” *Anabasis. Studia Classica et Orientalia* 3, 239–250.
–. 2016. “Vorarbeiten zu einer Königsliste Kaukasisch-Iberiens. 5. Im Schatten Schapurs II.” *Anabasis. Studia Classica et Orientalia* 7, 204–221.
Schreiber, T. 2021. “The archives of Artaxata: Archival practice in the capital of ancient Armenia.” *Electrum* 28, 277–310.
Sherozia, M. 2008. “Monetary circulation in Iberia in the 1st century BC–1st Century AD” In Furtwängler, Gagoshidze, Löhr, and Ludwig (2008), 235–252.
Sherwin-White, A. N. 1984. *Roman foreign policy in the East, 168 BC to AD 1*. London: Duckworth.
Shnirelman, V. 2006. “The politics of a name: Between consolidation and separation in the northern Caucasus.” *Acta Slavica Iaponica* 23, 37–73.
Shortland, A. J., P. Degryse, M. Walton, M. Geer, V. Lauwers, and L. Salou. 2011. “The evaporitic deposits of Lake Fazda (Wadi Natrun, Egypt) and their use in Roman glass production.” *Archaeometry* 53.5, 916–929.
Shortland, A. J. and H. Schroeder. 2009. “Analysis of first millennium BC glass from vessels and beads from the Pichvnari necropolis, Georgia.” *Archaeometry* 51.6, 947–965.
Simpson, S. J. 2015. “Sasanian glassware from Mesopotamia, Gilan, and the Caucasus.” *Journal of Glass Studies*, 77–96.
Sinclair, T. A. 1995. “The site of Tigranocerta I.” *Revue des Études Arméniennes* 25, 183–253.
–. 1996. “The site of Tigranocerta. II.” *Revue des Études Arméniennes* 26, 51–118.
Solomonik, E. I. 1959. Сарматские знаки Северного Причерноморья [*Sarmatian symbols of the northern Black Sea*]. Киев: Издательство Академии Наук Украинской ССР.

Speidel, M. 2021. "*Provincia Armenia* in the light of the epigraphic evidence." *Electrum* 28, 135–150.
Sullivan, R. D. 1990. *Near Eastern royalty and Rome, 100–30 BC*. Toronto: University of Toronto Press.
Sundermann, W. 1989. "Bidaxš." *Encyclopaedia Iranica* 4.3, 242–244.
Tarn, W. W. 1901. "Patrocles and the Oxo-Caspian trade route." *The Journal of Hellenic Studies* 21, 10–29.
Ter-Martirossov, F. 2001. "The typology of the columnar structures of Armenia in the Achaemenid period." In I. Nielsen (ed.), *The royal palace institution in the first millennium BC: Regional development and cultural interchange between East and West*, 155–163. Aarhus: Aarhus University Press.
Thompson, M., O. Mørkholm, and C. M. Kraay. 1973. *An inventory of Greek coin hoards*. New York, NY: American Numismatic Society.
Thomson, R. W. 1978. *Moses Khorenats'i: History of the Armenians*. Cambridge, MA: Harvard University Press.
–. 1996. *Rewriting Caucasian history. The medieval Armenian adaptation of the Georgian chronicles. The original Georgian chronicles and the Armenian adaptation*. Oxford: Oxford University Press.
–. 2004. "Armenian ideology and the Persians." In G. Gnoli (ed.), *Convegno internazionale La Persia e Bisanzio: (Roma, 14–18 ottobre 2002)*, 373–389. Rome: Accademia Nazionale dei Lincei.
–. 2014. "The major works of Armenian historiography (classical and medieval)." In V. Calzolari und M. E. Stone (eds.), *Armenian philology in the modern era. From manuscript to digital text,* 303–320. Leiden: Brill.
Tiratsyan, G. A. 1979. "Armenian towns of Hellenistic times in the light of archaeological research." In R. Vardanyan (ed.), S. Mardanyan, G. Muradyan, and A. T'op'chyan (trans.), *From Urartu to Armenia: Florilegium Gevork A. Tiratsyan in memoriam*, 127–138. Neuchâtel: Recherches et publications.
Tonikyan, A. V. 1992. "The layout of Artashat and its historical development." *Mesopotamia* 27, 161–187.
Toumanoff, C. 1963. *Studies in Christian Caucasian history*. Washington, D.C.: Georgetown University Press.
–. 1969. "Chronology of the early kings of Iberia." *Traditio* 25, 1–33.
Traina, G. 2016. "Traditions on Armenia in submerged Greek literature: Preliminary considerations." In G. Colesanti and L. Lulli (eds.), *Submerged literature in ancient Greek culture.* Vol. 2, 111–123. Berlin: De Gruyter.
–. 2017. "Strabo and the history of Armenia." In D. Dueck (ed.), *The Routledge companion to Strabo*, 93–101. London: Routledge.
–. 2019. "Dynastic connections in Armenia and Iberia: Further reflections on the Greek inscriptions from Bagineti (SEG 52, no. 1509–1510)." In U. Hartmann, T. Stickler, and F. Schleicher (eds.), *Iberien zwischen Rom und Iran: Beiträge zur Geschichte und Kultur Transkaukasiens in der Antike*, 123–128. Stuttgart: Franz Steiner.
–. 2021a. "Ancient Armenia: Evidence and models." *Electrum* 28, 13–20.
–. 2021b. "Armenia and the 'Orontid connection.' Some remarks on Strabo, Geography 11, 14, 15." In M. Blömer, S. Riedel, M. J. Versluys, and E. Winter (eds.), *Common dwelling place of all the gods*, 345–356. Stuttgart: Franz Steiner.
Trever, K. V. 1953. Очерки по истории культуры древней Армении (II в. до н. э.–IV в. н. э.) [*Studies on the history of the culture of ancient Armenia: 2nd century BCE–4th century CE*]. Москва: Издательство Академии наук СССР.
–. 1959. Очерки по истории и культуре Кавказской Албании IV в. до н. э.–VII в. н. э. [*Studies on the history and culture of Caucasian Albania: 4th century BCE–7th century CE*]. Москва: Издательство Академии наук СССР.
Tsetskhladze, G. R. 1989. "Монеты Диоскуриады из Херсонеса таврического" [Coins of Diosurias from Tauric Chersonesos]. Вестник древней истории, no. 4, 91–95.
–. 1992. "Greek colonization of the Eastern Black Sea littoral (Colchis)." *Dialogues d'histoire ancienne* 18.2, 223–258.
–. 1993. "On the numismatics of Colchis: the classical archaeologist's perspective." *Dialogues d'histoire ancienne* 19.1, 233–256.

Tuallagov, A. A. 2014. Аланы Придарьялья и закавказские походы I–II вв. [*The Alan pre-Darial and Transcaspian campaigns of the 1st and 2nd centuries*]. Владикавказ: ИПЦ СОИГСИ ВНЦ РАН и РСО-А, 2014.

Vardumian, G. D. 1991. "Дохристианские культы армян" [The pre-Christian cults of the Armenians]. Армянская этнография и фольклор (материалы и исследования) 18, 60–146.

Vargyas, P. 2008. "The silver hoard from Nush-i Jan revisited." *Iranica antiqua* 43, 167–183.

Versluys, M. J. 2017. *Visual style and constructing identity in the Hellenistic world: Nemrud Dağ and Commagene under Antiochos I*. Cambridge: Cambridge University Press.

Vinogradov, J. G. 1990. "Côte septentrionale du Pont, Caucase, Asie centrale." *Bulletin epigraphique, Revue des Études Grecques*, 103, 531–560.

Voroniatov, S. V. 2009. "О функции сарматских тамг на сосудах" [On the function of Sarmatian tamagas on vessels]. In Гунны, готы и сарматы между Волгой и Дунаем, 80–98. Санкт-Петербург.

Wages, S. M. 1986. "A note on the Dumbarton Oak 'Tethys mosaic'." *Dumbarton Oaks Papers* 40, 119–128.

Weaverdyck, E. J. S. and M. Dwivedi. Forthcoming. "Introduction." In L. Fabian, K. Leese-Messing, E. J. S. Weaverdyck, L. Morris, and M. Dwivedi (eds.), *Economies of the edge: Frontier-zone processes at regional, imperial, and global scales (300 BCE–300 CE)*. Heidelberg: HeiUP.

Wheeler, E. L. 1977. "Flavius Arrianus: A political and military biography." PhD diss., Duke University.

Wilkinson, R. D. 1982. "A fresh look at the Ionic building at Garni." *Revue des Études Arméniennes* 16, 221–244.

Wolf, D. and R. Kunze. 2013. "Gegharkunik–Neue Quellen für altes Gold aus Südkaukasien." In H. Meller, R. Risch, and E. Pernicka (eds.), *Metalle der Macht – Frühes Gold und Silber*, 111–140. Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt.

Yao, A. 2012. "Sarmatian mirrors and Han ingots (100 BC–AD 100): How the foreign became local and vice versa." *Cambridge Archaeological Journal* 22.1, 57–70.

Ziegler, K.-H. 1964. *Die Beziehungen zwischen Rom und dem Partherreich: Ein Beitrag zur Geschichte des Völkerrechts.* Stuttgart: Franz Steiner.

Zimansky, P. E. 1985. *Ecology and empire: The structure of the Urartian state*. Chicago, IL: University of Chicago Press.

Leonardo Gregoratti

10 An Empire of Many Frontiers: The Economy of Arsakid Borderlands

I Which Frontier?

Almost thirty years ago, Charles Richard Whittaker, in his fundamental book *Frontiers of the Roman Empire, a Social and Economic Study*, introduced an enlightening new approach to the frontiers of the Roman state, an approach that profoundly influenced the perception of the relationships between the Roman Empire and its neighbors.[1] Whittaker strongly criticized the idea expressed a couple of decades before by the American strategist Edward Luttwak, who, in his much discussed and extremely popular book on Roman territorial expansion, land control, and frontiers, theorized the existence of an overall 'Grand Strategy' elaborated through time by the leadership of the Roman Empire and aimed at extending the imperial territory within a precise and 'scientifically' defined system of artificial and natural frontiers.[2]

According to Luttwak, a three-stage evolution could be discerned, especially regarding the Roman eastern frontier. There was first a 'client state' phase, in which the limits of the Roman political sphere extended well beyond the provincial territory, and most of Rome's domains were controlled indirectly. There followed a second 'border defense,' which was the stage of maturity according to Luttwak, when client kingdoms were absorbed into the empire and direct territorial control prevailed.[3] 'Scientific' frontiers were established and strenuously defended until in the third phase the decline of the late empire forced the Roman leadership to adopt a much-contested 'defense-in-dept,' the abandonment of a defense line to protect cities and settlements in the backcountry.

Whittaker, however, demonstrated the inapplicability of Luttwak's geopolitical model in the western provinces by analyzing the frontiers of the empire as a whole. In particular, he contested the idea of a 'scientific frontier' as a real frontier, and therefore its role as a defense line for the empire.[4] Luttwak was highly influenced by nineteenth-century conceptions of nation states and borders, and therefore contemporary history. Whittaker also emphasized the absence of a 'scientific frontier' – an agreed-upon administrative border such as modern states have – along the Euphrates where one would have expected it most.[5] There, Roman power bordered the only

1 Whittaker 1994; see also Weaverdyck, vol. 1, ch. 7, 252–236.

2 Luttwak (1976) 2016, 51–125; earlier, Alföldy 1952; see also von Reden and Speidel, vol. 1, ch. 17, esp. 718.

3 Luttwak (1976) 2016, 21–22.

4 Whittaker 1994, 60–61.

5 Whittaker 1994, 51–52.

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other political contender characterized by a comparable geographical extension, similar military power, and similar resources: the Arsakid Empire.[6] There was no negotiated boundary line – the expression of the territorial limits and extension of two authorities – which, following the nineteenth-century conception of national borders, would have been the natural consequence of past political conflicts between rival superpowers, and the most likely safeguard to avoid future ones.

Whittaker took into account the perplexities expressed by specialists in the history of the region. Benjamin Isaac had already presented his objections to Luttwak's frontier model on archaeological grounds.[7] In his fundamental *The Roman Near East* published the previous year, Fergus Millar, the pioneer of modern historical research on the Roman presence west of the Euphrates, had conceived the Roman Eastern *limes* as a communication line between humans and governments on both sides of it, be this a road, a river, or a line of interconnected forts.[8] Already there the idea of a *limes* frontier as an actual defense line, a geographical boundary to guard, had been called into question.

Whittaker pushed these conclusions further: "Ancient *limites* were never linear but were always zones."[9] The Roman frontier thus became a portion of space, a border portion of land, that is to say, an actual geographical place instead of a border line. The conception of a frontier as a real three-dimensional place in the study of ancient world frontiers was a paradigm shift. Whereas before, a linear boundary, however permeable, divided two powers, two different administrative systems, and two distinct orders, now the frontier had become a space where people could meet and mix.[10] The frontier ceased to be a separating element and began to be understood as a unifying factor: a place where – politically and culturally – communities could exchange, negotiate, and integrate, thus finding a metaphorical common ground in a real space.

As an inspiration for his work, Whittaker cited the considerations of Owen Lattimore, who conceptualized the Central Asian frontiers between the Chinese and Mongol Empires.[11] Lattimore regarded that frontier primarily as a social phenomenon, a process taking place on a portion of land that after conquest or an annexation had become a stopping boundary. For Lattimore, the economic factors were fundamental for triggering the frontier process. Economic opportunities and common needs and interests favored the development of a frontier network of connections between the people inside and outside the political border. This network was different from and supplementary to each community that developed within their respective territories.

6 Gregoratti 2017a; Fabian, vol. 1, ch. 6 with bibliography.

7 Isaac 1990.

8 Millar 1993, 138–139.

9 Whittaker 1994, 71 adapted to Roman reality the thought of Febvre 1922, 331; Isaac 1990, 349.

10 Whittaker 1994, 72.

11 Lattimore 1962, 469–500; Whittaker 1994, 8–9, 86; see also von Reden, ch. 1, this volume.

Thanks to shared characteristics such as culture, environmental conditions, and economic goals, people living within the border space (which he called the 'inner frontier') and outside it (the 'outer frontier') would develop into a joint community over time. The boundary went from being a stopping point and a partition line to become the epicenter of the new frontier zone.

When we turn to the Romano-Parthian frontier along the Euphrates, the concept of the frontier zone, and in particular Lattimore's construction of social networks around it, seems particularly fitting.[12] For the men and women living on both banks of the Euphrates frontier, 'the other' was a resource, a suitable partner for exchange who most of the time shared economic goals and cultural practices.

However, none of the frontier models wholly got rid of the linear boundary. Even Lattimore's pioneering ideas of the inner and outer frontiers were based on the idea of an original political boundary line.[13] A spatial frontier must ideally be anchored in a linear geographical boundary. Yet while in Luttwak's conception the frontier was a real line of defense, in Lattimore's and Whittaker's models it was an ideal geographical base around which a frontier zone was built. In order to apply Lattimore's model of inner and outer frontiers to the Roman Empire, it is necessary to individuate an 'ideal' boundary that can act as the focal point for Lattimore's bi-zonal frontier.

As Luttwak rightly pointed out, ancient authors do not consider the frontier a zone. They preferred to refer explicitly to a linear boundary. Tacitus writes that in his times, "the empire had been fenced by the ocean or distant rivers."[14] On his deathbed, Augustus recommended that his successor maintain the empire within its limits.[15] Specifically concerning the Euphrates, the Arsakid Great Kings insisted that the later Republican warlords Lucullus and Pompey acknowledge the river as the border between the Roman and Arsakid Empires.[16] In several cases, Roman warlords, emperors, generals, and Parthian pretenders witnessed favorable, disastrous, or unclear omens almost exclusively the very moment they were to cross the Euphrates. In the imagination of Roman authors, that was a threshold toward the unpredictable, a decisive act.

A famous passage by Velleius Paterculus is the most explicit of all references indicating the relevance of the Euphrates as the linear border between two superpowers.[17] The young military tribune Velleius describes the meeting (which took place

12 As noted in Gregoratti 2020a.

13 Lattimore 1962, 469–470.

14 Tacitus *Annales* (Tac. *Ann.*), 1. 9; Flavius Josephus *Bellum Judaicum* (Joseph. *BJ*), 2. 371–401; Herodian 2. 11. 5; Whittaker 1994, 35, 61.

15 Tac. *Ann.* 1. 11; Cassius Dio (Cass. Dio) 56. 33. 5.

16 Plutarch (Plut.) *Life of Pompey*, 33. 6; Cass. Dio 37. 6. 3.

17 Velleius Paterculus 2. 101. 2–3: "This spectacle of the Roman army arrayed on one side, the Parthian on the other, while these two eminent leaders not only of the empires they represented but also of mankind thus met in conference…it was my fortunate lot to see…" (trans. F. W. Shipley); Gregoratti 2019, 52–53; Gregoratti 2020b.

before his very eyes) between Gaius, Augustus's grandson and adopted son, and the Great King Phraates V in the year 2 CE.[18] They chose an island located in the middle of the Euphrates for their meeting.[19] According to Velleius, the representatives of the two rival empires divided the whole known world into two parts. A simple line drawn on a map following an agreement between two monarchs was enough to distinguish what was Rome and what was not, to separate friend from enemy, the ally of Rome from 'the other.'[20]

If the zone model better describes the reality of ancient frontiers, how can the continuous relevance of the Euphrates as a linear frontier be explained? Millar tried to strip the river of the meaning attached to it by Luttwak, who himself based his interpretations on the evidence by ancient authors, speaking in this case of a "symbolic frontier."[21] Whittaker explained the ancient authors' conceptions by referring to the ubiquitous practice of *centuriatio* (the measurement and apportioning of land), a practice that was endowed with strong symbolic meanings and connected with the ancestral ritual of the city foundations. According to *Hyginus Gromaticus*, beyond the centuriated land (the land directly administered and controlled by Roman authority), there was the so-called *extra clusa*, a portion of land indirectly controlled by the Roman government and extending as far as a natural boundary such as a mountain range or a river, like the Euphrates in this case.[22]

This was the meaning of the Euphrates boundary in the Roman imagination: it was an ideal border limiting the portion of the *oikoumene* controlled either directly or indirectly by Rome. Gaius and Phraates V met on the island in the Euphrates to mark the common limit of their two spheres of political influence. At that time, in fact, both Rome and the Arsakids exerted land control mainly through client kingdoms; only a small part of the banks of the Euphrates was directly governed by the respective imperial powers. After the clash between the 50s and the 30s of the first century BCE and the diplomatic reconciliation that followed, the two imperial representatives met to agree where their world had to end and that of the 'other' was to begin, to separate geographically between 'us' and 'them.' This 'ideal' boundary line, as it will be referred to in the following sections, can be used in place of his administrative border to anchor Lattimore's double-frontier model to the geographical reality, thus making it possible to apply it to the Roman case and thereby integrating Whittaker's model.

The creation of this combined model, in part artificial like all models, has the merit of allowing detailed analysis of the phenomena occurring on the frontier in

18 Karras-Klapproth 1988, 145–147.

19 Cass. Dio 55. 10. 18–19; Suetonius (Suet.) *Tiberius* 12. 2; Orosius *Adversos Paganos* 7 .3. 4; Dąbrowa 1983, 43–44; Schlude 2020, 102–103.

20 Edwell 2013, 201; Overtoom 2016, 137–156; Gregoratti 2017b, 107–108.

21 Millar 1993, 33.

22 Hyginus Gromaticus *Constitutio Limitum* p. 161 (Thulin 1913); Whittaker 1994, 19–21.

relation to the geopolitical situation of ancient times, phenomena that took place within that space because economic actors realized the advantages of the frontier zones and were ready to exploit them. As will be illustrated in this chapter, these connections included both trade relationships as explicitly stated by the sources available as well as more general political and cultural ones that hint at probable economic connections not explicitly proved by the sources.

II The West: The Romano-Parthian Frontier

Adapting Lattimore's frontier model to the Roman case as defined by Whittaker and applying it to the Euphrates situation in particular shows how the river was the epicentre of the frontier, lying in the middle of the frontier zone (map 1). From there, looking at it from the Roman point of view, an inner frontier zone of interaction extended toward Antiocheia, while an outer one faced Ktesiphon/Seleukeia-Tigris. It is sufficient to switch the point of view and adopt a Parthian perspective to understand how in the case of the Euphrates the models conceived for the Roman Empire and for its Euphrates frontier in particular can be instrumental in describing the frontiers of the Arsakid state as well.

The sources available are not very helpful for the interactions between different ethnic and cultural groups in the frontier zone west of the river (the Parthian outer

Map 1: Important cities, sites, and regions of the Arsakid Empire and neighboring territories.
© Peter Palm.

frontier). Most of the literary sources concern high-level political and diplomatic connections between members of the Roman and Parthian leadership and administration, including client states such as Kommagene and Judaea on one side, and Osrhoene and Adiabene on the other.[23] Ancient geographers refer vaguely to the interrelations between nomadic groups across the river.[24] Generic connections between Palmyrenes and the people on the eastern bank are alluded to by Appian for mid-first-century BCE Palmyra, when the inhabitants of the oasis in the desert seem able to abandon the settlement in a hurry and find shelter beyond the river. It seems evident that, if we believe that Appian was not playing with nomadic literary stereotypes, such a possibility can be only the result of consolidated connections between the people on both banks, well before the rise of the Palmyrene Mesopotamian network.[25]

Still, one relevant channel of interchange and movement of people and goods can be spotted from the few references in the sources: the network of Jewish communities.[26] According to Flavius Josephus, between 9 and 6 BCE a certain Zamaris, a wealthy Jewish landowner occupying a prominent position in Arsakid society, decided to leave his lands and move to Antiocheia and then to Judaea along with all his relatives and 500 horsemen.[27] It is hard to think that such a movement of people would have been possible without a long tradition of relationships between Syrian-Judaean Jews and those who had settled in the Arsakid Empire, which implied previous contacts primarily for religious but also for commercial purposes.

Several large Jewish communities existed for centuries in Arsakid Babylonia and controlled the trade activities of their cities. The bonds between them created a commercial and political network.[28] The communities in Nehardēʿā and Nisibis were the most relevant.[29] They oversaw the collection of the two-*drachm* offering/tax to the temple in Jerusalem that all Jews were supposed to pay annually. Thus according to Josephus, regular expeditions protected by large armed escorts crossed the Parthian frontier from Babylonia to reach Judaea.[30] This gives a clue to the intense relationships that took place between Jerusalem and the Babylonian communities, without which commercial enterprise would have been impossible.

23 Schlude 2020 with the previous bibliography.

24 For example, Strabo 16. 1. 28; Whittaker 1994, 78.

25 Appian *Bellum Civile* 5. 1. 9; Sommer 2017, 64–68; Hekster and Kaizer 2004; Kaizer 2020, 26–27: Fabian, vol. 1, ch. 6, 232; Gregoratti 2021, 134–135.

26 Fabian, vol. 1, ch. 6, 225.

27 Joseph. *Antiquitates Judaicae* (*AJ*), 18. 23–29; Applebaum 1989. The newcomers were settled by King Herodes close to Batanea; Neusner 1984, 41–44; Goodblatt 2012, 271.

28 Herman 2012, 141–150.

29 Ptolemy *Geography* (Ptol.), 5. 18. 7; Oppenheimer 1983, 319–334; Brizzi 1995, 68–70; Rajak 1998, 316–317; Goodblatt 2012, 266–267.

30 Joseph. *AJ* 18. 310–313; Babylonian Talmud (Bab.) *Baba Qamma* 97b.

Talmudic sources attest to the regular movement of people for religious purposes in the later period.[31] Religious personalities, along with a large mass of ordinary pilgrims, travelled from eastern communities to Jerusalem to attend ceremonies during religious festivals, or simply to pray and visit the holiest place of their religion. Some references indicate that devotees combined a commercial motivation with their journeys. Hiyya the Elder was a Babylonian dignitary, close to the Babylonian *exilarch*, but a wealthy landowner in Palestine and a silk merchant in Tyros.[32] Abba, the father of Samuel b. Abba and Judah b. Bathyra II from Nisibis, the latter very close both to the religious circles in Jerusalem and the moneychanger's community in his city,[33] were well known in the Tannaitic schools of Palestine but also referred to as skilled traders on the silk market. The examples seem to suggest that Jews from Mesopotamia commercially exploited their religious connections with Jerusalem and, more relevantly, the nearby ports of Caesarea and Phoenicia.[34]

The leading role played by the Jewish communities of Mesopotamia in the revolt against Trajan's Roman conquest in 116–117 CE,[35] which caused the ruthless reaction of the Roman emperor against the Jewish population,[36] has been connected with his provincialization project for the region.[37] The annexation of northern Mesopotamia, the elimination of the Euphrates frontier, and the establishment of a Roman-controlled taxation system would have considerably reduced the role of the Jewish trade communities as mediators between East and West, the same role that Palmyra was successfully playing further south. According to several scholars, the fear of radical changes prompted the communities to provide decisive help to the apparently doomed Parthian military power, exposing themselves to dire consequences.

The engagement of the Jewish Babylonian communities in the frontier zone west of the Euphrates (the Parthian outer frontier) emerges from various sources. The movement of people from Mesopotamia westward and their contact with western communities were linked to the religious attraction of Jerusalem and Judaea. The economic aspect of this traffic and these connections remain in the background, and it can be deduced only from sparse pieces of information due to the fact that most authors of our sources were far more interested in highlighting the religious nature of such contacts.

31 Acts of the Apostles 2. 9–11; Philon, *De Specialibus Legibus*, I, 69; Neusner 1984, 44–52. Letter exchange and contacts are attested in several Talmud passages: Jerusalem Talmud (Yer.) *Hallah* 4. 11; *Yoma* 6. 4; *Menahot* 11. 7; Bab. *Shabbat* 26a.

32 *Bereishit Rabba*, 77. 2.

33 Yer. *Yevamot* 12. 1; Bab. *Yevamot* 102a; *Pesahim* 3b; *Mikva'ot* 4. 5.

34 Neusner 1984, 94; Brizzi 1995, 67.

35 Pucci Ben Zeev 2005, 99–100; Horbury 2014, 252–256.

36 Cass. Dio 68. 30. 1–2. On the Roman repression: Eusebius *Historia Ecclesiastica* 4. 2. 5; Nicephorus *Historia Ecclesiastica* 3. 22b.

37 Fronto *Principia Historiae* 17.

The involvement of communities belonging to the Roman sphere of influence in Mesopotamia (the Parthian inner frontier) is much better attested, thanks to sources of a completely different nature. The well-known Palmyrene corpus of caravan inscriptions are an extraordinary source concerning the movement of people and goods through the western Arsakid Empire.[38] In slightly fewer than 40 texts, Palmyrene citizens and merchants themselves provide modern scholars with firsthand testimony concerning their trade activity abroad.[39] The inscriptions were meant to be displayed, perhaps along with citizens' portraits, in the public areas of the oasis city to remember and honor them. The texts recorded the citizens' public positions, offices, and sometimes their activities and deeds performed in service of the city and its prosperity. In addition, they provide a valuable list of places through which Palmyrene merchants' trade activities stretched east of the city, in both Roman and Parthian territory, and as far as the Persian Gulf and the Indian subcontinent.

Many scholars have dealt with these texts as a monolithic corpus testifying to the Palmyrenes' ability to manage transborder trade.[40] Palmyrene *comptoirs* in Parthian Mesopotamia at Spasinou Charax, Vologesias, and Forath are briefly mentioned in modern studies as part of the famous Palmyrene trade network, often appearing as sort of exclaves of Rome within the supposed *terra incognita* of the Arsakid Empire. Only recently have researchers looked beyond the mere list of Palmyrene trade destinations, contextualized them, and placed them in their geopolitical context.[41] Furthermore, careful analysis of the texts reveals that the inscriptions differ significantly, providing rather different information concerning the nature of the trade activities and their protagonists. Far from being a monolithic set of texts, the inscriptions of the caravan corpus reveal different phases of Palmyrene presence in the Parthian inner frontier through time.[42]

The fact that most of the texts are dated allows us to place the information in chronological order, highlighting the changes that affected Palmyrene trade activity, and to reconstruct the development of the Palmyrene trade network in Parthian Mesopotamia. The first attested presence of Palmyrenes in Arsakid territory is dated to 33 BCE, a few years after Mark Antony's raid on Palmyra in 41 BCE. The members of two Palmyrene clans endowed a small temple outside Dura-Europos's western city wall, possibly close to the caravanserai where camels of caravans from across the Syrian steppe were kept.[43] Dura had been Arsakid since the late second century BCE. Though situated on the western bank of the Euphrates, it was separated from Roman-controlled territory and from Palmyra by hundreds of miles of steppe desert. Dura

38 Wiesehöfer, vol. 1, ch. 11, 488–489.

39 Most recently Seland 2020 on the personnel presented in these inscriptions.

40 See also von Reden, vol. 2, ch. 2, esp. 41–42 and 52.

41 Gregoratti 2010; 2011; 2015a; 2016a.

42 Gregoratti 2021.

43 *PAT* 1067; Dirven 1996, 47–48; Baird and von Reden, ch. 12, this volume, for this temple.

can thus be regarded as part of the Parthian inner frontier. As Lucinda Dirven has pointed out, from their outcast position, outside the city walls, the Palmyrenes, in need of the products from Dura's *chora* for their fast-growing oasis city, gradually moved closer to the economic and political center of the town. This was thanks to their growing connections with Dura's Greek-style leading class.[44]

The first Palmyrene text referring to contacts beyond the Euphrates is dated 19 CE. The well-known Germanicus Inscription[45] is an extremely fragmented Aramaic text found in the area of the Bel.[46] It gives a list of three or four people, one of them possibly being Germanicus himself, the Roman general and adoptive son of the emperor Tiberius.[47] A Palmyrene known only by his surname Alexandros seems to have acted as a local agent, establishing first contacts with the king of Charakene, an Arsakid vassal monarch in southern Mesopotamia.[48] Judging from other texts in the corpus, it seems that concrete results did not follow this enterprise.

In the same year, other Palmyrene inscriptions attest to a more solid presence beyond the Euphrates. Yedibel, son of Azizos,[49] is honored by the Palmyrene and Greek merchants from Seleukeia-Tigris, a commercial metropolis that Strabo and Pliny describe as the most populous city outside the Roman Empire and core of the Arsakid Empire.[50] In 24 CE, moreover, a certain Malikos, a Palmyrene, is commemorated for his generosity by his fellow citizens, merchants living in Babylon, now a minor city with a substantial Greek population.[51] Cuneiform documents attest to a lively market in this town for commodities,[52] with very active temple institutions[53] until the mid-first century BCE.

The Arsakid Empire went through a period of political crisis in those years. Artabanus, called "half-Scythian," managed to gain the throne in 11/12 CE. In 18 CE, Germanicus was sent by Emperor Tiberius to find an agreement with the new Great King and reestablish the balance of power in the East.[54] After that diplomatic settlement, Artabanus could consolidate his rule, tightening his control over the leading class and client kings.[55]

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44 Dirven 1999; Baird 2018, 19–20, 166; and again Baird and von Reden, ch. 12, this volume.

45 *PAT* 2754; Gawlikowski 1996, 140; Gregoratti 2010, 25–26.

46 Cantineau 1931, n. 18, 139–141.

47 Sommer 2017, 68–71, 92–93; Gregoratti forthcoming.

48 On Charakene: Schuol 2000; Gregoratti 2011; Gregoratti 2017c; and the recent but not updated Hauser 2022.

49 *IGLS* XVII 1. 24; Millar 1993, 330; Yon 2002, 25–26, 103–105; Gregoratti 2010, 23–24; Smith 2013, 76; Seland 2014, 198; Gawlikowski 2016, 19–20; Gregoratti 2020c, 470–471; Gregoratti 2021, 137–138.

50 Strabo 16. 1. 17; Pliny *Naturalis Historia* (Plin. *HN*) 6. 133.

51 *IGLS* XVII 1. 16; Millar 1993, 322–323; Gregoratti 2020c, 471.

52 Van der Spek 2014.

53 Van der Spek 1998; Taasob, vol. 2, ch. 3.B, 149–151.

54 Tac. *Ann*. 2. 42–43, 56, and 64; Suet. *Tiberius* 16. 1; *Gaius* 1. 2; Ioseph. *AJ* 18. 53–54; Dąbrowa 1983, 102–104.

55 Gregoratti 2012; Gregoratti 2015b.

In this early phase, it seems that the Palmyrenes exploited the weakening of the Greek leading classes in the wealthy Mesopotamian cities, now put under pressure by the growing interference of King Artabanus, who favored the Jewish communities and fed the conflict between the local population and council leaders.[56] Perhaps the Palmyrenes saw the chance to set foot beyond the Euphrates, infiltrating the factions' conflict. It is interesting to note that neither Babylon nor Seleukeia are ever mentioned again in later inscriptions. These first attempts to establish a trade network in the core of Parthian territory were probably wiped out by the troublesome period that followed Artabanus. Internal strife devastated central Mesopotamia; Seleukeia's ruling class revolted and was defeated.[57]

After the attempt to establish trade colonies in the core of the Parthian empire by collaborating with the local ruling classes had failed, the Palmyrenes adopted a low profile. They penetrated the periphery of the Arsakid administration, that is to say the vassal kingdoms in southern Mesopotamia and in particular Charakene, where their activities would be less affected by conflicts between Rome and Parthia and by Arsakid dynastic strife. These areas can be regarded as a Parthian inner frontier.

The power of the Arsakid court was restored by king Volgases I in the 50s of the first century CE. He consolidated his throne by sharing his power with his brothers and creating a system of federal vassal kings to strengthen his position.[58] In Armenia the new Parthian king was victorious against Rome, and the resulting agreement between the two superpowers determined a period of peace that was favorable for transfrontier trade. Roman tax officers make their appearance in Palmyra in the 50s, indicating decisive support to Palmyrene trade activity from the Roman administration.[59]

The capital of the Charakenian kingdom, Spasinou Charax, begins to appear regularly in the corpus of caravan inscriptions, demonstrating the prominent role now played by the kingdom in Palmyrene activity. Trade was reestablished in southern Mesopotamia, and Mesene seems to have taken the place of Seleukeia and Babylonia as the primary connection point between Palmyra and the East.

In a series of texts, Palmyrenes, first defined as *emporoi* (merchants), then organized in *synodiai* (caravans), honor the caravan leaders who conducted them on the way back from Spasinou Charax to Palmyra.[60] The texts refer to merchants moving through the frontier; the itinerary seems to be the focus of the message conveyed. Of

56 Tac. *Ann.* 6. 42.

57 Tac. *Ann.* 6. 31–42, 11. 8–10, 12. 10–14; Joseph. *AJ* 18. 96–104, 20. 74; Cass. Dio 58. 26, 60. 8; Dąbrowa 1983, 90–120; Olbrycht 1998, 151–170; Wolski 1993, 108–109.

58 Dąbrowa 1983, 132; Wolski 1993, 165; Olbrycht 1998, 176–179; Sinisi 2012, 56–69, 138–148, 157, 161–163, 213–219; Gregoratti 2016b, 87–92; Gregoratti 2017a, 131–133.

59 *IGLS* XVII 1. 536; Gawlikowski 1998; As'ad 2002, n. 3, 366–368.

60 *IGLS* XVII 1. 240–242 and 244 (dated respectively between 75/76 and 81 CE; before 88 CE; 112 CE and first half of the second century, and after 109 CE): Gawlikowski 1996, 142; Schuol 2000, nn. 5–6 and 27, 52–54, 80–81; Yon 2002, 50–3, 67–68, 103–104, Smith 2013, 76–77.

course, some Palmyrenes were active in Spasinou and lived there, but no explicit mention is made of any Palmyrene permanently residing there.

Starting from the beginning of the second century CE, the situation changed radically. In 108 CE, an inscription mentions a certain Akkeos, son of Noaraios, who erected part of a temple in Vologesias, the new trade hub created by Great King Vologases.[61] Akkeos's presence in Parthian Mesopotamia seems to have assumed a more permanent character. He takes part in the construction of a temple in the city as an active and integrated member of the host society.

A few years later, the situation evolved along the line traced in the case of Akkeos. The Palmyrenes that appear as honorands in the inscriptions now hold administrative offices beyond the river, while the dedicators are explicitly said to live in Mesopotamia. In 131 CE, Yarhai, son of Nebuzabad,[62] a citizen of Palmyra, appears as *satrap* of Tylos/Bahrain in the Persian Gulf for King Meredates of Spasinou Charax. He is honoured by Palmyrene merchants living in the capital. The same Palmyrenes dedicate an inscription to a member of the clan Aabei, called *archon* of Mesene, in the first half of the century[63] and to another clansman in 138 CE, promoter of a diplomatic embassy to King Orodes of Elymais, a kingdom adjacent to Charakene with the metropolis of Susa as its capital.[64] In 140 CE, a certain Alexandros is documented as an officer of the city of Forath in Mesene.[65]

Finally, between 132 and 145 CE, three extraordinarily long and detailed texts document the career of Soados bar Boliades, the most famous among the caravan protectors.[66] There is no mention in these texts that he held any official public post, but letters and documents of appreciation attest that he enjoyed the support of high Roman authorities. His main activity consisted of providing assistance to merchants. In 144 CE, he appears as a military leader protecting the merchants against nomadic tribes that had prepared an attack on one of the caravans. The text also shows that Soados had a military force at his disposal and was ready to use it for the safety of the commercial expeditions.

A year later, the power Soados held is called *dynasteia.*[67] Strabo uses the term *dynasteia* to refer to the control of a tribal chieftain over his territory (16. 1. 27; 16. 3. 2). So it seems that Soados held effective control over a certain portion of territo-

61 *PAT* 263 (108 CE): Gawlikowski 1996, 140; Gregoratti 2010, 29–30; Seland 2016, 36. For Vologesias, see Plin. *HN* 6. 122; Ptol. 5. 20.2; 20. 6; Maricq 1959, 265–271; Chaumont 1974, 77–81.

62 *IGLS* XVII 1. 245: Millar 1993, 325; Yon 1998, 157–158; Schuol 2000, 56–57; Gregoratti 2010, 32–34; Yon 2002, 262–3; Gregoratti 2011, 220–221; Seland 2016, 36 –38; Gregoratti 2019, 62–63.

63 *IGLS* XVII 1. 160 and 227 (between 88 and 188 CE): Schuol 2000, nn. 12–13, 61–64; Yon 2002, 50, 278; Gregoratti 2015a, 141–142; Seland 2016, 82.

64 Dąbrowa 1998; Gregoratti 2017c, 100.

65 *IGLS* XVII 1. 246 (140 CE); Gawlikowski 1994, n. 10, 32; Schuol 2000, n. 14, 64–65; Yon 2002, 104–105.

66 *IGLS* XVII 1. 127 (144 CE), 150 (132 CE) and *PAT* 1062 (145 CE); Millar 1998, 133–135; Andrade 2012; Smith 2013, 138.

67 Gregoratti 2015a; Gregoratti 2016a.

ry between Palmyra and Parthian Mesopotamia as well as Charakene. He obviously combined the influence and the position he held among the Palmyrene communities in Mesopotamia with a solid control over the steppe territory through which caravans passed. He was a businessman, a caravan manager, and a commander in the field when circumstances required it. His Roman political contacts could not officially acknowledge the whole expanse of his power because it extended across the ideal border of the Euphrates. Soados was a real man of the frontier, whose power and territorial control crossed the inner and outer frontiers of both the Roman and Parthian superpowers.

Most of the inscriptions referring to Palmyrenes living in Mesopotamia and/or holding administrative offices there are dated between 131 and 145 CE. In that period, the Great King of the Arsakid Empire assured control of the client kingdom of Charakene, appointing his brother Meredates to the vassal throne. The new foreign king, as can be deduced from Palmyrene sources, decided to ally with the Palmyrene merchants by granting them extraordinary authority in his kingdom to assure the efficiency of trade through his ports and the Persian Gulf.[68]

Meredates's rule ended abruptly in 151 BCE, however, when Vologases III took control of the Arsakid realm, invaded Meredates's kingdom, and put one of his relatives on the throne.[69] The inscriptions show how these events changed the nature of the Palmyrene presence in the Arsakid Empire. A Palmyrene with Roman citizenship, Marcus Ulpius Yarhai, son of Hairan, appears in several dedications by merchants and caravan leaders between 155 and 159 BCE.[70] One of them refers to boats coming from Scythia, that is to say, northwest India.[71] Yarhai's texts are short. The dedicators who thank him for his support are merchants traveling from Spasinou Charax. Yarhai's activity seems to have been concentrated on the route to and from Palmyra, which he seems to have monopolized. There is no reference to a regional command or influence, nor any offices he held in Parthian territory. No Palmyrene is explicitly said to dwell beyond the Euphrates any longer. The focus of the Palmyrenes has reverted again to trade only. But now the reach of trade contacts stretched much further than those of Soados. The collapse of Palmyrene territorial authority in Mesopotamia again changed the nature of the Palmyrene presence in the frontier zone,

68 Potter 1991; Schuol 2000, 345–348; Gregoratti 2010, 30–31; Gregoratti 2011, 221–222; Gregoratti 2017c, 100–101; Gregoratti 2021, 140–142.

69 Pennacchietti 1987; Potts 1988, 143–144 and 152–154; Potts 1990, 145–147, 325–326; Schuol 2000, 349–351; Raja 2022, 96–97; Fabian, vol. 1, ch. 6, 216. Recently Gawlikowski 2021, 45–47, who bases his convictions on Charakene on an old article by Bowersock overlooking later studies on the topic. For the royal count, Sinisi 2012.

70 *IGLS* XVII 1. 313 (Ago 155 CE); *PAT* 1411 (Ago 156 CE); *IGLS* XVII 1. 202, 248–251, and 255–6 (January 157–May 159 CE); *PAT* 307; Millar 1993, 330–331; Gawlikowski 1996, 142–143; Schuol 2000, n. 18, 70–71, nn. 20–24, 75–78; Delplace 2003; Yon 1998; Yon 2002, 99–103, 111–114, 145–147, 205–206, 245–246; Seland 2011, 398–399; Seland 2014, 205–206; Seland 2016, 36, 68.

71 *IGLS* XVII 1. 250 (March 157 CE) + *IGLS* XVII 1. 26; Gregoratti 2019, 59, 64.

and people such as the Marci Ulpii were the ones to exploit the chances the new Charakene government offered.[72]

The Palmyrene presence and activity within the frontier varied considerably depending on the political situation of the Arsakid Empire and its inner frontiers. If the presence of Palmyrenes as traders in the Arsakid frontiers was a constant element throughout the first and the second century, their role in the host societies in support of their merchant activities and the level of their integration into the frontier zones changed radically. During Meredates's Charakene, they reached a remarkable level of integration, becoming part of the Arsakid administration. When that situation changed, the level of integration weakened, and the degree of direct territorial control over portions of Parthian territory and administration diminished. But the consequences for trade were marginal. Other Palmyrenes, now taking advantage of established political affiliations, integrated themselves into the extended networks of trade that had developed in the course of the first century.

If the frontier is a zone where the different meet, then the Palmyrenes pushed the opportunities that navigating outer frontiers and inner frontiers offered to the extreme. During the period of their best integration, they participated in the administration of the Parthian inner frontier so that any differences were settled at the highest level of the host society – between the king and his *satraps* or among the members of the city administration – and no longer just between traders and friendly members of the host society.

At the same time that the Palmyrene were active in the south, quite a different economic-penetration phenomenon occurred in northern Mesopotamia. The significant number of Roman coins (minted in Syrian mints) found in the excavations of frontier cities such as Arsakid Dura,[73] Sippar,[74] Seleukeia-Tigris,[75] Susa,[76] Nineveh,[77] and Assur[78] is well known and possibly explained by the general scarcity of Arsakid coinage, which could not supply the high demands of the local monetized economies.[79] What is interesting, however, is that at Assur and in the second-century kingdom of Hatra, coins imitative of Antiochean *denarii* (the top currency in Syria and beyond) with distinctive features are minted and used as local currency.[80] It seems that in order to support their monetized economy, these societies first imported and used Roman coins, then began to imitate them, and then finally minted their own coinages.[81]

72 Gregoratti 2021, 142–143.
73 Bellinger 1949.
74 Butcher 2015; Lucchelli 2018, 154.
75 Lucchelli 2018, 153.
76 Le Rider 1965.
77 Hill 1931.
78 Butcher and Heidemann 2017, 9–13, 21–23, and 33–35.
79 Taasob, vol. 2, ch. 8.B, 431–435.
80 Butcher and Heidemann 2017, 13–14 and 35–37.
81 Butcher and Heidemann 2017, 14–21 and 24–25.

III Other Frontiers: The South

In the preceding section, the idea of an ideal border outlined by Roman authors along the Euphrates worked as a helpful reference element to characterize the inner and outer frontiers between the empires. For the other frontiers of the Arsakid Empire, the ancient authors also provide a set of ideal borders that can be taken as ideal line limits of the Parthian Commonwealth.

Concerning the northern and southern boundaries,[82] Pliny states, "the kingdom of the Persians, which we now know as Parthia, lies between the two seas, the Persian and the Caspian,"[83] and again, "the Parthians possess in all eighteen kingdoms ... on the coasts of two seas, the Red Sea on the south and the Caspian Sea on the north."[84] The words Pliny puts into the mouth of Marcus Agrippa confirm these statements: "The countries of Media, Parthia and Persis are bounded on the north by the Taurus and Caucasus mountains, and on the south by the Red Sea, Mesopotamia by itself, (is) bounded by ... the Persian Sea on the south."[85]

Pliny's effort at individuating discernible natural boundaries of the Arsakid Empire – rivers, mountain ranges, and finally seas, or better coastlines – is evident and parallels Whittaker's conception of a Roman ideal border. Both to the north and the south, the coastlines of the Caspian Sea and the Indian Ocean mark the end of the Parthian dominion, a barrier not different from those constituted by the mountaintops. No reference is made to a possible Parthian dominion over the seas or beyond.

As for the west, the reality, of course, was different. Since the second century BCE, the Arsakid vassal kings of Charakene had established stations[86] on the islands of the Persian Gulf – Tylos/Bahrain,[87] Kharg,[88] and Ikaros/Failaka[89] – to control the sea and its routes connecting the harbors situated at the mouths of the Tigris and Euphrates rivers, the largest navigable rivers in the region, with the southern Arabian kingdoms and Asia.[90] Here, the sea routes met the soon-to-be network of Palmyrene economic actors.

The second-century CE inscription of Yarhai, son of Nebuzabad, the Palmyrene *satrap* of Tylos/Bahrain for King Meredates mentioned above, demonstrates that the Palmyrene–Charakenian alliance still exerted control over the Gulf. According to most

82 Lerouge 2007, 198–199; Fabian, vol. 1, ch. 6, 207–208.
83 Plin. *HN* 6. 41; Lerouge 2007, 209–211.
84 Plin. *HN* 6. 112.
85 M. Agrippa ap. Plin. *HN* 6. 137.
86 Lucian *Long Lives* 16; Potts 1988, 140–141.
87 Gatier, Lombard, and Al-Sindi 2002, 223–226; Kosmin 2013.
88 Strabo 16. 3. 2; Plin. *HN* 6. 111, Ptol. 6. 4; Haerinck 1975, 138–145; Boucharlat and Salles 1981, 70–71; Potts 1990, 147; Steve et al. 2003, 7–8.
89 Where a few Charakene coins have been found that are dated to the second and first century BCE: Boucharlat and Salles 1981, 73–74; Salles 1993, 505–506; Potts 1996, 270.
90 *Periplus Maris Eythraei* (*PME*) 35; Gregoratti 2019 with bibliography.

scholars, moreover, from 143/4 CE, the king began to mint his own coins, displaying all his titles: Meredates, son of Pakoros, King of Kings, king of the Omanes (Pennacchietti's reading),[91] a clear indication that the king of Charakene ruled over the mysterious Omana, wherever it was located, in the half of the second century CE and that he regarded this rule so relevant that he put it on his coins.[92]

As to its location, the late first-century CE *Periplus Maris Eythraei* (*PME*) mentions an *emporion* (commercial harbor/port of trade) of "Persis" called Omana.

> After sailing by the mouth of the gulf, six runs further on you come to another port of trade (*emporion*) of the Persis (Persidos) called Omana. Customarily the merchants of Barygaza deal with it, sending out big vessels to both of Persis's ports of trade [i.e. Apologos and Omana], with supplies of copper, teak wood, and beams, saplings, and logs of sissoo and ebony; Omana also takes in frankincense from Kane and sends out to Arabia its local sewn boats, the kind called *madarate.* Both ports of trade export to Barygaza[93] and Arabia pearls in quantity, but inferior to the Indian; purple cloth, native clothing, wines, dates in quantity, gold, slaves.[94]

According to the *PME*, Omana was the only trade hub within the Parthian Commonwealth outside Charakene whose merchant contacts extended to India and South Arabia. Pliny placed Omana on the Arabian coast, possibly immediately west of the Hormuz Strait, explicitly stating that previous writers wrongly placed it opposite in Carmania on the southern coast of "Persia."[95]

Archaeological investigations have offered an excellent candidate for the location of Omana that might suggest that Pliny was right. Research in the territory of the United Arab Emirates has revealed at Ed-Dur on the western shore of the Musandam Peninsula, so inside the Persian Gulf, a large town characterized by intense building activity between the first and second century CE.[96] Large amounts of imported material found on the site confirm the far-reaching connections of the site, as described for Omana in the *Periplus*.[97] Parthian ware produced in Mesopotamia is attested there in large quantities, reaching 40 percent of all ceramic material found. Coin finds also attest to the long-distance relations of the city: first/second-century Charakenian coins are well documented, along with specimens from Rome, Persis, Parthia, the Nabataean kingdom, India, and South Arabia/Hadramawt.[98] The nearby site of Mleiha, east of Ed-Dur on the mainland,[99] was probably the seat of the local state authority, which

91 Pennacchietti 1987, 178–179.

92 Schuol 2000, 352; Potts 1988, 146–149; Potts 1990, 324–327.

93 Dwivedi, vol. 1, ch. 3, 118–119. For the harbor, see Dwivedi, ch. 8, this volume.

94 *PME* 36, Casson 1989; with comments by the editor. For the *PME*, von Reden, vol. 1, ch. 17, 472–474.

95 Plin. *HN* 6. 149; Casson 1989, 18–19, 180–182; Boucharlat and Salles 1981, 67.

96 Potts 1990, 275–277; Mouton 2008, 32–35, 61–124, 225–227; Mouton and Schiettecatte 2014, 65–69.

97 Salles 1984; Haerinck 1998, 292.

98 Salles 1980, 98–99; Potts 1988, 141–143; Potts 1990, 291; Haerinck 1998, 283–284; Callot 2004, 70–83, nn. 101–108, 111–120.

99 Salles 1980, 100–101; Potts 1990, 288–290; Mouton 1999, 9–32; Overlaet 2018.

ruled over the harbor of Ed-Dur as well as the other, minor coastal settlement of Dibba looking out toward the Arabian Sea.[100] The mint of Mleiha produced local coinage inspired by Alexander or early Seleukid coins with a legend in Aramaic reading *Abi'el*, possibly a ruler's name or title.[101] Due to the significant presence of imported materials and the privileged position of the complex on both sides of the Musandam Peninsula, D. T. Potts identified the three-city complex of Ed-Dur-Mleiha-Dibba with the Omana of Pliny.[102]

Recently, the identification has been confirmed by a bilingual Aramaic-Hasaitic inscription found at Mleiha mentioning a "king of Oman/Ommana" dating as early as the third century BCE.[103] Thus an independent kingdom existed in the south-eastern Arabian Peninsula and minted its own coinage long before the Charakenian thalassocracy in the Gulf. It was an independent kingdom that, according to the findings and taking into consideration its size and strategic position, certainly played a key role in the Gulf trade and possibly in the Parthian-Charakenian sea network. Unfortunately, in this case there are no sources in which traders themselves provide information about their activity. Nonetheless, Omana's characterization in the Periplus suggests that the three-city complex was an important station on the Gulf routes to the east and a meeting place for economic actors. Therefore, the question of Omana's political control and influence is fundamental when discussing the southern Parthian frontier and the trade activities that took place within and through it.

In two distinct moments, the kingdom of Omana may have been under the direct control of Charakene/the Arsakids: in the last third of the first century as attested by the *Periplus* and in the first half of the second century CE as attested by the coins. According to this scenario, Charakenian control extended far into the Gulf, including its islands, and into portions of the Arabian Peninsula beyond the ideal border of the coastline and well into the outer frontier of the Arsakid Empire.

After checking all extant specimens of Meredates's coinage, Patrick Pasmans concluded that the widely accepted reading of its legend by Pennacchietti was not confirmed by the few and very worn coins available.[104] In his opinion, the reference to Omana on this coinage is completely made up. Furthermore, all the specimens from this series seem to come from the Basra area, the core of the Charakenian kingdom. None have been found in the Ed-Dur, Mleiha, and Dibba complex, whose control by the king the legend was supposed to refer to. The reference to Parthian control over Omana in the *PME* is also doubtful, as its author placed it in Carmania, within the borders of the Parthian Commonwealth, and was notoriously ill-informed about locations in the Gulf.

100 Jasim and Yousif 2014, 50–79.
101 Boucharlat and Drieux, 1991; van Alfen 2010 for the legend.
102 Potts 1990, 302–303.
103 Overlaet, Macdonald, and Stein 2016, 136–140.
104 Pasmans 2022.

Recent research, however, suggests a more nuanced presence of Charakenians in the Parthian outer frontier and a more indirect form of political influence, possibly excluding permanent direct occupation. The only attested presence of Charakenes in Omana/the three-city complex is, in fact, limited to the finding of significant amounts of Charakenian coins dated to the first and early second century CE and the imports of Mesopotamian ceramics. Due to its power and organization, Charakene must have played a significant role in Omana's commercial development and prosperity, especially during the second century CE. Both kingdoms benefited from the trade contacts, but it is nonetheless hard to assume that Omana managed to preserve its complete political autonomy over time due to its strategic relevance and powerful neighbor. On the other hand, nothing from the sites indicates Charakenian or Parthian political control over the area.

However, absence of explicit references to Arsakid authority over a territory is a constant element in the self-representation of the subjects of the Arsakid Commonwealth. Therefore, we cannot totally exclude a scenario wherein the kings of Omana, already active during the Seleukid period, became later, at least for some time, vassals of the Arsakids, like the Charakenian dynasts. The existence of a local coinage, whose date is still under debate, however, would make direct political control highly unlikely, but a status of vassalage, or any other indirect form of political influence, might have been possible.[105]

The independent kingdom of the Omanes, then, existed alongside the Charakenian expansion in the Gulf at the frontier of the Arsakid Empire. Due to its position on the coast, it became commercially relevant when the Charakenian–Palmyrene trade enterprises operated in the Gulf, and it was surely included in the Gulf trade network. Its powerful neighbors, Charakene and the empire of the Arsakids,[106] likely exerted a strong political influence on the kingdom, perhaps occupying it temporarily in the second half of the first century CE and during Meredates's rule, if one wishes to hold the coins' traditional reading.

In any case, the archaeological evidence seems to attest to strong contacts between Parthian-Charakenians and their neighbors in the outer frontier of the Arsakid realm. The most likely scenario from what can be seen in the rest of the empire during most of Arsakid history[107] is that the kingdom of Omana had entered into the imperial orbit early, either officially as a vassal kingdom bound to the Arsakids by formal rules as with Charakene, or as a formally autonomous and independent but inferior political ally, whose policy was influenced by its powerful neighbor. A cautious approach in light of recent debates over the evidence available would suggest that the political autonomy of Omana vis-à-vis Arsakid presence in their outer frontier was influenced by the degree of stability of Parthian power. When the Parthians and

105 Potts 1991; Potts 1994; van Alfen 2010.

106 Gregoratti 2019.

107 Gregoratti 2017c; see also Fabian, vol. 1, ch. 6.

eventually Charakene were powerful and prosperous, as in the second century CE, their influence was more intense, possibly even to the extent of a temporary occupation of Omana; when they were weaker, the kingdom enjoyed greater autonomy.

The presence of Parthian-Charakenians in the Gulf islands and probably in Omana – that is to say, along the sea routes of western Asia – shows how Arsakid subjects moved along economic routes through the frontier zone, well beyond the ideal limits imagined by ancient authors. In this case, not dissimilarly from the Palmyrene case, economic interests prompted the attempts first to politically influence and later to control the communities of the Parthian outer frontier zone who came to play a relevant role in the long-distance trade network.

IV The Other Frontiers: The Unknown East

The western sources are extremely inconclusive concerning the eastern frontiers of the Arsakid Empire, the remotest ones from the western point of view, facing the nomadic peoples of Central Asia to the north and the various states of northwestern India established after the fall of Greek Bactria. Classical geographers indicate the Indus River or Alexandria Arachosia for the eastern Parthian frontier, clearly masking their ignorance by referring to the traditional limits of the Achaemenid state and Alexander's conquests.[108] The northeastern frontier remains blank. Their limited knowledge of the eastern Arsakid Empire and of the different waves of nomadic peoples who moved and settled in Transoxiana and Bactria between the second and first century BCE did not allow them even to shape an ideal frontier for that area, which remained virtually boundless.

This sector is somewhat different from the frontiers already considered. Here, as opposed to the Euphrates and the Gulf where developed political subjects continued to exist before and after Parthian expansion, the Arsakid Empire faced and interacted with confederations of pastoral tribes that began to develop more complex sociopolitical structures only after having settled in Transoxiana and western Bactria.[109] Here, both in the outer and inner frontiers, interesting sociopolitical phenomena suggest a cultural and probably political influence over the developing societies on one side and the rising relevance of the Parthian border district on the other.

Of course, the real relevance of this frontier is that it was through the northeastern *satrapies* that goods and men coming from Central Asia and the Far East entered the Arsakid Empire by land. At least from the late second century BCE, with the opening of the trans-Asiatic long-distance trade routes, this region was the gate of Parthia. The processes of cultural and political interaction through the frontier and the parallel

108 Strabo 15. 2. 11; Plin. *HN* 6. 137; Lerouge 2007, 216–219.
109 See Brosseder, vol. 1, ch. 5.

development of both the border districts and the trans-border tribal communities must be directly linked to if not triggered by the economic relevance of that frontier.

To apply the concept of the frontier zone, it is necessary to also individuate an ideal frontier for the northeastern Arsakid Empire. Pliny writes that the Roman soldiers captured at Carrhae were sent to Antiocheia Margiana/Merv on the other side of the Arsakid domains.[110] The *Parthian Stations*' itinerary runs from Roman Syria eastward until it reaches Antiocheia Margiana.[111] There, it turns south toward Alexandria Ariana/Herat, clearly showing that by reaching Merv, the itinerary reached the limits of Arsakid territory. The western authors' descriptions of the entire region of Margiana as a fertile land surrounded by mountains and deserts conveys the idea of a last piece of civilized land before the vastness of the Central Asiatic steppe.[112] Furthermore, from the time of Phraates II (138–127 BCE), the easternmost mint of the Arsakids at Antiocheia Margiana was active at least until the mid-first century CE.[113] Chinese sources call Merv "Lesser Anxi" (lesser Parthia),[114] indicating the Amu Darya River as Margiana's eastern limit.[115] All of these pieces of evidence indicate Merv and its region as a good candidate for the Parthian northeastern ideal frontier.

After a period of internal struggle within the empire, the elderly Sinatrukes (78/7–70/69 BCE) managed to obtain the throne thanks to the help of the Scythian tribes.[116] After this event and until the first decade of the first century CE, the new Great King, founder of a new Arsakid dynasty and his successors, maintained a privileged relationship with the pastoral confederations beyond the Oxus, which included both the Scythians and the Yuezhi, who also occupied in this period the Bactrian territories south of the river. During the rule of Sinatrukes's descendants, Phraates III, Orodes II, Phraates IV, and Phraatakes, the influx of Arsakid coins into western Bactria increased. Several finds are reported from Kampyrtepa,[117] Tillya Tepe,[118] and other sites of the mid-Oxus,[119] indicating that the Arsakids were in close contact with those lands, possibly exerting a certain political influence on tribal leaders.

Knowledge of these populations, their movements, and their sociopolitical development is extremely limited. In most cases, it is hard even to distinguish Scythians

110 Plin. *HN* 6. 46–47.

111 Isidorus *Mansiones Parthicae* 14–15; Khlopin 1976, 119–136; Fabian, vol. 1, ch. 6, 231; Wiesehöfer, vol. 1, ch. 11.

112 Strabo 11. 10. 1–2; Ammianus Marcellinus 23. 6. 54.

113 Loginov and Nikitin 1998.

114 *Hou Hanshu* 88. 2918; Olbrycht 1998, 188–189; Zanous and Yang 2018, 126.

115 The Classical ancient Oxus, Gui river in the Chinese sources, is indicated as the eastern border of Anxi/Parthia; *Shiji* 123. 3162; *Hanshou* 96A. 14A; Olbrycht 1998, 101 and 215; Benjamin 2018, 75–76. On Chinese sources, see Leese-Messing, vol. 1, ch. 12.

116 Lucian *Long Lives* 15.

117 Gorin 2010, 108–109; Rtvelazde 2011, 153–154.

118 Olbrycht 2016, 15–16.

119 Olbrycht 1998, 144; Gorin 2010, 124.

from Yuezhi, assuming the two ethnicities were somehow distinct. Some sites, particularly those where coins were found, provide clues about the authority that was taking shape in western Bactria. Of course, considering the nature of the people involved, it is wise to think about several different centers of power active at the same time in different regions, some of them destined to disappear very quickly.[120]

One of the most remarkable pieces of evidence of the existence of political power in these regions is the appearance of imitative coins of various previous rulers of the area, mainly Graeco-Bactrian or Indo-Greeks, dated between first century BCE and first century CE.[121] Probably contemporary with at least some of these minting activities, a series of countermarks appears first on Sinatrukes's coins (Sellwood Type I[122]), then on those of Orodes II and Phraates IV (Selwood type V[123] and 91. 2–6[124]). Interestingly, when these new elements were introduced, care was taken not to damage the Arsakid royal images on the coins, which always remain clearly readable. This circumstance has led some scholars to suggest a form of political patronage of the Arsakids over these local chiefs. The powerful neighbor probably granted support to their personal rule and promoted their development in exchange for the possibility of exerting some form of political control over the middle Oxus. Connected with this phenomenon is the appearance of locally minted imitations of Phraates IV's *drachms*, probably produced after the monarch's death (2 BCE).[125] Some imitative coins are countermarked, and some even present fake countermarks.[126] Eugenij Zejmal considers all these issues as steps in the same process.[127] Local lords first imported and used Arsakid coinage, then countermarked them with the sign of their authority, perhaps acknowledging Arsakid sovereignty, before starting to produce imitations as their ancestors did in the previous centuries.

The process was complete with the appearance of local coin production, independent of Arsakid types but, according to some scholars, closely connected to the countermarks on both Phraates IV's genuine and imitative exemplars. This is the case for the coinage of Talinsmaidates and his queen Raggodene, and of Sapadbizes and his successors.[128] The process can be compared to that of the use, imitation, and finally local replacement of Roman coinage in northern Mesopotamia, a practice that

120 Morris, vol. 1, ch. 2, 76–83.

121 Rtvelazde 1993/1994.

122 Sellwood 1980[2], 294; Olbrycht 1998, 111–112; Loginov and Niktin 1998, 47–50; Taasob, vol. 2, ch. 8.B, 433.

123 Sellwood 1980[2], Type 91. 11–13, 294–5; Zejmal 1983, 119–121; Rtvelazde 1993/1994, 82–84; Nikitin 1998, 18.

124 Olbrycht 1998, 119.

125 Olbrycht 2016, 15–16.

126 Zejmal 1983, 133; Frye 2004; Gorin 2010, 122–124.

127 Zejmal 1983, 129–139; Nikitin 1998, 18–19.

128 Rtvelazde 1993/1994, 81–82; Olbrycht 1998, 125–126; Weber 2004; Gorin 2010, 124–125; Olbrycht 2016, 16 and 22.

Fig. 1: Reconstruction of two sculptural panels. Khalchayan, northern Bactria/Uzbekistan (Pugachenkova 1971, figs. 51 and 61).

is usually interpreted as a reaction to a lack of coinage in an increasingly monetized economy.

Phraates IV defended his throne with the help of the Scythians, showing the degree of cooperation between the court and the pastoral tribes.[129] After his death, with the weakening of the Arsakids in the first half of the first century CE, the alliance established by Sanatrukes, which meant Parthian indirect control over the mid-Oxus and therefore over the crossroads of trade routes running along and across the river, began to leave the Bactrian chiefs significant spaces of autonomy to build and affirm their rule through the imagery of coins. A few decades later, Bactrian tribes and clans quickly gained strength around Lord Kujula Kadphises and his Kushan clan.[130]

If the presence of Parthians and their political influence in the frontier zone was suggested by Arsakid coin finds up to this time, in the first half of the first century CE the sources are more explicit. At Khalchayan, a clay relief in a sort of dynastic temple palace celebrates the triumph of the clan and the unification of the tribes, perhaps under Kujula's rule (fig. 1).[131] There, among Yuezhi princes, lords, and noble ancestors, a figure is present whose clothing, hairstyle, diademed head, and pointed beard led to his identification as an Arsakid prince or a Parthian high officer. His identification

129 Justin *Epitme*. 42. 5. 5–6; Olbrycht 1998, 118.

130 Morris, vol. 1. ch. 2, 74–75.

131 Pugachenkova 1971; Grenet 2000; see also Morris, vol 1. ch. 2, 78.

and the historical relevance of this representation, of course, depends on the still-debated interpretation of the entire relief and of the figures that are portrayed there.[132]

In the case of the relief portraits, it is remarkable that in the middle of the first century CE, an Arsakid prince appears as a guest in a generic court scene of notables attending a religious ceremony or an ancestors' gallery depicting the historical figures who played a role in the emerging Kushan power. His presence in a temple ceremony attests to contemporary diplomatic activities and connections with Parthia, surely connected to the increasing relevance the area was enjoying for long-distance trade. His portrait in a gallery of illustrious historical figures would show how relevant past contacts with Parthia had been and perhaps would attest to the relevant role the Arsakids played in the sociopolitical evolution of western Bactria.

It is interesting to note that "Parthian dressed" figures[133] appear in the same period also in Chorasmia, a lordship organised around fortresses on the eastern bank of the lower Oxus (map 1).[134] Here also, as in western Bactria, the Arsakids maintained close contacts and probably exerted some political influence during the period of their maximal strength to control the river route leading from India and Herat to northeast Iran and the Caspian Sea.[135]

While these contacts were taking place in the northeastern outer frontier, significant changes affected the Parthian inner frontier as well, that is to say, Merv and Margiana. According to Pilipko's classification,[136] in the first half of the first century CE, with the weakening of Parthian central power, Margiana's leadership began to mint local coins, the so-called "bronze *drachms*" based on contemporary Arsakid issues. This local production continued until the end of the Arsakid Empire, but in the second half of the first century, a certain "King Sanabares" appears in these coins' legends, perhaps connected with the Indo-Parthian dynasty.[137] During the first century CE, events at the empire's core and in the outer frontier forced the Arsakids to rethink their presence and the means through which they managed to exert their influence beyond the Oxus, therefore controlling the trade with Central Asia.

In this context, Margiana occupied a pivotal role as the gate of Parthia and began to develop into an autonomous province of the empire, eventually acquiring the status of a vassal kingdom. With the intensification of contacts with Han China in the second century and the emergence of the Kushan state in between, local leadership built a complex of fortresses[138] through the Murghab delta. The purpose was to protect the direct route to the Oxus but also to control the flow and distribution of local

132 Rtvelazde 2011, 158–159; Taasob 2019, 139– 151.

133 Kidd 2011, 242; Olbrycht 2015, 341.

134 Negus Cleary 2013; see also Morris, ch. 5, this volume.

135 Olbrycht 1998, 189; Rtvelazde 2010, 80–92; Kidd 2011, 240–241; Rtvelazde 2011, 154–158.

136 Pilipko 1984.

137 Dobbins 1971; Loginov and Nitikin 1998, 42.

138 Cerasetti and Tosi 2004, 103–104.

goods within the region, not excluding access of foreign goods into the empire, as the bullae of Gobelky Depe seem to suggest.[139]

The Arsakids expressed interest in the crucial area just beyond their borders, their northeastern outer frontier, as soon as they managed to neutralize the nomadic attacks from the East. Their interest grew into a solid relationship and a strong influence on the development of western Bactrian chiefdoms. Political connections were undoubtedly motivated by the increased relevance of the northeastern outer frontier for long-distance trade, and coin finds suggest that the Parthian presence also had a commercial dimension. Later, when the rise of the Kushans changed the political nature of the outer frontier, they maintained connections with the new court and in parallel developed new forms of rule in their border *satrapy*, the inner frontier, to deal with the new neighboring power and the control it now exerted on incoming trade traffic.

V Conclusion

This chapter has primarily examined the political and social dimensions of the phenomena observed across and within the Parthian frontier zones. Adopting the inner/outer frontier model has allowed a distinction within the frontier zone between the phenomena taking place at the periphery of the Arsakid Empire, as in Mesopotamia and Margiana, and those outside its area of control, such as Omana, Bactria, and Judaea. Most of the time, economic contacts are revealed by the finding of imported items and/or by the documented existence of political contacts concerning economically relevant areas. The wealth of information Palmyrenes provide on trade itself represents an extraordinary circumstance in general for the ancient world and a unique occurrence for the Parthian frontiers.

The phenomena investigated have been broadly conceived as the meeting of politically and culturally diverse people taking place in different sectors of the Parthian frontier zone. In the cases presented, the sources provide some information characterizing a Parthian presence or its political influence abroad, in the outer frontier, or the analogue presence of foreigners within the Arsakid Commonwealth in the inner frontier. In most cases, the nature of this presence varied through time depending on the historical circumstances and the transformations that affected the powers involved, notably the Arsakid Empire. In some cases, as in Margiana, the changes in the geopolitical situation triggered a series of transformations in the Parthian inner frontier, transformations the Arsakid leadership had to promote or at least accept in order to continue to enjoy the advantages of long-distance trade.

139 Koshelenko 1996.

In the case of the Palmyrenes, the initiative seems to be unaffected by political interest. Palmyrenes moved privately along trade routes, only later acquiring administrative roles in the host society. In the south, the involvement of the Arsakids (or of the Charakenes) and the political expansion beyond the frontier are evident, almost certainly following and supporting the development of Parthian merchants' trade networks.

In the east, as opposed to the other cases, the Arsakids were in a position to influence the political formation and development of the states along trade routes. There, political and economic initiatives were intertwined in the outer frontier. When the situation changed and a powerful state arose at the borders and presumably got rid of the Arsakid influence, the Parthians had to adapt their periphery to the new geopolitical situation and the new economic circumstances.

In all cases, even where political initiative remains in the background, the mutation of the political situation both in the core of their empire and in their frontiers is the primary factor determining changes in frontier trade activity. Trade routes, actors, and tools were sensitive to the political environment and subject to change when geopolitical situations evolved.

Following the fierce criticism concerning both the term and the concept of 'Silk Road(s),' their use has been deliberately avoided in this chapter.[140] Also, direct references to long-distance trade have been limited to the necessary contextualization of the events described. The chapter has aimed to highlight the contacts through the Parthian frontiers to the extent they are revealed by the sources, without forcing them into a framework of long-distance trade. In other words, in order to look without bias at what was going on 'beyond the Silk Road,' it will be wiser to presume that the 'Silk Road' did not exist. The empire of the Arsakids was undeniably a fundamental piece in the mosaic of Afro-Eurasian trade connections. The nature of the connections with the surrounding pieces has been traced in this chapter, leaving the task of shedding light on the magnificent scene that emerges from the whole mosaic to the combined effort of the other authors of this volume.

References

Alföldy, A. 1952. "The moral barrier on the Rhine and Danube." In E. Birley (ed.), *The Congress of Roman Frontier Studies, 1949*, 1–16. Durham: The University.

Andrade, N. 2012. "Inscribing the citizen: Soados and the civic context of Palmyra." *MAARAV* 19, 65–90.

Applebaum, S. 1989. "The troopers of Zamaris." In S. Applebaum (ed.), *Judaea in Hellenistic and Roman times: Historical and archaeological essays*, 47–65. Leiden: Brill.

As'ad, K. 2002. "Inscriptions latines de Palmyre." *Revue des Études Anciennes* 104, 363–400.

Baird, J. A. 2018. *Dura-Europos*. London: Bloomsbury Academic.

140 Rezakani 2010; Khazanov 2021; see also von Reden, ch. 1, this volume.

Bellinger, A. R. 1949. *The excavations at Dura-Europos. Final report*. Vol. 6, *The coins*. New Haven, CT: Yale University Press.

Benjamin, C. 2018. *Empires of ancient Eurasia: The first Silk Roads era, 100 BCE–250 CE*. Cambridge: Cambridge University Press.

Boucharlat, R. and M. Drieux. 1991. "A note on coins and the coin mold from Mleiha, Emirate of Sharjah, UAE." In D. T. Potts (ed.), *The Pre-Islamic coinage of eastern Arabia*, 110–119. Copenhagen: Carsten Niebuhr Institute of Ancient Near Eastern Studies.

Boucharlat, R. and J. F. Salles. 1981. "The history and archaeology of the Gulf from the fifth century BC to the seventh century AD: A review of the evidence." *Proceedings of the Seminar for Arabian Studies* 11, 65–87.

Brizzi, G. 1995. "Considerazioni di storia mesopotamica da un passo di Giuseppe Flavio (Ant. Jud. XVIII, 314–379)." *Cahiers du Centre Gustave Glotz* 6, 61–80.

Butcher, K. 2015. "Coins from Sippar." *Journal of the Oriental Society of Australia* 47, 182–189.

Butcher, K. and S. Heidemann. 2017. *Regional history and the coin finds from Assur: From the Achaemenids to the nineteenth century*. Wiesbaden: Harrassowitz.

Callot, O. 2004. *Catalogue des monnaies du musée de Sharjah (Émirats Arabes Unis): Essai sur les monnayages arabes préislamiques de la péninsule d'Oman*. Lyon: Publication de la Maison de l'Orient et de la Mediterranée.

Cantineau, J. 1931. "Textes palmyréniens provenant de la fouille du temple de Bel." *Syria* 12, 116–142.

Casson, L. 1989. *The* Periplus Maris Erythraei*: Text with introduction, translation, and commentary*. Princeton, NJ: Princeton University Press.

Cerasetti, B. and M. Tosi. 2004. "Development of the 'open frontier' between Iran and Central Asia: The Murghab defensive systems in antiquity and the variants of the Silk Road across the Karakum." *Parthica* 6, 101–106.

Chaumont, M.-L. 1974. "Études d'histoire parthe, 3: Les villes fondées par les Vologèse." *Syria* 51, 75–89.

Dąbrowa, E. 1983. *La politique de l'état parthe à l'égard de Rome – d'Artaban II à Vologèse I (ca 11–ca 79 de n. è.) et les facteurs qui la conditionnaient*. Krakow: Jagiellonian University Press.

–. 1998. "Zeugnisse zur Geschichte der parthischen Elymais und Susiane." In J. Wiesehöfer (ed.), *Das Partherreich und seine Zeugnisse / The Arsacid Empire: Sources and documentation*, 417–424. Stuttgart: Franz Steiner.

Delplace, C. 2003. "Palmyre et l'Inde (à propos de l'inscription Inv. X, 88)." In P. Defosse (ed.), *Hommages à Carl Deroux*. Vol. 3, 158–167. Brussels: Éditions Latomus.

Dirven, L. 1996. "The nature of the trade between Palmyra and Dura-Europos." *Aram* 8, 39–54.

–. 1999. *The Palmyrenes of Dura-Europos. A study of religious interaction in Roman Syria*. Leiden: Brill.

Dobbins, K. W. 1971. "Sanabares and the Gondophares dynasty." *The Numismatic Chronicle* 11, 135–142.

Edwell, P. 2013. "The Euphrates as a boundary between Rome and Parthia in the Late Republic and Early Empire." *Antichthon* 47, 191–206.

Febvre, L. 1922. *La terre et l'Évolution humaine.* Paris: Albin Michel.

Frye, R. N. 2004. "Parthians in the East." *Parthica* 6, 129–132.

Gatier, P.-L., P. Lombard, and K. M. Al-Sindi. 2002. "Greek inscriptions from Bahrain." *Arabian Archaeology and Epigraphy* 13, 223–233.

Gawlikowski, M. 1996. "Palmyra and its caravan trade." In "Palmyra and the Silk Road: Special issue documenting the activities of the International Colloquium. Palmyra, 7–11 April 1992." Special issue, *Annales Archéologiques Arabes Syriennes* 42, 139–145.

–. 1998. "Deux publicains et leur tombeau." *Syria* 75, 145–151.

–. 2016. "Trade across frontiers: Foreign relations of a caravan city." In J. C. Meyer, E. H. Seland, and N. Anfinset (eds.), *Palmyrena: City, hinterland and caravan trade between Orient and Occident. Proceedings of the conference held in Athens, December 1–3, 2012*, 19–28. Oxford: Archeopress.

–. 2021. *Tadmor – Palmyra, A caravan city between East and West*. Krakow: IRSA.

Goodblatt, D. 2012. "The Jews in the Parthian Empire: What we don't know." In B. Isaac and Y. Shahar (eds.), *Judaea-Palaestina, Babylon and Rome: Jews in antiquity*, 263–278. Tübingen: Mohr Siebeck.

Gorin, A. 2010. “Parthian coins from Kampyrtepa.” *Anabasis* 1, 107–134.
Gregoratti, L. 2010. “The Palmyrenes and the Arsacid policy.” Вопросы эпиграфики. Сборник статей 4, 21–37.
–. 2011. “A Parthian port on the Persian Gulf: Characene and its trade.” *Anabasis* 2, 209–229.
–. 2012. “The importance of the mint of Seleucia on the Tigris in the Arsacid history.” *Mesopotamia* 47, 129–13.
–. 2015a. “The Palmyrene trade lords and the protection of the caravans.” *Aram* 27, 139–148.
–. 2015b. “A tale of two Great Kings: Artabanus and Vologaeses.” In A. Krasnowolska and R. Rusek-Kowalska (eds.), *Studies on the Iranian World*. Vol. 1, 203–210. Krakow: Jagiellonian University Press.
–. 2016a. “Some considerations concerning trade and territorial control in Roman Palmyra.” *Aram* 28.2, 531–540.
–. 2016b. “Legendary and real wealth in the Arsacid kingdom.” In F. Santangelo and E. Bissa (eds.), *Studies on Wealth in the Ancient World*, 83–92. London: Institute of Classical Studies.
–. 2017a. “The Arsacid Empire.” In T. Daryaee (ed.), *King of the seven climes: A history of the ancient Iranian world (3000 BCE –651 CE)*, 125–153. Leiden: Brill.
–. 2017b. “Corbulo versus Vologaeses: A game of chess for Armenia.” *Electrum* 24, 107–121.
–. 2017c. “Sinews of the other empire: The Parthian Great King’s rule over vassal kingdoms.” In H. Teigon and E. Seland (eds.), *Sinews of empire*, 95–104. Oxford: Oxbow.
–. 2019. “Indian Ocean trade: The role of Parthia.” In M. A. Cobb (ed.), *The Indian Ocean trade in antiquity: Political, cultural and economic impacts*, 66–86. London: Routledge.
–. 2020a. “The need for a Third Space, geographical and political spaces at the periphery of the Parthian and Roman empires: Some preliminary remarks.” In I. B. Mæhle, P. B. Ravnå, and E. H. Seland (eds.), *Methods and models in ancient history: Essays in honor of Jørgen Christian Meyer*, 221–230. Athens: The Norwegian Institute at Athens.
–. 2020b. “Augustus and the Parthians.” In C. Pimentel, A. M. Lóio, R. Furtado, and N. S. Rodrigues (eds.), *Augustan papers: New approaches to the Age of Augustus on the bimillennium of his death*. Vol. 1, 79–94. Hildesheim: Georg Holms.
–. 2020c. “Temples and traders in Palmyra.” In P. Erdkamp, K. Verboven, and A. Zuiderhoek (eds.), *Capital investment and innovation in the Roman world*, 461–480. Oxford: Oxford University Press.
–. 2021. “The Palmyrene trade inscriptions in the context of Near Eastern policy: Changes and evolution through time.” In D. Nappo and G. D. Merola (eds.), *Economia e Frontiera nell’impero romano*, 131–150. Bari: Edipuglia.
–. Forthcoming. “Palmyra and Emesa, or Palmyre sans Émèse.” In R. Raja and A. Kopp (eds.), *Palmyra and the Mediterranean*, Cambridge: Cambridge University Press.
Grenet, F. 2000. “Новая гипотеза о датировке рельефов Халчаяна” [New hypothesis on the dating of the Khalchaian reliefs]. Вестник древней истории no. 2, 130–135.
Haerinck, E. 1975. “Quelques monuments funéraires de l’île de Kharg dans le Golfe Persique.” *Iranica Antiqua* 11, 134–159.
–. 1998. “International contacts in the southern Persian Gulf in the late 1st century BC/1st century AD: Numismatic evidence from Ed-Dur (Emirate of Umm Al-Qaiwain, U.A.E.).” *Iranica Antiqua* 33, 273–302.
Hauser, S. 2022. “Imagined communities: Die Mesene, ein Grenzfall im Spannungsfeld moderner Vorurteile.” In U. Hartmann, T. Stickler, and F. Schleicher (eds.), *Imperia sine fine? Der römisch-parthische Grenzraum als Konflikt- und Kontaktzone vom späten 1. bis zum frühen 3. Jahrhundert n. Chr. (Konferenz Jena 2019)*, 329–355. Stuttgart: Kohlhammer.
Hekster, O. and T. Kaizer. 2004. “Mark Antony and the raid on Palmyra: Reflections on Appian, *Bella Civilia* V, 9.” *Latomus* 63.1, 70–80.
Herman, G. 2012. “The Jews of Parthian Babylonia.” In P. Wick and M. Zehnder (eds.), *The Parthian Empire and its religions: Studies in the dynamics of religious diversity*, 141–150. Gutenberg: Computus.
Hill, G. F. 1931. “A hoard of coins from Nineveh.” *The Numismatic Chronicle and Journal of the Royal Numismatic Society*, fifth series 11, 161–171.

Horbury, W. 2014. *Jewish War under Trajan and Hadrian*, Cambridge: Cambridge University Press.
Isaac, B. H. 1990. *The limits of empire: The Roman army in the East*. Oxford: Clarendon Press.
Jasim, S. A. and E. Yousif. 2014. "Dibba: An ancient port on the Gulf of Oman in the early Roman era." *Arabian Archaeology and Epigraphy* 25, 50–79.
Kaizer, T. 2020. "Oasis-*polis*: Tadmur-Palmyra as a Greek city in the Roman world (or not) in five episodes." In M. Sommer (ed.), *Inter duo Imperia, Palmyra between East and West*, 23–36. Stuttgart: Franz Steiner.
Karras-Klapproth, M. 1988. *Prosopographische Studien zur Geschichte des Partherreiches auf der Grundlage antiker literarischer Überlieferung*. Bonn: Habelt.
Khazanov, A. M. 2021. "The overland 'Great Silk Road': Myths and realities (a politically incorrect paper on a politically correct subject)." In P. B. Clarkson and C. M. Santoro (ed.), *Caravans in global perspective: Contexts and Boundaries*, 122–167. London: Routledge.
Khlopin, I. 1976. "Die Reiseroute Isidors von Charax und die oberen Satrapien Parthiens." *Iranica Antiqua* 12, 117–165.
Kidd, F. 2011. "Complex connections: Figurative art from Akchakhan-Kala and the problematic question of relations between Khorezm and Parthia." *Topoi* 7, 229–276.
Koshelenko G. 1996. "Bullae from Göbekly-depe: General problems and main subjects." In M.-F. Boussac and A. Invernizzi (eds.), *Archives et sceaux du monde hellénistique, Actes du colloque de Turin 1993*, 377–383. Athens: École Française d'Athènes.
Kosmin, P. 2013. "Rethinking the Hellenistic Gulf: The new Greek inscription from Bahrain." *Journal of Hellenic Studies* 133, 61–79.
Lattimore, O. 1962. *Studies in frontier history: Collected Papers 1928–1958*. Oxford: Oxford University Press.
Le Rider, G. 1965. *Suse sous les Séleucides et les Parthes: Les trouvailles monétaires et l'histoire de la ville*. Paris: Paul Geuthner.
Lerouge, C. 2007. *L'image des Parthes dans le monde gréco-romain: Du début du Ier siècle av. J.-C. jusqu'à la fin du Haut-Empire romain*. Stuttgart: Franz Steiner.
Loginov, S. D. and A. B. Nikitin. 1998. "Parthian coins from Margiana: Numismatics and history." *Bulletin of the Asia Institute* 10, 39–51.
Luttwak, E. (1976) 2016. *The Grand strategy of the Roman Empire from the first century AD to the third*. 2nd ed. Baltimore, MD: Johns Hopkins University Press.
Lucchelli, T. 2018. "Osservazioni sull'interscambio monetario romano-partico." In M. Bellomo (ed.), *Studi di storiografia e storia antica. Omaggio a Pier Giuseppe Michelotto*, 149–159. Rome: Arbor Sapientiae.
Maricq, A. 1959. "Classica et Orientalia, 7: Vologésias, l'emporium de Ctésiphon." *Syria* 36, 264–276.
Millar, F. 1993. *The Roman Near East (31 BC–AD 337).* Cambridge, MA: Harvard University Press.
–. 1998. "Caravan cities: The Roman Near East and long-distance trade by land." In M. Austin, J. Harries, and C. Smith (eds.), *Modus operandi: Essays in honour of Geoffrey Rickman*, 275–299. London: Institute of Classical Studies.
Mouton, M. 1999. "Mleiha: présentation du site et périodisation / Mleiha: description and dating of the site." In M. Mouton (ed.), *Mleiha.* Vol. 1, 9–32. Lyon: Maison de l'Orient méditerranéen.
–. 2008. *La péninsule d'Oman de la fin de l'Age du fer au début de la période sassanide 250 av.–350 ap. J.-C.)*. Oxford: Archaeopress.
Mouton, M. and J. Schiettecatte. 2014. *In the desert margins: The settlement process in ancient South and East Arabia*. Rome: L'Erma di Bretschneider.
Negus Cleary, M. 2013. "Khorezmian walled sites of the seventh century BC–fourth century AD: Urban settlements? Elite strongholds? Mobile centres?" *Iran* 52, 71–100.
Neusner, J. 1984. *A history of the Jews in Babylonia*. Vol. 1, *The Parthian period*. Chico, CA: Scholars Press.
Nikitin, A. B. 1998. "Early Parthian coins from Margiana." In V. S. Curtis, R. Hillenbrand, and M. Rogers (eds.), *The art and archaeology of ancient Persia: New light on the Parthian and Sasanian empires*, 14–19. London: I. B. Tauris.
Olbrycht, M. J. 1998. *Parthia et ulteriores gentes: Die politischen Beziehungen zwischen dem arsakidischen Iran und den Nomaden der eurasischen Steppen*. Munich: tuduv- Verlagsgesellschaft.

–. 2015. “Arsacid Iran and the nomads of Central Asia: Ways of cultural transfer.” In J. Bemmann and M. Schmauder (eds.), *Complexity of interaction along the Eurasian steppe zone in the first millennium CE*, 333–390. Bonn: Rheinische Friedrich-Wilhelms-Universität.

–. 2016. “Archaeological discoveries at Tillya-tepe and Parthia’s relations with Bactria.” *Parthica* 18, 9–29.

Oppenheimer, A. 1983. *Babylonia Judaica in the Talmudic period*. Wiesbaden: Dr. Reichert.

Overlaet, B. 2018. *Mleiha, an Arab kingdom on the caravan trails, Mleiha, Sharjah Emirate, U.A.E.: Catalogue of an exhibition at the Royal Museums of Art and History, Brussels (30.10 – 30. 12. 2018)*. Brussels: Sharjah Archaeology Authority.

Overlaet, B., M. Macdonald, and P. Stein. 2016. “An Aramaic-Hasaitic bilingual inscription from a monumental tomb at Mleiha, Sharjah, UAE.” *Arabian Archaeology and Epigraphy* 27, 127–142.

Overtoom, N. L. 2016. “The rivalry of Rome and Parthia in the sources from the Augustan age to late antiquity.” *Anabasis* 7, 137–156.

Pasmans, P. 2022. “*Meredat, no longer king of the Omani?*” *Revue Belge de Numismatique et de Sigillographie* 168, 308–315.

Pennacchietti, F. A. 1987. “L’iscrizione bilingue greco-partica dell’Eracle di Seleucia.” *Mesopotamia* 22, 169–185.

Pilipko, V. N. 1984. “Парфянские бронзовые монеты со знаком П под луком” [Parthian bronze coins bearing the sign П under the bow]. Вестник древней истории no. 4, 105–124.

Potts D. T. 1988. “Arabia and the kingdom of Characene.” In D. T. Potts (ed.), *Araby the Blest, Studies in Arabian Archaeology*, 137–167. Copenhagen: Museum Tusculanum Press.

–. 1990. *The Arabian Gulf in Antiquity*. Vol. 2, *From Alexander to the coming of Islam*. Oxford: Oxford University Press.

–. 1991. *The pre-Islamic coinage of Eastern Arabia*. Copenhagen: Museum Tusculanum Press.

–. 1994. *Supplement to the pre-Islamic coinage of Eastern Arabia*. Copenhagen: Museum Tusculanum Press.

–. 1996. “The Parthian presence in the Arabian Gulf.” In J. E. Reade (ed.), *The Indian Ocean in antiquity*, 269–285. London: Kegan Paul International.

Pucci, M. 2005. *Diaspora Judaism in turmoil, 116/117 CE: Ancient sources and modern insights*. Leuven: Peeters.

Pugachenkova, G. A. 1971. Скульптура Халчаяна [*The sculpture of Khalchaiana*]. Moscow: Iskusstvo.

Raja, R. 2022. *Pearl of the desert: A history of Palmyra*. Oxford: Oxford University Press.

Rajak, T. 1998. “The Parthians in Josephus.” In J. Wiesehöfer (ed.), *Das Partherreich und seine Zeugnisse / The Arsacid Empire: Sources and documentation*, 309–324. Stuttgart: Franz Steiner.

Rezakhani, K. 2010. “The road that never was: The Silk Road and trans-Eurasian exchange.” *Comparative Studies of South Asia, Africa and the Middle East* 30.3, 420–433.

Rtveladze, E. V. 1993/1994. “Coins of the Yuezhi rulers of northern Bactria.” *Silk Road Art and Archaeology* 3, 81–95.

–. 2010. “The Great Indian Road: India – Central Asia – Transcaucasia.” *Anabasis* 1, 80–96.

–. 2011. “Parthians in the Oxus valley: Struggle for the Great Indian Road.” *Anabasis* 2, 149–178.

Salles, J.-F. 1980. “Monnaies d’Arabie orientale: Éléments pour l’histoire des Emirats Arabes Unis à l’époque historique.” *Proceedings of the Seminar for Arabian Studies* 10, 97–109.

–. 1984, “Céramiques de surface à Ed Dour, Emirats Arabes Unis.” In R. Boucharlat and J.-F. Salles (eds.), *Arabie orientale, Mésopotamie et Iran méridional de l’age du fer au début de la période islamique: Réunion de travail, Lyon, 1982*, 241–270. Paris: Editions Recherche sur les Civilisations.

–. 1993, “The Periplus of the Erythraean Sea and the Arab-Persian Gulf.” *Topoi* 3, 493–523.

Schlude, J. M. 2020. *Rome, Parthia, and the politics of peace: The origins of war in the ancient Middle East*. London: Routledge.

Seland, E. H. 2011. “The Persian Gulf or the Red Sea? Two axes in ancient Indian Ocean trade, where to go and why.” *World Archaeology* 43.3, 398–409.

–. 2014. “The Organisation of the Palmyrene caravan trade.” *Ancient West and East* 13, 197–211.

–. 2016. *Ships of the desert and ships of the sea: Palmyra in the world trade of the first three centuries CE*. Wiesbaden: Harrassowitz.
–. 2020. "The rise of the merchant princes? Scale, status, and wealth in Palmyrene trade." In M. Sommer (ed.), *Inter duo Imperia, Palmyra between East and West*, 85–94. Stuttgart: Franz Steiner.
Sellwood, D. 1980. *An introduction to the coinage of Parthia*. 2nd ed. London: Spink and Son Ltd.
Sinisi, F. 2012. *Sylloge Nummorum Parthicorum: New York – Paris – London – Vienna – Tehran – Berlin*. Vol. 7, *Vologases I–Pacorus II*. Vienna: Österreichische Akademie der Wissenschaften.
Smith, A. M. 2013. *Roman Palmyra: Identity, community, and state formation*. Oxford: Oxford University Press.
Sommer, M. 2017. *Palmyra*: *A history.* London: Routledge.
Schuol, M. 2000. *Die Charakene: Ein mesopotamisches Königreich in hellenistisch-parthischer Zeit*. Stuttgart: Franz Steiner.
Steve, M.-J. 2003. *L'île de Khārg: Une page de l'histoire du Golfe Persique et du monachisme oriental*. Neuchâtel: Recherches et Publications.
Taasob, R. 2019. "Khalchayan and historical links to the numismatic and iconographical evidence in Central Asia: Some suggestions for chronology." *Anabasis* 10, 138–160.
Thulin, C. 1913. *Corpus agrimensorum romanorum*. Leipzig: Teubner.
Van Alfen, P. 2010. "A die study of the 'Abiel' coinages of eastern Arabia." In M. Huth and P. G. van Alfen (eds.), *Coinage of the caravan kingdoms: Studies in ancient Arabian monetization*, 549–594. New York: The American Numismatic Society.
Van der Spek, R. J. 1998. "Cuneiform documents on Parthian history: The Rahimesu archive." In J. Wiesehöfer (ed.), *Das Partherreich und seine Zeugnisse / The Arsacid Empire: Sources and documentaion*, 205–258. Stuttgart: Franz Steiner.
–. 2014. "Factor markets in Hellenistic and Parthian Babylonia (331 BCE–224 CE)." *Journal of the Economic and Social History of the Orient* 57, 203–230.
Weber, D. 2004. "The coin legend Tanlismaidates and related problems." *Parthica* 6, 247–250.
Whittaker, C. R. 1994. *Frontiers of the Roman Empire: A social and economic study*. Baltimore, MD: Johns Hopkins University Press.
Wolski, J. 1993. *L'Empire des Arsacides*. Leuven: Peeters.
Yon, J.-B. 1998. "Remarques sur une famille caravanière à Palmyre." *Syria* 75, 53–160.
–. 2002. *Les notables de Palmyre*. Beirut: Institut Français de Proche Orient.
Zanous, H. P. and J. Yang. 2018. "Arsacid cities in the *Hanshu* and *Houhanshu*." *Iran and the Caucasus* 22.2, 123–138.
Zejmal' E. V. 1983. Древние монеты Таджикистана [*Ancient Coins of Tadzhikistan*]. Dushanbe: Izdatel'stvo Donish.

Jennifer Baird and Sitta von Reden

11 A Caravan City at the Edge of Empire? The Economy of Dura-Europos in the Syrian Desert

I Introduction

The chronological bracket of this volume, 300 BCE–300 CE, takes in virtually the entire existence of the city of Dura-Europos on the Syrian Euphrates, from its Seleukid foundation, through its Arsakid and Roman lifespan, to its end at the hands of Shapur's Sasanian army. Dura's history begins in the wake of Alexander: while we have only fragmentary remains of early Seleukid Dura, by the Arsakid period the civic founder was remembered as Seleukos Nikator.[1] It seems the basis of that early community was agricultural; the settlers of this initial military colony arrayed beneath the citadel were, we learn from later parchment evidence, holders of plots of land called *kleroi*, which were distributed to them.[2] The same naturally fortified position over the Euphrates that had attracted that Seleukid colony was probably a central reason that, hundreds of years later, the Roman military also chose the site for a garrison.[3] Dura's urban life ended, as it had started, as a military settlement, when, in the late second or early third century CE, a Roman military garrison moved into the site, taking over much of its north side; a Roman palace was built overlooking the Euphrates, and barracks buildings, an amphitheater, and baths displaced much of the population.[4]

As with much of Dura's history, we owe the status quo to Rostovtzeff, renowned émigré scholar and historian. It was Rostovtzeff who orchestrated the funding and permissions for most of the excavations, and he was joint scientific director of the expedition with Franz Cumont. It was also Rostovtzeff, of course, who framed Dura as one of his *Caravan cities* in his volume of that name, arguing that its strategic position on the Euphrates allowed it to protect and tax caravan routes heading from and returning to Palmyra.[5] For Rostovtzeff, caravan cities were not simply settlements that might have witnessed passing caravans; their very character – their place in history – was dependent on their role in an Asian long-distance trade network.[6] Ros-

1 For an overview of Dura's history, Baird 2018. On Hellenism at Dura, Kaizer 2017a, 40–62; for the foundation story, see further below.

2 Kosmin 2011.

3 That fortress life might have started early: the Semitic toponym, preserved on a redeposited Old Babylonian tablet at the site, was *Da-wa-ra*, meaning fortress; this naturally fortified site may indeed have a much deeper history: see Stephens 1937; Frahm 2020.

4 On the Roman military base, James 2019.

5 Rostovtzeff 1932.

6 On Rostovtzeff's characterization, see Millar 1998; Alston 2007.

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tovtzeff's framing of Dura and its economy still casts a long shadow,[7] with the site characterized either as a caravan city or a stopping place for Palmyrene trade routes, from which it gathered prosperity and links to long-distance networks.[8] More recently, it has been described as an above all locally based economy, emphasizing its agrarian setting, local manufacturing, and local commercial connections reaching no further than Ana in the south, the Euphrates-Khabour confluence in the north, or Palmyra and the desert tribes to the east.[9] This chapter aims to put the evidence for Dura's economy into a new conceptual framework and revisit how the site's position and status is understood better in a global rather than Silk Road perspective.

II The Rhetoric of Maps

Even before Dura was identified as an archaeological site, it appeared on maps, such as a 1914 visualization of the text of Isidore of Charax's *Parthian Stations*, a text that lists nodes on an overland route of the first century BCE.[10] Maps have been key in how the site has been understood, both in its relationship to empires and in its presence or absence in broader trade networks. In either case, Dura can usually be found on the edges: from the point of view of the Roman world, it is the easternmost node on maps of Mithraea, or amphitheaters, or provinces; sometimes, it literally falls off the edge.[11] As it is on the right bank of the south-flowing Euphrates and thus not technically in Mesopotamia, it also tends to fall off the western edge of Parthian or Roman-era Mesopotamia as well.[12] Whether on the edge of the Roman world or the Mesopotamian one, Dura was certainly in a liminal zone, a permanent frontier. But, in some ways, this is a cartographic misnomer that privileges a world view of empires, universal units with centers and peripheries. Dura's liminality is simply relational, peripheral only to what we, following ancient imperial world views, perceive as cores.

Maps situating Dura in a world of long-distance trade also quite arbitrarily position trade routes, lines drawn to make a rhetorical point about Dura's involvement in those routes, rendering the argument circular. In Rostovtzeff's map in *Caravan cities* (map 1), Dura marked the easternmost hub of a route network that connected the caravan city with Palmyra, Damascus, Antiocheia, Bosra, Petra, and Seleukeia-

7 Elsner 2021.

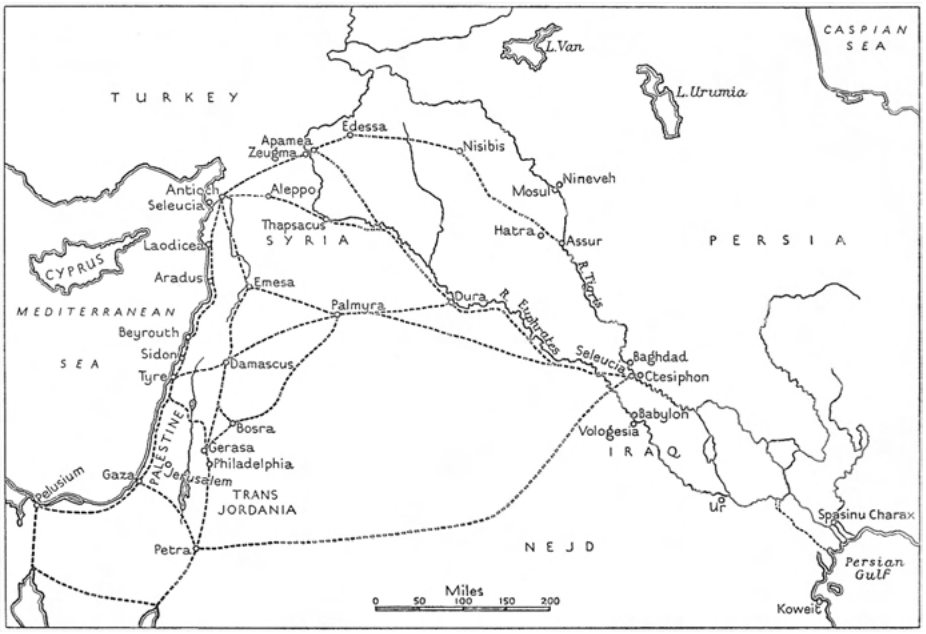
8 For Palmyra, Gregoratti, ch. 10, this volume; von Reden, vol. 2, ch. 2, 29–32.

9 Millar 1993, 449–450; Gawlikowski 1987; Gawlikowski 1996.

10 Schoff 1914. Schoff's map is based on the *Parthian Stations* 1.3–4: "Then the village of Asich, 4 *schoeni*; beyond which is the city of Dura Nicanoris, founded by the Macedonians, also called by the Greeks Europos, 6 *schoeni*. Then Merrha, a fortified place, a walled village, 5 *schoeni*."

11 E.g., http://sebastianheath.com/roman-amphitheaters/; Dura is beyond the frame of the map on Collar's plotting of relationships between Jewish communities of the Roman world: see Collar 2013.

12 E.g., Palermo 2019, figure 4.1 for major centers in Roman-period Mesopotamia.



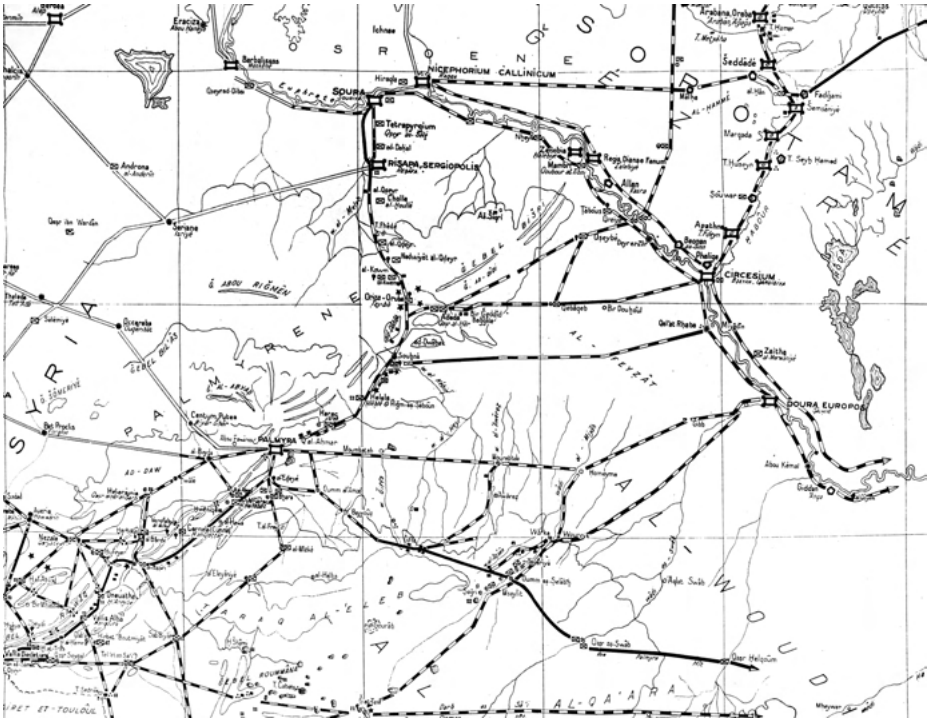
Map 1: M. Rostovtzeff, *Caravan Cities* (1932).

Tigris. The map mirrors Rostovtzeff's own journey. *Caravan cities* was based on what he called "travel sketches" written in 1928, while his journeys through Syria, Arabia, and Palestine "were still fresh" in his mind.[13] In the map of the French archaeologist Antoine Poidebard (1878–1955), another pioneer of Syrian archaeology, a complex of arteries was represented like railway lines, suggesting that these routes belonged to a regional network of transport that connected the Mediterranean and Northern Mesopotamia to the Arab-Persian Gulf (map 2).[14]

The conventions of cartography that were employed made hypothetical routes of movement into an implied physical infrastructure. Over the decades, route lines have been drawn in service of various arguments. Michal Gawlikowski (map 3) makes Dura

13 On this point, Ruffing 2007, 399. *Caravan cities* includes a chapter on 'Palmyra and Dura,' which gives an overview of the historical development of the sites, and separate chapters on the ruins of the two sites, respectively. The role of Dura had been noted already by Cumont 1926.

14 Poidebard 1934. The map appears before the aerial photographs of vol. 2 (Atlas). Poidebard's motivation to identify routes and sites as Roman was to create "a projected connection between ancient Roman and modern French civilization in the geographical region of the Mandate" (Helbig 2016, 283). Dirven 1996, 39–40 with n. 3 on the controversy of the inclusion or exclusion of Dura into the long-distance Euphrates trade route. Dirven considers Dura as a stopover on that route, but suggests that the connections between Dura and Palmyra had primarily a local purpose.



Map 2: A. Poidebard, *La Trace de Rome dans le désert de Syrie,* vol. 2 (1934).

a backwater that is situated beyond the route that connects Palmyra with Hit.[15] In Young's map, Palmyra is a hub to which several cities on the Euphrates are connected locally, while in the atlas of *Brill's New Pauly*, Petra is the hub through which Dura and Palmyra are connected to the Mediterranean.[16]

The suggestions of the earliest visitors, including the famous British explorer and diplomat Gertrude Bell (1868–1926), the Hungarian-British archaeologist Aurel Stein (1862–1943), as well as Rostovtzeff and Poidebard, were based on rather thin evidence.[17] If they saw tracks on the ground, or on aerial photography, it was difficult to ascertain whether they were Roman, Umayyad, Ottoman, or later.[18] Meyer and Seland have shown that it is in fact extremely difficult to identify ancient roads in a desert landscape.[19] Instead, Meyer and Seland explored the desert hydrology in the

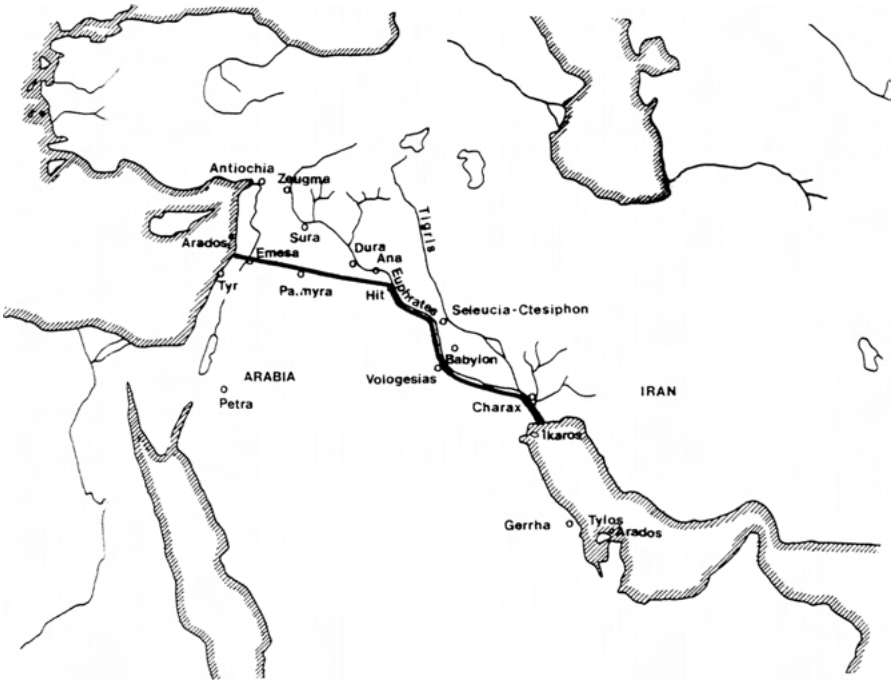
15 Gawlikowski 1994, figure 1. Gawlikowski's map has recently been used by Graf 2018, 491. In earlier maps, Gawlikowski had drawn a link between Dura and Pamyra; see Gawlikowski 1983, 54.

16 Young 2002, 141; *Brill's New Pauly*, Suppl. 3; https://referenceworks.brillonline.com/entries/brill-s-new-pauly-supplements-i-3/trade-routes-in-the-roman-empire-1st3rd-cents-ad-BNPA202#.

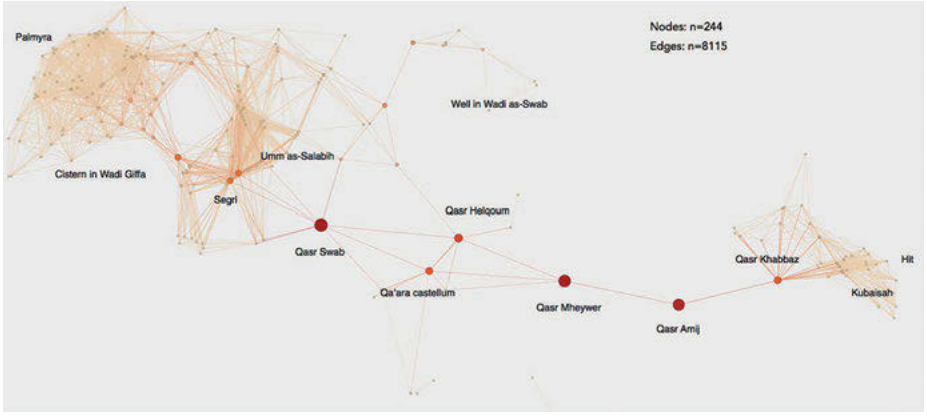
17 Meyer and Seland 2016, 499–502 for these early visitors.

18 Meyer and Seland 2016, 498–499.

19 Meyer and Seland 2016.



Map 3: M. Gawlikowski "Palmyra as a trading centre" (1994). © M. Gawlikowski.



Map 4: J. C. Meyer and E. Seland "Palmyra and the trade route to Euphrates" (2016). © E. Seland.

region triangulated by Palmyra, Dura, and Hit in order to identify historical paths through the desert. The hydrological situation combined with GIS, network, and cost–benefit modeling suggested that caravan routes must have bypassed Dura, reaching the Euphrates at Hit (map 4). Seland and Meyer's map roughly coincides with Poide-

bard's; a supporting argument for that route might be that the Euphrates between Dura and Hit has strong currents and is not easily navigable in either direction.[20] But broadly, we understand the links between Dura and other sites less well than is usually made clear, and the lines on maps are often closer to imagined geographies than real paths in the sand.

III Palmyrene Presences and Spectral Caravans

Rostovtzeff's summary of Dura in *Caravan cities* is in many ways a caricature, with caravans of goods, beasts of burden, and customs duties.[21] In the chapter focusing on the "The Ruins of Dura," Rostvtozeff sets out Dura's raison d'être as he saw it, which was the protection of Palmyra's caravan traffic. Rostovtzeff writes there that his own travels to Dura happened in a Ford and a Chevrolet, because, he writes wistfully, the camel had "once and forever reverted to the world of legend" in the region.[22] While Rotovtzeff's view of a romantic desert landscape through which camels crossed was, to his mind, sadly inaccessible in his own era, the links between Dura and Palmyra are nonetheless well attested in the archaeological evidence of Dura, where the presence of Palmyrenes has loomed large in assessments of the Durene.[23]

Palmyrenes are attested at Dura first in 33 BCE by the dedication of a temple to the two Palmyrene city gods Bel and Yaribol 350 m outside the city walls. Two individuals, *bny glydbwl* and *bny kmr'* dedicated the sanctuary with an inscription in their native dialect of Aramaic.[24] The temple was maintained and renovated several times

20 In contrast to Gawlikowski 1987, who suggested that upstream navigability of the Euphrates ceased at Hit; see Smith 2013, 156, and Meyer and Seland 2016 for discussion.

21 Rostovtzeff 1932, 105. "A glance at the map will show that Dura is the nearest crossing-place of the Euphrates and if, in addition to this, it was also, as we have every reason to suppose, the most northerly fort on the Euphrates owned by Parthia, it was naturally by way of Dura that the Parthians dispatched the majority of the caravans from Palmyra destined for Mesopotamia and Iran, and there that they received those returning to Palmyra. The garrison of Dura was responsible for the safety of the roads leading to the west, south, and east across the Euphrates, and this fact alone was sufficient to lead the caravan merchants to pass through Dura and even to halt there for a longer or shorter period of time. / As a result of this Dura's wealth increased. Her Macedonian landowners developed into Levantine merchants, furnished the caravans with wine, oil, bread, vegetables, beasts of burden, and all other necessities, and levied in return various taxes from all caravans which stopped at, or made use of, Dura. These taxes were distinct from the main customs-dues which were probably levied by the Arsakids. A study of the ruins shows that in the first century A.D. Dura must have been a large and rich town. All her best and richest religious buildings date from this time."

22 Rostovtzeff 1932, 160. Much of the chapter on the "Ruins of Dura" in *Caravan cities* is just a survey of what was known at Dura at the time (up to the fifth season of excavations), and personal experience of traveling there. The chapter unfortunately also includes racist remarks about Bedouin and Syrians.

23 The key work on the Palmyrenes of Dura remains Dirven 1999.

24 'Necropolis temple' inscription, *Palmyrene Aramaic Texts* (*PAT*) 1067. Rostovtzeff, Brown, and Welles 1939, 319–320, no. 916; Dirven 1999, 199–200.

during the first and second centuries CE, suggesting that Palmyrenes frequented it over a long period of time. It grew in size during the period Dura was under Roman control.[25] Quite likely, the large contingent of Palmyrene archers, then garrisoned in the city as the *cohors XX Palmyrenorum*, worshipped their home gods in this temple.

Still during the Arsakid era of the city, a temple inside the city was renovated, and the worship of the main god, identified in its bilingual inscription as Baalshamin and Zeus Kyrios, is attested in one of its chambers for the first time.[26] Perhaps even more significant is the construction, also in the Arsakid era, of a building which contained a pair of votive reliefs dedicated to the Gadde of both Palmyra and Dura (fig. 1 and 2).[27] One of the reliefs (1) depicts the Gad of Palmyra, a female goddess, crowned by Nike and flanked on the left by Hairan, son of Malku and grandson of Nashor, the priest who dedicated the relief in 159 CE.

The complementary relief (2) depicts the Gad of Dura represented here as a male deity. To his right stands Seleukos I Nikator, the founder of the city, and to his left Hairan, this time identified just as son of Malku. The twin reliefs worked by Palmyrene craftsmen and equipped with inscriptions in the Palmyrene dialect seem to have aimed at demonstrating the cooperative relationship between the two cities, especially from the Palmyrene point of view.

The relationship of the two cities was emphasized once again in dedications by the *cohors XX Palmyrenorum* in the Roman period. In a painting in the temple of Zeus dated to 239 CE, Palmyrene deities, together with the goddesses of fortune of Dura and Palmyra, receive sacrifice from the Roman military tribune Julius Terentius and the members of the Palmyrene cohort.[28] More than anything else, the inscriptions of Palmyrenes at Dura emphasize their being in harmony with the Durene religious cosmos.

While the military connections between Palmyrenes and Dura during the Roman period are undisputed, the reasons for the visibility of Palmyrenes in Dura before this period are more difficult to fathom. The building of a sanctuary in honor of Palmyrene gods and equipment with inscriptions in the Palmyrene dialect suggest a mostly Palmyrene function of the temple. It shows their effort to worship their gods and to mark identity in a foreign environment.[29] Dirven has suggested that the cistern and courtyard in the sanctuary may have served as feeding and resting place for camels on their way to Palmyra; yet it may be noted that courtyards and cisterns are quite regular features in religious buildings, and that the courtyard may have served

25 Downey 1988, 98; Dirven 1999, 209–211.

26 *PAT* 1089, 31 CE; Dirven 1999, 212–218.

27 Downey 1977, 14–19, nos. 4, 5; Smith 2013, 157–159. The central deity of the religious building in which the reliefs were found was likely Malakbel (whose central sculpture was more fragmentary when excavated than the subsidiary cult reliefs of the Gadde), on which see further Dirven 1999.

28 James 2019, 1, 63.

29 Smith 2013, 152.

Fig. 1 and 2: Votive relief to the Gadde of Palmyra (top) and Dura (bottom), Yale University Art Gallery, Dura-Europos Collection 1938.5314 and 1938.5313. © YUAG.

several functions.[30] No more conclusive is the fact that the founders of the sanctuary belonged to clans or dynasties that 200 years later appear as sponsors of the caravan trade in the Palmyrene caravan inscriptions. The families may have had a long tradition in the trans-Syrian caravan trade, yet their endowment of a temple in 33 BCE does not prove that this sanctuary was above all an abode for traders, nor indeed that all the euergetic activities of the Palmyrene trading dynasties served the interests of traders. The presence of Palmyrenes is thus a rather poor indicator for the role of trade in the economy of Dura.[31]

Palmyrenes, moreover, were not the only foreigners at the site. Other graffiti, in Safaitic, testifies to the presence of mobile pastoralists from the Arabian steppe,[32] and travelers probably from Hatra left a mark too.[33] So, whatever lack of utility we might now place on understanding Dura as 'caravan city,' we have here a place that is undoubtedly connected to a much wider ancient world, both geographically and temporally, and not only through the powers that ruled it and the armies that captured it, but also by the goods and people that moved through.

Another point in the debate on Dura is its participation in what has been dubbed caravan trade. This is a term that has become naturalized in the language of Silk Road trade but is rather vague about what it actually denotes economically. What does it say about the nature of this trade? Does it refer to very long-distance trade in contrast to smaller journeys made overland by mules or via river on rafts? Does it include regional journeys to Syria and the Syrian coast, or to Northern and Southern Mesopotamia, or does it refer solely to long-distance ventures to the Arab-Persian Gulf, India, and Central Asia? Does this term in its utter vagueness not just conjure up trade in luxuries to the exclusion of more mundane products such as wine, wool, and unembroidered textiles, which surely were transported on camels too?[34] It certainly was just this imagined oriental caravan trade that excavators had in mind when they posed a camel for a photograph in the main gate of the city (fig. 3). The more closely we look, the more it is evident that the notion of 'caravan city' not only does not apply to Dura but is also economically meaningless. Without specification of what it refers to, it just summons up oriental nostalgia of premodern camel caravans loaded with pearls and spices, or even worse, railway lines that shipped eastern goods to Europe.

And what does participation in caravan trade mean? To be sure, goods from long-distance trade were consumed in Dura: In the deep deposits of the Roman rampart, built in an ultimately futile attempt to keep the city from Shapur's army, come frag-

30 Dirven 1999, 32; Downey 1988, 98; Buchmann 2021 on the multifunctionality of sanctuaries, which renders arguments on primary or secondary functions of the Palmyrene temple rather futile.

31 On the Middle Euphrates in this period as a Palmyrene protectorate, Luther 2004. See now Kaizer 2017b.

32 Macdonald 2005.

33 Bertolino 1997; Leriche and Bertolino 1997. On foreigners at Dura, Dirven 2011.

34 See for Silk Road imaginations, von Reden, ch. 1, this volume.

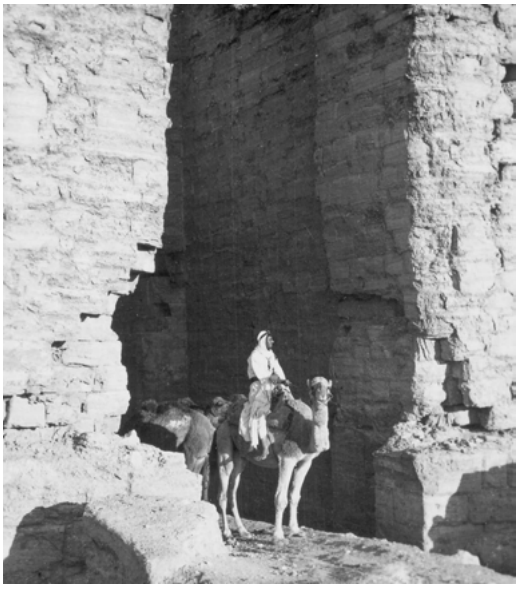


Fig. 3: Mounted camel rider posed for photograph in 1936, Yale University Art Gallery Dura collection Y550. © YUAG.

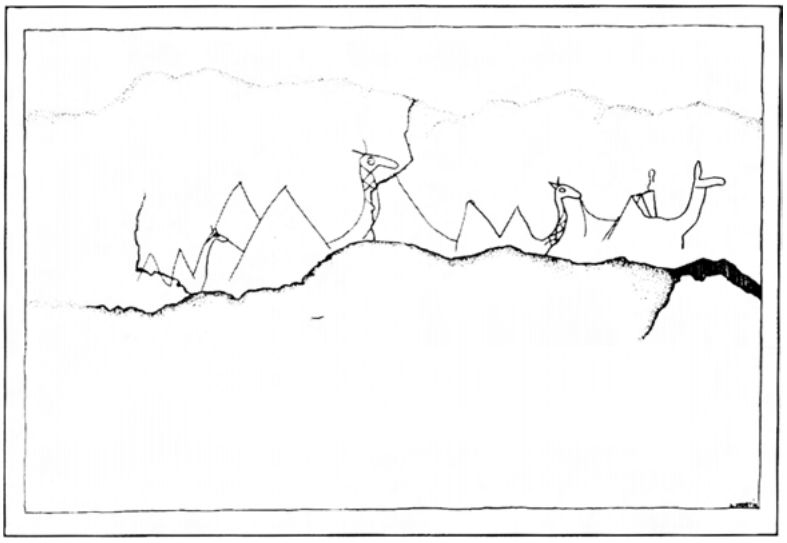


Fig. 4: Graffito of camel caravan (Baur et al. 1933, plate 23.2).

ments of silk.[35] Yet there is no evidence that the town of Dura flourished on trade. Taxing foreign goods was usually the preserve of imperial governments, as was the case with the quarter tax that was raised at imperial borders.[36] Elites would certainly have profited from being part of the tax administration, but less so from the tax itself. It could also have meant that Dura was involved in haulage, such as loading and unloading camels and boats for transiting from desert to river and vice versa, although we have no similar evidence for this as we have from Koptos in Egypt (which, incidentally, has never been called a caravan city). Caravans were certainly present at Dura, as is shown by an image of one scratched in the plaster of a house wall, but this cannot tell us how important caravan trade might have been for the economy of the site (fig. 4).[37]

IV The Global Economy of Dura

Let us move then into the twenty-first century – that is, let us ask questions of modern economic history rather than those that occupied scholars a century ago. Ancient sources are notoriously difficult, and indeed insufficient, for writing the economic history we want in the twenty-first century. We would like to know, for example, what proportion of the city's income was earned in foreign trade, how GDP changed as a result and over time, and what agrarian or commercial strategies individuals and the city adopted in order to increase their prosperity and income. These questions are impossible to answer with the evidence we have. But they provide the framework for what we need to look for: visible changes in prosperity and possible reasons for them. In the programmatic chapters of volume 2 of this handbook, we suggested drawing on globalization theory, neoinstitutionalism, and network theory, amongst others. In combination, they help us to search for relationships and institutions that created economic opportunities in ancient desert environments: money, law, and physical infrastructures; networks of trust, and the standards that help to build and sustain networks (such as common coinages, common languages, or common legal institutions); and network power, that is, the ability to use people and networks effectively, and to draw on them to one's own advantage.[38] Utilizing some insights of globalization theory, it is possible to shift the perspective on Dura's economy away from the dichotomy between long-distance trade and local agricultural self-sufficiency to one that emphasizes the attempts of Durene economic actors to increase their

35 Snow 2011, 39–40. For other goods of eastern origin, recorded in the graffiti from the walls of house B8-H, the House of Nebukelos, see Ruffing 2000. As noted by Ruffing, Dura may be the city mentioned in Chinese sources as Yü-Lo: Leslie and Gardiner 1996, 166–167, 196–198.

36 Weaverdyck et al., vol. 2, ch. 8, 308.

37 Graffito from the 'House of the Ravine' in block C5: Baur, Rostovtzeff, and Bellinger 1933, 221–222.

38 Von Reden, vol. 2, ch. 2, esp. 43–45.

opportunities in local, regional, and global economic activities, which in total might explain the prosperity of the town. In the following, we will look first at phases of visible increase in urban investment and seek the economic or political backgrounds of that increase. Then we will look at coinage and the monetary networks that the people of Dura seem to have maintained. What interests and network relationships might they reveal? And finally we will revisit some institutions that economic actors in Dura seem to have taken advantage of – Greek language and Greek contractual forms – in order to examine the economic goals of the city and individuals within it. These different aspects will demonstrate that distinctions between a local, regional, and global economy of Dura are not very helpful ones, let alone that any one of these radiuses of economic activity explains the prosperity of Dura independently of the others.

IV.1 Prosperity

Dura was founded as a military settlement (*phrourion*) around 300 BCE by either Seleukos I Nikator or one of his generals named Nikanor in an area that since neo-Babylonian times was called Parapotamia – "beyond the river."[39] The perspective on this territory from the eastern bank of the river is significant. The main function of the garrison town seems to have been to control movement along the western bank of the Euphrates and to protect the Seleukid center in Mesopotamia. Possibly, Dura also secured some territorial border, since the rebel Molon, when conquering Parapotamia in 221 BCE, is said to have moved up to, but no further than, Dura (Polybios 5. 48. 16).

The city, which like many Hellenistic foundations incorporated a small earlier settlement, was constructed around a fortified acropolis, with the garrison and residential areas built around it. *Kleruchs* (military settlers) received parcels of land for farming, horti- or viticulture, and residence. Parcels will have varied in size according to military rank, as they did elsewhere in the Hellenistic empires. Like other Hellenistic colonies, moreover, Dura was founded on royal land, that is, on conquered territory that was appropriated by the king and taxed rather than through civic intermediaries by the king directly. It could not be sold by the *kleruch* and if no longer cultivated reverted to the king. As time went by, however, royal land ceded to *kleruchs* became de facto their property and then could be sold and inherited, even though some royal claims continued to be attached to it.[40] So despite some minor encumbrances, Dura's land regime was based on Greek private property rights. Such property rights encouraged care and investment, which were likely to maintain if not increase the productivity of the land.

39 Baird 2022; Kosmin 2011; 2014, 219–221, Sommer 2018, 273–310, for this and the following.
40 Taasob, vol. 2, ch. 8.B, 442.

The landed assets were located in the fertile alluvial stretch along the western bank of the Euphrates that, if irrigated successfully, provided good conditions for intensive agriculture. Dura developed into a rather large town that could sustain at the height of its prosperity in the Roman period about 10,000 residents.[41] Some *kleruchs* enjoyed a considerable comparative advantage for earning a profit from surplus production through the larger size of their *kleroi.* In the Parthian and Roman period, but possibly under the Seleukids too, Dura served as an administrative center in the region, offering further opportunities for making money and the control of labor at the intersection of public administration and private land management.[42]

Sometime around the middle of the second century BCE, the size of Dura expanded. Its urban plan was restructured and its political status raised. It received an orthogonal street plan, fortification walls, new temples, and an archive for the collection of public documents.[43] Kosmin suggests that the urban upgrade was related to two specific political events: the conquest of Syria-Phoenicia, which brought the southern Levant into the economic orbit of the Seleukids, and the increasing threat of the Parthians, which put pressure on Mesopotamia. Dura became a bulwark against the Parthians and a base from which expeditions could be launched. The energetic urban development was a top-down royal initiative and most likely executed with royal money rather than local resources. However, the political, demographic, and urban increase of the city is likely to have laid the foundations for Dura's efflorescence in the centuries to come.

For the following years, scholars have identified three phases of significant building activity in Dura: first, between the mid-first century BCE and the mid-first century CE when Dura was under Parthian control; second, around the mid-second century CE shortly before the Roman takeover, as can be taken from dates attested epigraphically in sanctuary dedications; and third in the final decades of the second century, when the Romans transformed Dura into a garrison town.

In the first phase, the temple of Artemis was rebuilt and the temple of Zeus Megistos underwent major reconstruction work.[44] At this time, the small extramural sanctuary of the Palmyrenes was dedicated.[45] Fifty years later, a number of temples were newly built, such as the temple of Azzanathkona, Zeus Kyrios, Atargatis, Bel, and Aphlad.

In the second phase, the temples of Zeus Theos, of the Gadde, and of Adonis were added. Given that the twin reliefs of the Gadde in the temple of the Gadde were dedicated by a priest, we can assume that the economic elite of Dura was connected with the religious organization of the city.[46] It is noteworthy, moreover, that the eco-

41 James 2019, 300; Baird 2020.

42 Tasoob, vol. 2, ch. 8.B for those opportunities.

43 Baird 2018, 21–22; Leriche 1996; Coqueugniot 2012.

44 Edwell 2008, 103; Downey 1988; Downey 2012.

45 Dirven 1999, 199–211.

46 On the temple-building phases, Downey 1988, 76–130.

nomic elite did not position themselves just as Graeco-Macedonians, with firm descent from the original settlers, but displayed religious sentiments more closely connected to Syria and Mesopotamia. Over time, a mixture of religious affiliations were prominent: above all, Mesopotamian (Aphlad and Azzanathkona), Syrian (Baalshamin), and Palmyrene (Bel and Yaribol).[47] With all due caution, one might say that the Durene economic elite was more inclusive and open to newcomers than agrarian elites tend to be.

The urban profile of Dura changed once again in the third phase, when Dura came under Roman control. This period was one of massive reorganization in the region and the site. A large military contingent, including the auxiliary *cohors XX Palmyrenorum* was based in the city and occupied part of its former religious, administrative, and residential space. From then on, there was a city within the city, as Simon James has put it, with the civil and military population negotiating with each other their economic and social interests.[48] Soldiers brought their families and spending power, which, however, was fueled by their military stipends rather than their economic activity in Dura. It led to a gradual transformation of the urban economy, which was increasingly powered by the spending power and consumption of the soldiers. It will have come as an advantage for the consumption habits of the garrisons that throughout the Parthian period Dura had remained firmly rooted in the Syrian economy despite its population having wider social and cultural connections.

IV.2 Money

Dura did not have its own mint or coinage, like Palmyra, which only started to mint during its short imperial intermezzo. Both cities were dominated by coins minted in Antiocheia, which produced a general currency for the Syrian exchange network in the Roman period. Yet coins from other mints found their way to Dura too, and it is interesting to observe their changing origins. In 1978, J. R. Clark submitted the coin finds of Dura to a quantitative analysis, exploring what he calls their distance-decay gradient, which can indicate how coin circulation can be influenced by political change obstructing the ease of trade in an area. He analyzed 11,775 coins from the beginning of the reign of Augustus (27 BCE) to the end of that of Galienus (256 CE), which had been recorded by A. W. Bellinger during the Dura excavations.[49] Of these, 10,712 were produced in eastern mints, and 1,063 in the city of Rome. The non-Roman coins were produced from 61 different mints in Asia Minor, Bithynia, Pontos, Kappa-

47 Kaizer 2008.

48 James 2019, 300–301.

49 Clark 1978. Clark's data are taken from Bellinger 1949, whose attributions are currently under revision; the sample is also biased toward particular types of coins and places of deposit. For methodological issues, see Butcher 2013, discussing the coins of Zeugma/Seleukeia-Euphrates.

Tab. 1: Comparison of eastern Greek coins and coins minted at Rome (after Clark 1978, 260).

Coin era	Eastern Greek Coins	Coins minted at Rome	Total	Percentage at Rome
1. 27 BCE–97 CE	568	66	634	10.4
2. 97–180 CE	415	279	694	38.8
3. 180–235 CE	5,020	438	5,458	8.5
4. 235–256 CE	4,709	280	4,989	5.6

dokia, Syria, and Mesopotamia. The 300-year period of the coin finds can be divided into four minting eras: (1) from Augustus to Domitian (27 BCE to 97 CE); (2) from Nerva to Marcus Aurelius (97 to 180 CE); (3) from Commodus to Severus Alexander (180 to 235 CE); and (4) from Maximinus to Gallienus (235 to 256 CE). Clark notes, first, a notable increase of coins in era (3) and (4), second, a greater diversity of the origins of coins in these two eras, and, third, a sharp decrease of the distance of coins from where they were produced in era (4). Even though the relationship between number of coins found and coin use in Dura is rather crudely calculated,[50] the factor of increase of coins in the years of, and immediately preceding, Roman domination can be taken as significant. This number increased by a factor of 10, and thus to a much larger degree than the number of inhabitants of Dura did. It looks as though Roman soldiers in Dura used more coins in the town than had been circulating there before. Moreover, during eras (1) to (3), coins from Antiocheia dominate the sample of extant coins, while there was still a significant amount of coins from Seleukeia in period (1).[51] Table 1 shows the degree to which the number of coins produced in Rome in period (4) declined proportionally to the total number of coins circulating in the city. The latter is well explained by the fact that the Roman Empire from the Severans onward relied heavily on coinages produced locally.

What might this coin profile tell us about the economy of Arsakid and Roman Dura? First of all, the distance-decay gradient (i.e., the degree to which coins were minted more closely to the place of use) in era (4) need not interest here. Yet the predominance of coins struck in Antiocheia in the middle Arsakid period shows the integration of Dura into a Syrian exchange network in which Antiochean coinage dominated.[52] There was, by contrast, surprisingly little Arsakid coinage in Dura, de-

50 There might be a greater degree of coin loss in these troubled times, lesser amounts of coins leaving the town, i.e., a greater degree of local circulation, and some other factors skewing the evidence.

51 For the continuity of Seleukid *tetradrachms* struck in Seleukeia-Tigris in the Arsakid period, see Taasob, vol. 2, ch. 8.B, 432 with references.

52 It is usually observed that Dura's coinage showed its connection to Antiocheia, or the Antiochean economic orbit, as Dirven 1996, 40, puts it. Yet given the predominance of Antiochean coinage in Syria generally, its predominance in Dura just shows the town's economic connections to Syria more generally.

spite it being an Arsakid town. Secondly, the increase of the total coin volume in Roman Dura suggests greater spending capacity in the city once Roman soldiers arrived. The greater diversity of the origins of coins in this period might (tentatively) suggest quite a diversity of exchange relationships among the soldiers and other Durenes, a diversity that might have been similar in previous eras but does not show up in the smaller sample of coins extant from these eras.

Moreover, the relatively small number of coins in Dura throughout the Arsakid period should not just be noted in passing. The extant papyri and parchments from Dura give the impression that the economy of Dura was thoroughly monetized throughout the Arsakid and Roman periods: taxes, rents, loans, penalties, and other payments were all assessed in Greek monetary units, and one might assume that they were also paid in this form. How did a monetary economy of this kind manage its coin supply, and how did coins circulate into the city before the Romans arrived? The answer must be twofold: one factor must have been Dura's role in the local tax administration, which channeled tax money into the city. The other factor must have been trade. The two, in fact, were intimately related. The availability of coins circulating into the city through taxation benefited monetary trade, exchange, and other interpersonal payment made with the medium of coinage. Most importantly, however, the coin profile of Dura shows its strong economic connections with Syria, and Mesopotamia as far as Seleukid coinage reached, in the earlier and middle Arsakid period and the concentration of connections into Syria in the final 80 years of Arsakid rule.

IV.3 Institutions: Language Use, Contractual Forms, Kinship Practices

The continuing Graeco-Mesopotamian and Graeco-Syrian orientations of Dura in the Parthian period is confirmed by their choice of language and contractual forms. Inscriptions and papyri/parchments show that the administrative and legal language in Dura was Greek and that Greek was the language in which many inhabitants of Dura expressed themselves in public. Yet it is worth emphasizing that economic actors in Dura, just as they used Seleukid and Syrian rather than Arsakid coins, saw advantages in acting within a Greek linguistic and legal framework. Throughout the Arsakid period, the city's institutions and language remained Hellenistic, despite the facts that Dura's population was of mixed origin and that several institutions were controlled by the Arsakids, such as the royal treasury, the royal judges, and the chief tax collector (*argapet*).[53] The Durenes, moreover, maintained a Greek property rights regime, Greek forms of legal execution, Greek contractual forms, and Greek notary practices. This gave them an advantage over other Parthian economic actors that used legal tradi-

53 Taasob, vol. 2, ch. 3.B, 150–151.

tions giving landowners and creditors much lesser chances to execute contracts and receive their rights.[54] In a mixed society that was geographically mobile,[55] using Greek language, Greek coins, and Greek contractual forms seems to have offered economic actors a great network advantage.

The mixed local elite of Dura sustained their power by a variety of means. Under the Arsakids, they became the overseers of the tax regime that ensured taxes ended up where they were collected. Families adopting Greek names such as Lysias and Heliodoros controlled the town and held power as *strategos kai epistates*. Theirs was a power enacted in part by authority performed as being rooted in the deep past, with *strategoi* and other citizens calling themselves *Europaioi*, "men of Europos," the name of the town when it was first settled by Macedonian soldiers. Whether that line of descent was real or imagined does not really matter here – what matters is that the claim was worth making. It was also a power that could be framed and indeed named situationally. As Michael Sommer has pointed out, the (Greek) *strategos* in Dura was probably *padheshah* to their Arsakid overlords and *genearch* ("general and ruler of tribes") to the tribal populations in Dura's hinterland.[56]

The way the predominantly non-Greek population of Dura inserted itself deliberately into a Greek legal framework despite maintaining socioeconomic relationships that were not typically Greek can be illustrated by *P. Dura* 20.[57] Here, a person referred to by the Parthian name Phraates is eunuch and subordinate of a certain Manesos, *paraleptes*, *strategos*, and *arabarch* of Mesopotamia and Parapotamia.[58] He agrees to lend a sum of money to Baarlas, who lives in the village of Peliga in the district of Iradas, where the agreement was sealed before being stored in the record office at Dura. The particular kind of contract was an antichretic loan agreement that was quite common in Seleukid and Arsakid Asia. It was a special contract in which a monetary loan was extended against the payment of interest that was payable in the form of personal service. In the contract of *P. Dura* 20, Baarlas agrees to pay interest in the form of his own servile labour (*chreia doulika*). If he misses a day's work, a penalty of one *drachm* was to be paid to Phraates. If the loan was not repaid, or not renewed after the initial period of one year, Baarlas had to pay a penalty of 400 *drachms* to Phraates, plus the same amount to the royal treasury. This was a merciless arrangement for a laborer and likely never to be executed. The agreement was most likely a contractual way of organizing a dependent-labor relationship between Phraates and Baarlas that included a monetary budget for Baarlas, here constructed as a loan.

54 Taasob, vol. 2, ch. 8.B, 443.

55 Zerbini 2016 for the mobility of people attested in the parchments and papyri of Dura.

56 Sommer 2006, 429–430. *Strategos kai genearches* attested in the Artemis inscription (31 BCE), for which Rostovtzeff et al. 1936, 411–412; Cumont 1926, 409, no. 52.

57 Taasob, vol. 2, ch. 3.B, 151–152.

58 See von Reden, ch. 8, this volume, for similar titles and the social standing of these personnel in the Eastern Desert of Egypt.

Most important for our context is this: A culturally mixed economic elite continued to use Greek language and contractual forms and apply them to local social institutions, such as dependent-labor relationships and even forms of personal-debt bondage. Combining a local labor regime with Greek contractual law gave creditors and landlords a good chance of receiving their rights in a labor regime that was not Greek. Such hybrid forms of institutional behaviour in combination with the Syrian-Mesopotamian orientation of Durene economic connections might explain the success of Dura in the Arsakid period.

We see the same conservative localism and continuity in the art and architecture of Dura, which is so different in form from nearby urban contemporaries at Palmyra or Zeugma. The local stone – a friable local gypsum, compared for example to the more fine-grained Palmyrene limestone – can only go so far in explaining the different vernacular architectural traditions and the different forms we see, which set Dura apart from other Roman sites in Syria. At Dura, under its ruling families, there is a strength of community ties that meant for instance that all the houses, from the smallest to the largest, shared key features in their layout.[59] Similarly, there is a depth of shared practice that resulted in shared form and decoration of religious buildings, even when the religions being practiced differed greatly, and even when some were monotheistic, which we can see for example in the practice of painted sanctuary decoration. We see this marked difference with other regional community practices in other ways as well, for instance in the complete lack of funerary portraiture: Despite an excavated necropolis, we have not a single example of funerary commemoration of the type known at Palmyra in the same period, and only one, unfinished, funerary inscription, and that was found inside the city and belonged to a Roman military tribune.[60]

Strong local elite power, elites who would act for whoever the imperial power was, from Hellenistic to Arsakid to Roman, allowed for a continuity of community practice that we see enacted in building and religious traditions. Such was the concentration of local power that some of the differences we see between Dura and other regional sites result from the lack of competition between those elite families (or at least, the lack of competition that resulted in public or funerary monuments). That is not to say there was a static or unchanging local situation at Dura, far from it – but the change was of a particular kind, and so was what it was changing *from*, in that the Arsakid-era site was already a hybrid form based on the Mesopotamian and Hellenistic traditions that were the Seleukid inheritance.[61]

We can perhaps begin to account for all this in the terms Monica Smith used almost two decades ago to explain the cities she was investigating in India: that is,

59 Baird 2014.

60 Similarly on the lack of impact of Roman activity on the nonmilitary settlements of northern Mesopotamia, De Jong and Palermo 2018, 256.

61 On the hybrid forms of Seleukid architecture, Canepa 2015. See also Canepa 2018.

that cities could act as "small worlds" in which many long-distance connections come together and give prestige to those in charge of maintaining them.[62] At Dura, even with its many ties to a global ancient world, there was a tendency to turn inward. We see this in house form, secluding as it does kin groups from outside views, but also in the lack of public spaces. Perhaps this was due to the extreme concentration of urban power in the hands of so few at Dura – power that was maintained not only by control of those wider networks, but also strategies enacted locally such as endogamy and brother–sister marriage for the maintenance of landholding.[63]

The same small group of families who held positions like that of *strategos* under Arsakid rule did their best to maintain it under the Romans, taking on Roman names and titles as any well-behaved local elite would after the Antonine constitution (which gave all free inhabitants of the Roman empire Roman citizenship rights). To a certain extent, this strategy was successful for them, and they were able to hang onto property. The house known as the House of Lysias, which is also epigraphically linked to the Lysiad family, was the only excavated house on the site that did not fragment into smaller properties by the third century. It was immediately adjacent to the Temple of Zeus Megistos, which seems to have been their family sanctuary.[64]

V Conclusion: The Local, Regional, and Global Economy of Dura

Rather than emphasizing Dura's connection to railway-like long-distance trade routes, we might thus understand an alternative framework for explaining Dura's prosperity in the Arsakid and Roman period, a framework that might be a starting point for developing a more encompassing approach to the economy of Dura. It might also help to explain Palmyrene presence in Dura's territory in different ways. In the mid-first century BCE, when the Palmyrene temple outside Dura was dedicated, connections of northern Mesopotamia to the Arab-Persian Gulf and Indian Ocean were as of yet rather incidental, and there is no evidence for Palmyrene involvement in them. However, Palmyra was well connected with Babylonia, the Arabian southern kingdoms, and the Eastern Mediterranean for its own consumption needs. This is attested by the pottery finds and the role of myrrh and precious textiles in its mummification practices.[65] By contrast, the first Palmyrene temple belonged to the time when Marc Antony was active in the region and Palmyra raided and the Parthians pushed back

62 Smith 2003. For a recent implementation of this idea, Wynne-Jones and Fleisher 2016.

63 Associations seem to have been more important, hence 'chapel' rooms that are frequently a feature of temples, some of which are recorded in their dedicatory inscriptions.

64 On religious communities at Dura and their link to families, Dirven 2004.

65 See von Reden, vol. 2, ch. 2, 30.

beyond the Euphrates. It is possible that the Palmyrenes aimed at securing for themselves Mesopotamian goods via Dura, which had better access to the region beyond the Euphrates. As in so many other instances, the presence of Palmyrenes in particular cities had more to do with political conditions that could change abruptly rather than changing routes of long-distance caravan trade. It is noteworthy, moreover, that we hear so much about Palmyrenes in other cities, including Dura, whereas merchants from Dura are not attested at Palmyra.

And so it is not very helpful to separate out local, regional, and long-distance economic connections when explaining the prosperity of Dura in the Arsakid and Roman periods. Dura was an agrarian town that had a good resource base in its own hinterland. The combined factors of a fertile hinterland, good riverine connections, connections with Mesopotamia and Syria, and the network advantage of Dura's elite who remained familiar with the Greek language and Greek legal institutions, are sufficient to explain Dura's economic success in the Arsakid and Roman periods. The presence of considerable amounts of coinage, mostly from the Antiochean but also a host of minor mints, shows the high degree of connectivity that Dura enjoyed during the Arsakid period.

Why global, then, if Dura's exchange networks seem to have spanned above all Syria and Mesopotamia? The question of whether Dura was connected to long-distance trade does not depend on the question of whether or not a caravan route passed through Dura, but rather on how one constructs economic connectivity, and whether we continue to implicitly model a presumed ancient caravan trade on colonial railway transports that moved large amounts of goods over long distances at high frequency. Ancient interimperial trade was laborious, time-intensive, and dependent on a number of regional seasonal factors. Long-distance trade was a series of interlocking short and mid-length journeys in which mostly small consignments of everyday commodities were transacted, with only a few goods traveling over a longer distance. In this system, Dura participated by its location, by its role in the local administration, and by the network advantages that depended on a great variety of social and institutional choices. Caravan trade – like other grand narratives, such as the Silk Road itself – obscures important nuance.

So too do these narratives obscure our ability to recognize local actors' capacity to negotiate their place within that global network. Dura responded to and perhaps survived so long in part through a continuity that was rooted in a local *habitus* and local forms of power, which were successful in maintaining themselves by adapting in relation to higher authority while enacting local conservative power downward. Those local forms of power, that local elite, constructed themselves through a connection with the site's own deep past (through *progonoi* and ancestors) but adapted to change through an ability to position themselves to whatever imperial power they needed to, thus maintaining access to broad networks. Ultimately, the power that pushed inward within the site and backward in time was ill equipped to deal with the Roman military within the city itself. The Lysiads, those shrewd operators, packed up and left before the Sasanians took the site from the Roman military.

Dura survived so long at the meeting point of empires because it was a node in a series of different connections: linguistic, cultural, material, religious, and economic. But perhaps its fate was sealed when the installation of a Roman garrison and the growing power of the Sasanians transformed it from a node to a target. At Dura, by looking carefully at the local situation through time, we can see sophisticated ways of negotiating different spheres and scales. But, in the end, like the fragments of silk found in the rampart, the site itself ended up as collateral damage, and no nuanced power negotiation could save it when the Romans and Sasanians collided, literally, at its gates.[66]

References

Alston, R. 2007. "Fraying round the edges: Models of change on the margins." In R. Alston and S. N. C. Lieu (eds.), *Aspects of the Roman East.* Vol. 1, 1–32. Turnhout: Brepols.

Baird, J. A. 2012. "*Dura deserta*: The death and afterlife of Dura-Europos." In N. Christie and A. Augenti (eds.), *Urbes extinctae: Archaeologies of abandoned classical towns*, 307–329. London: Routledge.

–. 2014. *The inner lives of ancient houses: An archaeology of Dura-Europos*. Oxford: Oxford University Press.

–. 2018. *Dura-Europos*. London: Bloomsbury.

–. 2020. "The ruination of Dura-Europos." *Theoretical Roman Archaeology Journal* 3(1). doi: https://doi.org/10.16995/traj.421.

–. 2022. "Dura-Europos." In T. Kaizer (ed.) *A companion to the Hellenistic and Roman Near East*, 295–304. Hoboken, NJ: Wiley Blackwell.

Baur, P. V. C., M. I. Rostovtzeff, and A. R. Bellinger, eds. 1933. *The excavations at Dura-Europos conducted by Yale University and the French Academy of Inscriptions and Letters: Preliminary report of the fourth season of work, October 1930–March 1931*. New Haven, CT: Yale University Press.

Bellinger, A. R. 1949. *The excavations at Dura Europus.* Vol. 6, *Final report VI: The coins.* New Haven, CT: Yale University Press.

Bertolino, R. 1997. "Les inscriptions Hatréennes de Doura-Europos: étude épigraphique." In P. Leriche and M. Gelin (eds.), *Doura-Europos, Études IV*, 199–206. Paris: Paul Geuthner.

Buchmann, J. 2021. "Multifunctional sanctuaries in Dura-Europos." In T. Kaizer (ed.), *Religion, society and culture at Dura-Europos*, 114–125. Cambridge: Cambridge University Press.

Butcher, K. 2013. "Coins and hoards." In W. Aylward (ed.), *Excavations at Zeugma conducted by Oxford archaeology*. Vol. 3, 1–92. Los Altos, CA: Packard Humanities Institute.

Canepa, M. P. 2015. "Seleukid sacred architecture, royal cult and the transformation of Iranian culture in the Middle Iranian period." *Iranian Studies* 48, 71–97.

–. 2018. *The Iranian expanse: Transforming royal identity through architecture, landscape, and the built environment, 550 BCE–642 CE.* Oakland, CA: University of California Press.

Clark, J. R. 1978. "Measuring changes in the ease of trade with archaeological data: An analysis of coins found at Dura-Europos in Syria." *Professional Geographer* 30, 256–263.

Collar, A. 2013. *Religious networks in the Roman Empire: The spread of new ideas*. Cambridge: Cambridge University Press.

66 On the abandonment sequence of Dura and the final battles there, Baird 2012; James 2007; James 2011; James 2015.

Coqueugniot, G. 2012. “Le chreophylakeion et l’agora d’Europos-Doura: bilan des recherches, 2004–2008.” In P. Leriche, G. Coqueugniot, and S. du Pontbriand (eds.), *Europos-Doura varia* 1, 93–110. Beirut: Institut Français de Proche Oriente.

Cumont, F. 1926. *Fouilles de Doura-Europos (1922–1923)*. Paris: Paul Geuthner.

De Jong, L. and Palermo, R. 2018. “Living on the edge: The Roman empire in the north Mesopotamian steppe.” In B. S. Düring and T. D. Stek (eds.), *The archaeology of imperial landscapes: A comparative study of empires in the ancient Near East and Mediterranean world*, 240–271. Cambridge: Cambridge University Press.

Dirven, L. 1996. “The nature of the trade route between Palmyra and Dura.” *Aram* 8, 39–54.

–. 1999. *The Palmyrenes of Dura-Europos: A study of religious interaction in Roman Syria*. Leiden: Brill.

–. 2004. “Religious competition and the decoration of sanctuaries: The case of Dura-Europos.” *Eastern Christian Art* 1, 1–19.

–. 2011. “Strangers and sojourners: The religious behavior of Palmyrenes and other foreigners in Dura-Europos.” In G. Hoffman and L. Brody (eds.), *Dura-Europos: Crossroads of antiquity*, 201–220. Chesnut Hill, MA: McMullen Museum of Art.

Downey, S. B. 1977. *Excavations at Dura-Europos, final report.* Vol. 3, part 1, fasc. 2, *The stone and plaster sculpture*. Los Angeles, CA: Institute of Archaeology.

–. 1988. *Mesopotamian religious architecture: Alexander through the Parthians*. Princeton, NJ: Princeton University Press.

–. 2012. “Temple of Zeus Megistos: Brief report on excavations, 1992–2002.” In P. Leriche, G. Coqueugniot, and S. du Pontbriand (eds.), *Europos-Doura varia* 1, 65–75. Beirut: Institut Français de Proche Oriente.

Edwell, P. M. 2008. *Between Rome and Persia: The middle Euphrates, Mesopotamia and Palmyra under Roman control*. London: Routledge.

Elsner, J. 2021. “100 years of Dura-Europos.” *Journal of Roman Archaeology* 34, 764–784.

Frahm, E. 2020. “Notes brèves 17) Dūr-Katlimmu, an alleged neo-Assyrian library text, Ḫana, and the early history of Dura- Europos.” *Nouvelle Assyriologiques Brèves et Utilitaires* 20, 37–41.

Gawlikowski, M. 1994. “Palmyra as a trading centre.” *Iraq* 56, 27–33.

–. 1987. “The Roman frontier on the Euphrates.” *Mesopotamia* 22, 77–80.

–. 1983. “Palmyre et l’Euphrate.” *Syria* 60, 53–68.

–. 1996. “Palmyra and its caravan trade.” In “Palymra and the Silk Road: Special issue documenting the activities of the International Colloquium. Palmyra, 7–11 April 1992.” Special Issue, *Les Annales Archaeologiques Arabes Syriennes* 42, 140–145.

Graf, D. F. 2018. “The Silk Road between Syria and China.” In A. Wilson and A. K. Bowman (eds.), *Trade, commerce, and the state in the Roman World*, 443–530. Oxford: Oxford University Press.

Helbig, D. K. 2016. “La trace de Rome? Aerial photography and archaeology in mandate Syria and Lebanon.” *History of Photography* 40, 283–300.

James, S. 2007. “New light on the Roman military base at Dura-Europos: Interim report on a pilot season of fieldwork in 2005.” In A. S. Lewin and P. Pellegrini (eds.), *Proceedings of the Later Roman army in the east conference held in Potenza, 2005*, 29–47. Oxford: Archaeopress.

–. 2011. “Stratagems, combat and ‘chemical warfare’ in the siege-mines of Dura-Europos.” *American Journal of Archaeology* 115, 69–101.

–. 2015. “Of colossal camps and a new Roman battlefield: Remote sensing, archival archaeology and the ‘conflict landscape’ of Dura-Europos, Syria.” In D. J. Breeze, R. Jones, and I. A. Oltean (eds.), *Understanding Roman frontiers,* 328–345. Edinburgh: Edinburgh University Press.

–. 2019. *The Roman military base at Dura-Europos, Syria: An archaeological visualisation.* Oxford: Oxford University Press.

Kaizer, T., ed. 2008. *The variety of local religious life in the Near East in the Hellenistic and Roman periods*. Leiden: Brill.

–. 2017a. “Trajectories of Hellenism at Tadmor-Palmyra and Dura-Europos.” In B. Chrubasik and D. King (eds.), *Hellenism and the local communities of the eastern Mediterranean, 400 BCE–250 CE*, 29–51. Oxford: Oxford University Press.

–. 2017b. “Empire, community and culture on the middle Euphrates: Durenes, Palmyrenes, villagers and soldiers.” *Bulletin of the Institute of Classical Studies* 60, 63–95.

Kosmin, P. J. 2011. “The foundation and early life of Dura-Europos.” In G. Hoffman and L. Brody (eds.), *Dura-Europos: Crossroads of antiquity*, 95–109. Chesnut Hill, MA: McMullen Museum of Art

–. 2014: *The land of the elephant kings*. Cambridge, MA: Harvard University Press.

Leriche, P. 1996. “Le Chreophylakeion de Doura-Europos et la mise en place du plan hippodamien de la ville.” In M.-F. Boussac and A. Invernizzi (eds.), *Archives et sceaux du monde hellénistique*, 157–169. Athens: École Française D’Athenes.

Leriche, P. and R. Bertolino. 1997. “Les inscriptions Hatréennes de Doura-Europos: Le contexte archéologique et historique.” In P. Leriche and M. Gelin (eds.), *Doura-Europos, Études IV*, 207–214. Beirut: Institut Français de Proche Oriente.

Leslie, D. and K. H. J. Gardiner. 1996. *The Roman empire in Chinese sources*. Rome: Bardi Editore.

Luther, A. 2004. “Dura-Europos zwischen Palmyra und den Parthern: Der politische Status der Region am Mittleren Euphrat im 2. Jh. n. Chr. und die Organisation des palmyrenischen Fernhandels.” In R. Rollinger and C. Ulf (eds.), *Commerce and monetary systems in the ancient world: Means of transmission and cultural interaction*, 327–351. Stuttgart: Franz Steiner.

Macdonald, M. C. A. 2005. “The Safaitic inscriptions at Dura-Europos.” In E. Cussini (ed.), *A journey to Palmyra: Collected essays to remember Delbert R. Hillers*, 118–129. Leiden: Brill.

Meyer, J. C. and E. Seland. 2016. “Palmyra and the trade route to Euphrates.” *Aram* 28, 497–523.

Millar, F. 1993. *The Roman Near East 31 BC–AD 337*. Cambridge, MA: Harvard University Press.

–. 1998. “Caravan cities: The Roman Near East and long-distance trade by land.” In M. Austin, J. Harries, and C. Smith (eds.), *Modus operandi: Essays in honour of Geoffrey Rickman*, 119–137. London: University of London Press.

Palermo, R. 2019. *On the edge of the empires: North Mesopotamia during the Roman period (2nd–4th c. CE)*. London: Routledge.

Poidebard, A. 1934. *La trace de Rome dans le désert de Syrie.* Vol. 2, Atlas. Paris: Librairie Orientaliste Paul Geuthner.

Rostovtzeff, M. I. 1932. *Caravan cities*. Oxford: Clarendon Press.

Rostovtzeff, M. I., A. R. Bellinger, C. Hopkins, and C. B. Welles, eds. 1936. *The excavations at Dura-Europos conducted by Yale University and the French Academy of Inscriptions and Letters: Preliminary report of the sixth season of work, October 1932–March 1933*. New Haven, CT: Yale University Press.

Rostovtzeff, M. I., F. E. Brown, and C. B. Welles, eds. 1939. *The excavations at Dura-Europos conducted by Yale University and the French academy of inscriptions and letters: Preliminary report of the seventh and eighth seasons of work, 1933–1934 and 1934–1935*. New Haven, CT: Yale University Press.

Ruffing, K. 2000. “Die Geschäfte des Aurelios Nebuchelos.” *Laverna* 11, 71–105.

–. 2007. “Dura Europos: A city on the Euphrates and her economic importance in the Roman era.” In M. Sartre (ed.), *Productions et échanges dans la Syrie grecque et romaine: Actes du colloque de Tours, juin 2003*. Supplement, *Topoi* 8, 399–411.

Schoff, W. 1914. *Parthian stations by Isidore of Charax: An account of the overland trade route between the Levant and India in the first century BC*.” Philadelphia, PA: The Commercial Museum.

Smith, A. M. I. 2013: *Roman Palmyra: Identity, community, and state formation*. Oxford: Oxford University Press.

Smith, M. 2003. “Early walled cities of the Indian subcontinent as ‘small worlds.’” In M. Smith (ed.), *The social construction of ancient cities*, 269–289. Washington D.C.: Smithsonian Books.

Snow, C. E. 2011. “Preservation of art and artifacts from Dura-Europos: A conservator’s perspective.” In G. Hoffman and L. Brody (eds.), *Dura-Europos: Crossroads of antiquity*, 33–44. Chesnut Hill, MA: McMullen Museum of Art.

Sommer, M. 2006. “Difference, diversity, diaspora: Locating the middle Euphrates on imperial maps.” *Mediterraneo Antico* 9, 417–436.

–. 2018. *Roms orientalische Steppengrenze. Palmyra – Edessa – Dura-Europos – Hatra. Eine Kulturgeschichte von Pompeius bis Diocletian*. 2nd ed. Stuttgart: Franz Steiner.

Stephens, F. J. 1937. “A cuneiform tablet from Dura-Europos.” *Revue d’Assyriolgie et d’archéologie Orientale* 34, 183–189.

Wynne-Jones, S. and J. Fleisher. 2016. “The multiple territories of Swahili urban landscapes.” *World Archaeology* 48, 1–14.

Zerbini, A. 2016. “Human mobility in the Roman Near East: Patterns and motives.” In L. de Ligt and L. E. Tacoma (eds.), *Migration in the early Roman Empire*, 305–345. Leiden: Brill.

12 Nabataean Networks and Transimperial Trade in Southwest Asia

Eli J. S. Weaverdyck

12.A Social, Political, and Economic Dynamics in a Desert Frontier

I Introduction

In 106 CE, the Roman governor of Syria annexed the Nabataean kingdom to the Roman Empire, turning it into the province of Arabia.[1] Prior to this, the Nabataean kings had been allies of Rome, what modern historians call 'client kings.'[2] While the precise causes of annexation are debated,[3] it can be seen as the culmination of a broader trend in which Rome gradually transformed allies into provinces over the course of the first century CE.[4] The shift from indirect to direct rule by Rome is often interpreted as a consequence of developments that made these areas more easily governable.[5] Sartre puts it baldly, when discussing the Nabataean annexation: "Rome presumably believed that the region included enough Hellenized leaders to serve as a local arm of the Roman administration and could govern itself directly."[6] This, then, can be seen as an example of a typical frontier process: An imperial core begins to extend its power into an area, making it a frontier. Under the influence of the core, the frontier region develops and transforms to resemble the core more closely, at which point the political power of the core is consolidated, and the former frontier becomes part of the core.[7]

This account, however, is unsatisfactory. Most obviously, all agency is vested in the core and the core–periphery relationship at the expense of actors and relationships in the frontier region itself. As a result, the causes of a process that, according to this model, reshaped local societies so fundamentally that the ungovernable became docile imperial subjects are a priori reduced to a single, high-level geopolitical relationship. That developmental process is the focus of this chapter, but as we shall see,

1 For a brief, up-to-date introduction to the Nabataeans with further literature, see Graf 2022.

2 See, e.g., Sartre 2005, 80–87. For the role of client kings in the Roman Empire, see Weaverdyck, vol. 1, ch. 7, III.2.1.

3 For recent accounts with further literature, see Cimadomo 2018; Speidel 2021.

4 Sartre 2005, 70–87.

5 Morley 2010, 55–57; Sartre 2013; but cf. Halamus 2018 for an argument emphasizing greater local contingency in the process of provincialization.

6 Sartre 2005, 87.

7 See Feuer 2016, 48–89 for a detailed explication of this model.

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Roman influence will play a relatively minor part. In fact, the first century CE, when Roman influence would have been strongest prior to annexation, was a high point for the Nabataeans, the culmination of processes that began in the last centuries BCE, rather than the beginning of a fundamental transformation.[8] I focus here, then, on the earlier period, asking how Nabataean society transformed and picking apart the roles that interaction with empires and neighboring states and internal developments played in the process.

This type of analysis could be performed in almost any historical context, but the Nabataean case is of particular interest for this project because of its pivotal position in the long-distance trade of frankincense and myrrh.[9] From their earliest appearance in historical records in the late fourth century BCE, the Nabataeans are characterized as wealthy merchants engaged in the incense trade between southern Arabia and the Mediterranean.[10] The characterization persists as a stereotype in the second century CE,[11] and archaeological evidence shows that the Nabataeans were heavily engaged in this trade until the early third century CE at least.[12] The impression one gets is one of great stability: for over half a millennium, the Nabataeans formed a crucial node in the long-distance networks that linked the Mediterranean to southern Arabia and, by extension, the Indian Ocean. Some of this stability can be attributed to geography: frankincense and myrrh only grow in southern Arabia and the eastern Horn of Africa, but in the late second or early first millennium BCE, they became religious necessities in the Mediterranean and Mesopotamia, creating a northward flow of aromatics that can be considered a structural feature of the ancient world.[13] The impression of stability also surely masks significant changes, e.g., in the volume of trade, the precise routes traveled, the locations of secondary processing, etc. Nevertheless, it is remarkable that people identifiable as Nabataeans should play such a prominent role in carrying out this trade for over half a millennium.[14]

Is there some connection between Nabataean group identity and their role as merchants?[15] Eivind Heldaas Seland has argued that the Palmyrene trade network was based on ethnic identity. Institutions such as language, kinship, tribal affiliation,

8 For a brief overview of Nabataean history, see Wenning 2007. For the first century in particular, see Bowersock 1983, 59–75; Sartre 2005, 80–87; and Schmid 2012 for Petra.

9 For an accessible overview of Nabataean trade, see Graf and Sidebotham 2003; for an up-to-date reassessment, see Nehmé 2021.

10 Diodorus Siculus (Diod. Sic.) 19. 94. 4–5, preserving the account of the fourth-century historian Hieronymos of Kardia.

11 Apuleius (*Florida* 6. 1) describes India as lying "beyond the learned Egyptians and the superstitious Jews and the Nabataean merchants and the flowing-robed Arsakids and the poor-in-harvest Ituraeans and the rich-in-aromatics Arabians."

12 Fiema 2003.

13 Purcell 2016; Avanzini 2016; Loreto 2021.

14 In contrast, the Palmyrenes' involvement in long-distance trade lasted for less than three centuries (Young 2001, 123–168).

15 For Nabataean identity, see Schmid 2021.

citizenship, voluntary associations, and religion created strong ties within the Palmyrene community, forming a trust network that was crucial for the success of their mercantile endeavors.[16] In volume 2, we dwelt at length on the importance of interpersonal networks in the economies of the ancient world and on the institutions that strengthened them, stretched them across space, and stimulated the formation of ties within them.[17] In this chapter, then, rather than tracing the vicissitudes of Nabataean long-distance trade, I will focus on the development of the Nabataean network and the institutions that shaped it.

Our evidence is not as full as we would like, but the evidence that we do have for banqueting practices and coinage suggests that the Nabataeans maintained a distinct network among themselves that, given their reputation as merchants, had surprisingly strong boundaries separating them from their neighbors. We can also trace the development of the institution of royal rule and investigate its economic consequences. Finally, we will ask whether and how this Nabataean network competed with neighboring polities over the control of long-distance trade and what such 'competition' actually amounted to in the ancient world. Before this analysis of the Nabataean social network, though, it will be useful to examine the larger geopolitical and economic networks of which the Nabataeans were a part. I will also briefly describe what we know about Nabataean economic actors to give a sense of the types of people who would have been involved in the development of the Nabataean network as a whole. In the process of these investigations it will become clear that development in this frontier zone was far more complex and multifaceted than simple core–periphery models would predict.

II Regional Networks and Nabataean Economic Actors

II.1 Nabataean Regional Political Networks

At its height, the Nabataean kingdom, with its capital at Petra, covered significant portions of the southern Levant, the Sinai, and the northwest corner of the Arabian Peninsula (map 1). This put them in the frontier zone of both the Ptolemaic and Seleukid kingdoms in the Hellenistic period and of the Roman and Arsakid empires later. The ecological marginality of the area allowed the Nabataeans to remain mostly independent from their imperial neighbors. In the late fourth century BCE, one of Alexander's successors attacked the Nabataeans but was unable to maintain a siege,

16 Seland 2013.

17 This is a consistent theme throughout the volume, but see especially Weaverdyck, vol. 2, ch. 12.C, V for this formulation of the role of institutions in shaping networks in the Roman Empire.

Map 1: The Nabataean kingdom in the first century CE (boundaries approximate). © Peter Palm.

so he negotiated a treaty and withdrew after receiving hostages and certain unspecified 'gifts.'[18] A similar episode occurred in the mid-first century BCE on the heels of Pompey's eastern campaigns. Even with supplies from Judaea, the Roman army could not take the Nabataean capital of Petra and retired after receiving 300 talents of silver.[19]

Of course, these imperial powers were only some of the polities with which the Nabataeans interacted. We are very well informed about the relationship between the Nabataean kings and their Jewish neighbors thanks to Josephus.[20] The relationship was a close one, characterized by conflict but also intimate personal ties between the rulers and, presumably, others less prominent in our sources. One story will have to illustrate the complexity of international relations in this frontier zone, and how these were further complicated by dynastic struggles within each polity.[21] In 40 BCE, the rule of Judaea was contested. Both claimants sought the support of the Romans and the Arsakids, relying primarily on bribes, with the result that the Arsakids sent troops into Judaea to install their favored candidate. Opposing them were the brothers Herodes and Phasael. Phasael was captured by the Arsakid troops, and Herodes went to the Nabataean king, Malichus, for money to pay his ransom. Herodes's father had done many favors for Malichus, but the Nabataean king turned him away nevertheless. Josephus tells us that Malichus claimed he was acting on the instructions of the Arsakids but was in fact acceding to the wishes of influential Nabataeans who did not wish to return the wealth that Herodes's father had left with them on deposit. Later, the Romans demanded that the Nabataeans pay a fine for supporting the Arsakids in their invasion.[22] The Nabataeans' relationship with their neighbors, then, was personal, articulated through intergenerational reciprocal gift-giving and favors between high-ranking individuals and families. At the same time, they were political at multiple scales. Not only did the interests of the various empires operating in the region need to be taken into account, but so too did the interests of the politically powerful constituencies within each kingdom.

We have far less information about the Nabataeans' relationship with their other neighbors, but they might have been similar. We know that in the early first century BCE, the city of Damascus requested that the Nabataean king rule them, and we should probably assume that this was the result of long-standing ties between powerful Nabataeans and Damascene elites. At the very least, it suggests close ties between Nabataeans and the heavily urbanized areas of the Levant to their north.

18 Diod. Sic. 19. 94–97.

19 Josephus *Jewish Antiquities* (Joseph. *AJ*) 14. 80–81.

20 See Wenning 2016a for the relationship with Herodes in particular and Wenning 2007, 38–40 more generally. For a collection of all Josephus's writings relevant to the Nabataeans, see Hackl, Jenni, and Schneider 2003, 465–558.

21 The following is based on Joseph. *AJ* 14. 330–372, esp. 370–372.

22 Cassius Dio (Cass. Dio) 48. 41. 5.

We can only guess at the relationships that the Nabataeans maintained with the peoples to the south and east of Petra. These regions are arid but dotted with oases, and they were inhabited by both sedentary agriculturalists in the oases and mobile pastoralists.[23] The largest polity, centered on the city of Dedan in the al-Ulla oasis, was the Lihyanite kingdom, which disappeared sometime in the second or first century BCE.[24] Recent research in the region, though, suggests that the power of the Lihyanite kingdom may have begun to wane already in the third century BCE, and that the political center of the region shifted from Dedan to Hegra, about 20 km to the north. Hegra would become a major Nabataean city from the late first century BCE, but at this point it was more likely independent.[25] Recent excavations at Dumata, a major oasis to the east of Petra, have revealed a large fortification wall, suggesting that it too formed a prosperous, independent community in the Hellenistic period.[26] Tayma, located 120 km north Dedan, was ruled by the Lihyanite kingdom from the fifth century BCE and later by the Nabataeans.[27] We could see the whole region, then, as a mosaic of economically interdependent but politically autonomous oasis states and mobile pastoralist groups, with a few polities achieving regional hegemony for a time.[28] Political relationships must have been extremely complex and fluid. Long-distance trade relationships, on the other hand, might have been more stable, at least on the macro scale.

II.2 Long-Distance Trade Networks

Two factors contributed to the apparent stability of long-distance trade networks. The first is supply and demand. Aromatics that could only be produced in southern Arabia were consumed consistently and in large quantities in the Mediterranean and Mesopotamia. This created a south to north flow of aromatics that should be considered a structural feature of the ancient world.[29] This flow is often called the 'incense road.'[30]

23 The ecology is thus similar to that of Sogdiana and the middle Syr Darya (Morris, ch. 4, this volume). For a brief introduction to mobile pastoralists in our period, see Macdonald 2022.

24 See Hausleiter 2012, 825–826 for an introduction. The chronology of the kingdom is highly uncertain. See Stein 2020, 27–29.

25 Rohmer and Charloux 2015. The chronology of Nabataean conquest of Hegra continues to be refined. See Durand and Gerber forthcoming.

26 Charloux, AlMalki, and AlQaeed 2021.

27 Hausleiter and Eichman 2018.

28 We should not assume that mobile pastoralists and oasis inhabitants were divided along political lines. The nineteenth-century tribes in this region practiced both settled agriculture and mobile pastoralism (van der Steen 2013, 175–177).

29 Purcell 2016.

30 Specialists are well aware of the multiplicity of trade routes crossing the Arabian Peninsula. For an overview, see Young 2001, 82–89. For more detail, see Potts 1988 (longue durée), de Maigret 1997 (the major overland route along the western side of the Peninsula), and al-Salameen 2004, 34–50 (Nabataean period specifically).

In the first century CE, Pliny described a single, coherent route stretching from southern Arabia to Gaza on the Mediterranean,[31] but this is simply one path through a larger network. The Zenon papyri, dating to the third century BCE, include references to frankincense coming to the Levant both from southern Arabia and from the Persian Gulf.[32] Indeed, overland routes connected southern Arabia to Egypt, the Levant, and the Mediterranean in the northwest as well as the Persian Gulf and southern Mesopotamia in the northeast. Other routes ran across the northern part of the Arabian Peninsula, connecting the Mediterranean to the Persian Gulf.[33] The demand for South Arabian aromatics did not lead to a single, coherent trade route. Rather, it kept open a series of circuits, and these circuits carried other goods as well, including return cargoes from the north exchanged for the aromatics and – because the frankincense and myrrh habitats are near the South Arabian and East African coasts – goods circulating in the Indian Ocean.[34]

The second stabilizing factor is the difficulty of the environment, which ensured that certain places remained important nodes for centuries. Travel across the Arabian desert requires oases, and both hydrological and topographical constraints favor travel through wadis. The Red Sea is similarly challenging. Dangerous reefs line the shores, and in the northern part the winds blow persistently from the north, making it difficult to transport aromatics from the south by sea. Safe harbors are both crucial and scarce. In both cases, travel is concentrated in a limited number of points and routes. The relative importance of certain nodes and routes did shift over time, but always within a restricted range of possibilities. There may have been no single incense route, but neither could the incense trade flow without restrictions.

Dedan and Hegra illustrate the point. In the Hellenistic period, Dedan hosted a colony of Minaean traders from southern Arabia that maintained some political autonomy.[35] The presence of graffiti in Ancient South Arabian scripts along the route leading from the al-Ulla oasis to Petra suggests that the Minaean traders may have continued further north,[36] but the importance of Dedan as a long-distance trade node is not in dispute. After the Nabataean conquest of the area, Hegra seems to have become a border market. The evidence for Nabataean activity in and around Hegra

31 Pliny *Natural History* (Plin. *HN*) 12. 63–65.

32 *P. Cair. Zen.* 1, 59009 frag. F. Incidentally, this fragment also references a Moabite man named Malichos, a Nabataean royal name, leading to the conclusion that he himself was Nabataean (Graf 1990, 54).

33 For these, see Schmid 2004a; Durand 2009.

34 Purcell 2016, 71. For South Arabian involvement with Indian Ocean trade, see Hatke and Ruzicka 2021. There is little indication for goods from India passing through Nabataean hands, but the incense trade in antiquity established connections that later would carry Indian Ocean goods. The port of Aila, which became a center for Indian Ocean trade in the sixth/seventh century CE, is a good example (Gupta 2019, 360).

35 Rossi 2014.

36 Nehmé 2021, 207–208.

is overwhelming, whereas the evidence further south is much more sparse.[37] The precise location of the key node shifted from Dedan to Hegra, but the network still required a node in the al-Ulla oasis. Similarly, Dumata and the Wadi Sirhan leading northwest to the urbanized Levant remained critical from the early first millennium BCE through the early Islamic period.[38]

The most significant shift came with the increased importance of Red Sea maritime trade in the late Hellenistic and early Roman periods.[39] As a result, new nodes were added to the network. The city of Aila, at the head of the Gulf of Aqaba and the southern end of the Wadi Arabah (the southern section of the Dead Sea rift), was founded in the late first century BCE.[40] Aila was connected to Petra, the Negev, and Gaza to the north via the Wadi Arabah and then the Via Nova Traiana, but there were also two important trade routes that led east to Egypt[41] and possibly also south, directly to Hegra.[42] We know of two other Nabataean ports on the Red Sea from archaeological remains, and one from literary sources, Leuke Kome, whose location is the object of debate.[43] The two archaeological sites, both currently under investigation, are Aynuna – at the mouth of the Gulf of Aqaba and linked to Petra – and al-Qusayr – across the sea from Myos Hormos and connected to Hegra.[44] Both have been suggested as possible locations for Leuke Kome.[45] If Leuke Kome was founded to facilitate the maritime trade of South Arabian aromatics, it did so by connecting the sea to a node that had already been prominent in the overland network (Hegra or Petra). Furthermore, it was also integrated into smaller-scale networks. Strabo describes a Roman army's sea voyage from Kleopatris in Egypt to Leuke Kome as exceedingly dangerous, but the *Periplus Maris Erythraei* (*PME*) simply says it is a voyage of two or three runs east of Myos Hormos (*PME* 19). For knowledgeable sailors with the appropriate vessels, then, Leuke Kome was a node that connected the Nabataeans to Egypt across the Red Sea, not just a stopover on the south–north incense route.

One final point about Nabataean long-distance trade routes requires emphasis: although Greek and Latin sources describe the Nabataeans as bringing aromatics

37 Nehmé 2021.

38 Loreto 2021.

39 Gallo 2019; Gupta 2019, 355–373.

40 Parker 2009.

41 Dolinka 2003, 91–94.

42 Strabo (16. 4. 4) mentions this connection.

43 Leuke Kome is mentioned in Strabo (16. 4. 23–24), the *Periplus Maris Erythraei* (*PME*) (19), and an inscription from Adulis copied in the sixth century CE (Cosmas *Christian Topography* 2. 62). The inscription copied by Cosmas is usually dated to the third or fourth century CE, but a case has been made for the first century CE (Fiema et al. 2020, 105 with literature).

44 Aynuna: Gawlikowski, Juchniewicz, and al-Zahrani 2021; al-Qusayr: Fiema et al. 2020.

45 Aynuna has long been considered a candidate for the location of Leuke Kome, and recently al-Qusayr has been put forward as well. The port of al-Wajh, 40 km from al-Qusayr, has also been proposed despite the fact that no Nabataean remains have been found there. For the debate, see Nappo 2010 (favoring al-Wajh), Gawlikowski 2019 (Aynuna), and Fiema et al. 2020, 105–106 (al-Qusayr).

from South Arabia to the Mediterranean, there is good evidence for connections to the Persian Gulf and southern Mesopotamia as well.[46] A Hellenistic source, preserved in Strabo and Diodorus, describes the Nabataeans' territory as the place "to which the Minaeans, Gerrhaeans, and all the neighboring peoples carry their loads of aromatics."[47] The Minaeans we have already met. Gerrha was a polity lying on the Persian Gulf that maintained close relationships with Mesopotamian kingdoms including the Seleukids and Charakene and, according to Greek sources, became wealthy by trading South Arabian aromatics with Mesopotamia.[48] The papyrus fragment from the Zenon archive mentioned above includes a line item for Gerrhaean frankincense alongside Minaean, proving the literary tradition correct. There is also archaeological evidence. Stephan Schmid, an expert in Nabataean pottery, has argued that while most Nabataean pottery forms find ready parallels in the eastern Mediterranean Hellenistic *koine*, some of the finest vessels find parallels in both form and decoration with ceramics from the Persian Gulf and Mesopotamia.[49] A few Parthian imports have been uncovered in Petra,[50] and Nabataean pottery and coins have been found in small numbers in the Gulf region.[51] The material culture from Dumata shows strong Mesopotamian influences, stronger indeed than Nabataean influences (though see below).[52] Viewed from Rome, as Pliny did, the long-distance aromatics trade might appear as a single route leading from the incense-bearing lands to the Mediterranean. For the Nabataeans engaged in that trade, though, this route, while important, was only one of many.[53]

II.3 Nabataean Economic Actors

Nabataean society is generally understood as tribal in structure, that is, characterized by segmentation along (ideologically) kin-based lines.[54] This is reflected in religious

46 For the following, see Schmid 2004a; Durand 2009.

47 Strabo 16. 4. 18, trans. Roller. Cf. Diod. Sic. 3. 42. 5. For the Hellenistic source of these passages, see Hackl, Jenni, and Schneider 2003, 437. See also Beeston 2005, 59.

48 Robin and Prioletta 2013; Robin 2016. Strabo (16. 3. 3) is typically explicit about the source of the Gerrhaeans' wealth. Polybios (13. 9) says that the Gerrhaeans bought peace and independence from Antiochos III with massive amounts of silver, frankincense, and oil of myrrh or cinnamon. The passage is reminiscent of the one describing the Hellenistic attack on the Nabataeans mentioned above (Diod. Sic. 19. 91–100), probably a result of intertextual discourse on encounters with peripheral (from the Greek perspective) peoples (Kosmin 2013, 66–67).

49 Schmid 2004a, 471–475. See also Vickers 1994.

50 Schmid 2004a, 475–476.

51 Schmid 2004b.

52 Charloux, Cotty, and Thomas 2014.

53 In fact, Pliny was aware of this too. In the course of describing 'Arabia,' he writes that the Nabataeans travel from Petra to a town called Forat and thence to Charax (*HN* 6. 145).

54 On Nabataean social structure, Macdonald 1991 remains valuable. More recent scholarship is usually framed in terms of identity (e.g., Al-Otaibi 2015; Schmid 2021). See van der Steen 2013, 1–17 for a discussion of what constitutes a tribal society.

inscriptions,[55] in the architecture and graffiti of Petra,[56] and perhaps in the archaeological landscape in the hinterland of Petra.[57] Epigraphic evidence also demonstrates that the nuclear family was an important subgroup distinct from tribal affiliation.[58] The economic implications of such a social structure are difficult to predict without more concrete evidence. One could draw a contrast to the *polis*-based societies of the Mediterranean and speculate that, if communal identity and social status were articulated within kin-based groups rather than a city, there might be less investment in the urban physical and institutional infrastructure, which was so critical for Mediterranean economies.[59] Given the importance of local elites in maintaining Mediterranean urbanism,[60] we would like to know more about the basis of Nabataean elites' social status than we do. At one point, Josephus describes a Nabataean man as a "*phylarch*," "head of a tribe." The individual in question was part of a plot to assassinate Herodes, along with one of Herodes's bodyguards and another Nabataean described as a "friend of Syllaeus," the Nabataean minister behind the plot.[61] Many of the Nabataean elite were probably "heads of a tribe," but we must leave open the possibility that there were other pathways to elite status. Without understanding the particular ideological power of tribal identity and its intersection with other group identities, it is very difficult to specify the economic implications of this social structure.

One possible implication of kin-based segmentation is a reluctance to identify with a larger Nabataean 'state' under the leadership of a king.[62] This might be why Strabo describes the Nabataean king as "egalitarian," serving others at banquets and accountable to "the people."[63] However, recent work on archaic states calls into question the old assumption that strong kin-groups were antithetical to state formation,[64] and I argue below that the king did manage to acquire significant sovereign power especially in the course of the first century BCE. Here I will simply identify the main figures involved in ruling the Nabataeans. The king is at the center. Kingship was dynastic, and we know from epigraphic and numismatic evidence that the king's immediate family was also important. Queens are frequently depicted and named on coins, and special types were issued to commemorate important events in the ruling

55 Wenning 1997; 2011.
56 Nehmé 2013; Schmid 2013.
57 Kennedy 2020a; 2020b.
58 Al-Qudrah and Abdelaziz 2008; Nehmé and Macdonald 2015.
59 Fabian and Weaverdyck, vol. 2, ch. 3.A, II.
60 Fabian and Weaverdyck, vol. 2, ch. 3.A, 105–106.
61 Josephus *Jewish War* (*BJ*) 1. 577; *AJ* 17. 56.
62 For this argument with reference to the Nabataeans, see, e.g., Hackl, Jenni, and Schneider 2003, 61; Wenning 2007, 31. But see van der Steen 2013, 148–165 for nineteenth-century examples of the development of state-like institutions in tribal societies.
63 Strabo 16. 4. 26, trans. Roller.
64 Porter 2010.

family, such as weddings and births.[65] The queen was referred to as 'sister of the king,' and it is not entirely clear if this is to be taken literally or not. Given the Ptolemaic example, incestuous endogamy within a dynastic family cannot be ruled out. In addition to the royal family, there was a chief administrator called the 'brother of the king,' and it is generally assumed that this title is not to be taken literally. This figure was powerful in his own right, and the most famous of them (indeed, the only one whose name, Syllaeus, is known) made a bid for the throne at the death of the old king and issued his own coins.[66] Strabo describes the brother of the king as "one of his companions," so we might envision a royal court similar to the better-known courts of the major Hellenistic monarchs.[67] Strabo also mentions a relative of the reigning king governing territory at the periphery of the kingdom, so it is possible that other royal relatives played a part in ruling the kingdom at certain points.[68]

We have epigraphic evidence for religious personnel, but we know little about how Nabataean temples operated as economic organizations.[69] They must have had some economic functions. An inscription at the Temple of the Winged Lions in Petra shows that temples could receive goods, including precious metal and coinage, and that priests received a share of these.[70] One term for a temple administrator attested in Sinai might be similar to the Greek terms *dioiketes* and *oikonomos* (both administrators with financial capacity).[71] We also hear of an archive of legal documents that might be held in a temple, but the words could also mean "measuring house."[72] We have just enough evidence to know that priests and temples likely played some economic role, but not enough to know what it was.

Given their reputation, we must expect that merchants were prominent in Nabataean society. Interestingly, however, the Nabataean realm has produced nothing like the Palmyrene caravan inscriptions honoring people for assisting long-distance trade. Among the numerous graffiti carved by caravaneers along trade routes, occupational terms such as "merchant," "trader," or "caravan leader" rarely appear.[73] Given the importance and profitability of long-distance trade, it seems unlikely that commerce was seen as shameful. It is more likely that, for most people, commerce was not seen as a specialized occupation that formed an important part of one's identity. It was simply something one did.

65 Barkay 2019, 82–83.

66 Al-Rawabdeh 2015; Barkay 2019, 35–42.

67 Strabo 16. 4. 21; for Hellenistic courts, see Fabian and Weaverdyck, vol. 2, ch. 3.A, III.

68 Strabo 16. 4. 24.

69 Healey 2001, 163–165 for personnel.

70 Healey 2001, 162–164.

71 Healey 2001, 75, 164 with further literature.

72 Healey 2013, 167–168.

73 Such terms do not appear at all in 912 Nabataean inscriptions found along the route between Hegra and Petra (Nehmé 2018b, 57).

The best indications we have for the activity of Nabataean merchants come from outside of the Nabataean kingdom. These include Nabataean pottery found around the Arabian Peninsula and one Nabataean inscription in southern Arabia, which will be considered below. There are also Nabataean graffiti in Sinai and the Eastern Desert of Egypt, mostly consisting of simple names.[74] But the most informative evidence for the operation of Nabataean merchants is the small epigraphic corpus attesting to their presence in the Mediterranean.[75] An inscription on the Aegean island of Tenos, dating to the second half of the second century BCE, testifies to the great honors that the *polis* bestowed on one "Salamenes, son of Edemon, the Nabataean" in return for unspecified services performed both for the city and for individual citizens.[76] Salamenes was clearly a wealthy individual who managed to integrate himself into the all-important *euergetic* cycle of gift and honor that defined eliteness in the Graeco-Roman world.[77] If we assume he was engaged in trade, this honor would have burnished his reputation among merchants embedded in the Hellenistic peer-polity network and made him a more attractive partner. At a lower level, we could see the dedications at Rome (mid-first century BCE or mid-first century CE), Kos (67 BCE or 9/10 CE), and Sidon (5/4 BCE) in a similar light, though these are bilingual inscriptions.[78] A dedication is not nearly as grand as the honors that Salamenes received, but it still establishes the dedicator as a pious, respectable person, one who can participate in both Greek-mediated and Nabataean-mediated networks.

The most impressive evidence, however, is a series of inscriptions from Puteoli relating to a temple of Dushara, the chief Nabataean deity.[79] The temple itself is lost, but the inscriptions are telling. One inscription records the renovation of a temple in 5 CE that had originally been built in 50/49 BCE, and another records the dedication of two camels in 11 CE. All of these dates are expressed in Nabataean regnal years, and the inscriptions themselves are in Nabataean. At the same time, an altar, several bases with slots for *betyls* (steles representing deities) and architectural blocks were consecrated to Dushara with Latin inscriptions. The meaning of this linguistic diversity is not clear, but the existence of a temple of Dushara, and consequently a resident Nabataean community, in Puteoli speaks to the existence of a trading colony.[80] As discussed in volume 2, a trading colony bridges networks by maintaining a good collective reputation in the host city through corporate participation in public life, acting

74 Sinai: Hackl, Jenni, and Schneider 2003, 410–414; Eastern Desert: Hackl, Jenni, and Schneider 2003, 355–367; Durand 2012.

75 Roche 1996; Hackl, Jenni, and Schneider 2003, 107–134; Terpstra 2015.

76 Hackl, Jenni, and Schneider 2003, 122–124.

77 Fabian and Weaverdyck, vol. 2, ch. 3.A, 105–106.

78 Hackl, Jenni, and Schneider 2003, 110–111, 128–129, 131–132. Dating uncertainty stems from ambiguity about which of two kings with the same name is meant.

79 Terpstra 2015, 81–84 for an overview of the evidence; Hackl, Jenni, and Schneider 2003, 116–122 for the text of the inscriptions.

80 Terpstra 2015, 84–91.

as a trust network by monitoring the behavior of and gathering information on members of the home community, and brokering relationships between individuals from home and host communities.[81]

Craft production played an important role in the Nabataean economy, but we know little about how it was organized or the statuses of the people involved. Evidence comes in the form of the craft products themselves and epigraphy mentioning occupations.[82] It has been suggested that groups of graffiti in Petra reflect banqueting associations organized by profession, but the evidence for this is not compelling.[83] Because the vast majority of Nabataean documentary evidence consists of signatures, occupations tend to be recorded when they form an important part of an individual's identity. This obviously produces a biased sample, but it also reveals which types of occupations were seen as honorable. People who worked with stone, metal (especially precious metal), and aromatics were more likely to record their occupation than other craftspeople. Precious metals and aromatics are obviously ingredients in very high value products requiring skilled labor. The phenomenal stone architecture of Petra, especially the famous rock-cut tomb facades and the architectural complexes they adorn, attests to the skill and high value of stone working as well.[84]

The importance of manufacturing perfumes using aromatics, not only those imported from southern Arabia but those grown locally and imported from the Mediterranean as well,[85] is attested by a large number of ceramic unguentaria dating from the late first century BCE through the third century CE made from local clay.[86] Although these unguentaria were produced in large numbers from the beginning, in the second century CE the quality of workmanship seems to have declined, possibly indicating an increase in the scale of production.[87] Perfume production was not limited to Petra. Industrial facilities near a fort and caravanserai in the Negev have been identified as a small perfume-production center dating to the second century CE and

81 Fabian and Weaverdyck, vol. 2, ch. 3.A, 129–130.

82 For epigraphic evidence of professions, see Nehmé 2018b, 51–57 with further literature. For craft producers, see Nehmé 2018a; for stone workers, Nehmé (introduction) in Bessac 2007, 15–21.

83 Nehmé made this assertion 26 years ago, citing the unpublished commentary on inscriptions from one part of Petra, al-Madras (1997, 1047). The inscriptions and associated monuments have now been published more thoroughly (Nehmé 2012), and I can find no evidence in support of it. The groups of signatures in and around rock-cut *triclinia*, which are assumed to represent the members of commensal groups, do contain a few occupational terms, but they are not consistently clustered in any way. The largest group of inscriptions (nos. MP 23–57 in *triclinium* no. 40) includes two musicians, two servants, and a scribe, for example. In his commentary in the later publication, Nehmé makes no mention of occupation-based associations (2012, 206–209).

84 Bessac 2012 for an introduction to stone working at Petra.

85 Purcell 2016 for the integration of aromatics of different origins.

86 Johnson 1987, 1990; but cf. Schmid 2004b, 421–422.

87 Johnson 1987, 66–67; but cf. Koulianos 2015, 32–33 for early unguentaria with flaws seen as characteristic of later periods found at Aila.

possibly earlier.[88] The perfume market was large, and production could happen anywhere with access to the aromatics and oil needed to make it.

We know less about metals. Strabo describes royal banquets in which 13 guests each drank from 11 golden cups, totaling 143 gold cups used in a single event.[89] He also says that gold and silver are produced in the region, but so far, the evidence for gold mining is circumstantial.[90] The jewelry found so far testifies to the consumption of precious metal and the skill of those who made it, but not to the chronological development or organization of the industry.[91] It is possibly relevant that the occupational term used in the graffiti is 'shaper of precious metals,' without the further distinction of specialties attested in the Roman epigraphic corpus.[92] On the other hand, the corpus of Nabataean occupational inscriptions is very small, and there are also plenty of generic 'gold workers' in Rome.

It is perhaps somewhat surprising that potters do not show up in the epigraphic record. The distinctive thin-walled ceramic tableware described below implies the existence of specialized potters operating in the Petra region from the late second or early first century BCE at the latest.[93] While this fine ware was produced at Petra and exported throughout the kingdom,[94] most pottery production followed regional patterns, suggesting little movement of craftspeople.[95] The painted fine-ware pottery played a crucial role in articulating Nabataean social networks, but it probably did so as a more affordable substitute for the precious metal cups that Strabo describes.[96] The presence of precious-metal workers and the absence of potters in the epigraphic record could reflect a hierarchy of status that paralleled the value of their products.

This brings us to primary producers. Diodorus describes the Nabataeans as pastoral nomads at the end of the fourth century BCE, but Strabo describes them as settled, with a capital city and tree-fruit cultivation, in the first century BCE.[97] Archaeological evidence from the hinterland of Petra indicates an expansion of settlement beginning in the second or first century BCE and accelerating greatly in the first century CE.[98] However, it is important to note that people with characteristically Nabataean names were practicing agriculture in Idumaea already in the fourth century BCE, and that

88 Erickson-Gini and Israel 2013, 48–49.
89 Strabo 16. 4. 26.
90 Strabo 16. 4. 26; Meshel 2006.
91 Almasri, Alawneh, and Bala'awi 2012.
92 Hawkins 2012, 179.
93 Schmid 2007.
94 Dolinka 2003, 54–56, though see Durand and Gerber forthcoming for recent proof that one type of fine, painted pottery was produced at Hegra.
95 See, e.g., Dolinka 2003 for Aila and Durand and Gerber 2014 for Hegra. Gerber (2014) has identified two distinct common ware traditions that cover larger areas.
96 Vickers 1994.
97 Diod. Sic. 19. 94. 3; Strabo 16. 4. 26.
98 Kouki 2013.

mobile pastoralism continued, even in the hinterland of Petra, throughout antiquity.[99] There is no simple, linear development from mobile pastoralism to agriculture. Furthermore, it is clear that the pastoral and agricultural sectors of the economy were closely integrated, as we would expect from analogy with other mobile pastoralist groups in the region.[100] Around Petra, sites indicating mobile pastoral activity occur in the same areas as those indicating agriculture,[101] and in the Negev, the distribution of mobile pastoralist sites extends beyond but overlaps significantly with agricultural sites.[102] The pastoralists exploited the drier regions of the desert in the south but also interacted with the agriculturalists living in the northern part of the Negev.

Pastoralism in the region entails transhumance, with herders spending the wet winter in the desert and the dry season in areas where higher precipitation makes agriculture possible.[103] The herds were dominated by sheep and goats. Faunal assemblages from a domestic quarter of Petra are overwhelmingly dominated by sheep/goat, exceeding 90 percent of all mammal remains.[104] Interestingly, although these were dietary remains showing evidence of butchery, most of the animals consumed were adults, indicating that the flocks were raised for wool and/or milk. Wool seems to have been an important product. Sheep were twice as common as goats in the domestic assemblages at Petra, Strabo comments on the whiteness of Nabataean sheep, and one professional weaver was proud enough to include his occupation as part of the signature he carved into a cliff face near Hegra.[105] After sheep/goat, camels are the second most common species in the Petra assemblages. They were eaten, but probably after serving as pack animals. Remains from Tayma have the same relative prevalence, but camels are even more common and, given their size, could have provided as much meat as sheep/goats.[106]

Nabataean agriculture was dependent on climatic and topographic variables. The northern parts of the kingdom, east of the Dead Sea and the northern Negev Desert, receive enough precipitation for rain-fed agriculture, but agriculture in the rest of the area relied on irrigation, especially run-off irrigation.[107] The primary crops were the standard Mediterranean suite of grapes, olives, grain, and pulses, but dates were also important, and there is even some evidence for cotton cultivation at Hegra.[108]

99 Graf 2013, 46–48 for the onomastic data, Kennedy 2020b for the archaeological data.

100 Van der Steen 2013, 175–177; Fabian and Weaverdyck, vol. 2, ch. 3.A, 113–115.

101 Kennedy 2020b.

102 Rosen 2007.

103 Van der Steen 2013, 168–172 for mobile pastoralism in the nineteenth century.

104 This paragraph is based primarily on Studer 2007. Sheep/goat also dominate Nabataean faunal assemblages from Tayma (Prust and Hausleiter 2020) and from the *triclinium* at Dumata (Charloux et al. 2016).

105 Strabo 16. 4. 26; Nehmé 2018a, 10–12.

106 Prust and Hausleiter 2020, 118.

107 Oleson 2007.

108 Bouchaud 2015; Bouchaud, Jacquat, and Martinoli 2017.

The hinterland of Petra was intensively cultivated, especially in the first century CE. Site densities are very high, and most sites are small, suggesting intensive household-scale cultivation was the norm.[109] Some of these small units were probably part of larger landholdings, though. One irrigation system spanned several tributary wadis, suggesting that they were part of a single estate.[110] A small number of 'rural mansions' have also been identified in the hinterland, indicating an agricultural basis for large fortunes,[111] and we have documentary evidence for royal and private ownership of land in the Babatha archive.[112] We cannot rule out the possibility that some land was communally owned and periodically redistributed, but the archaeological and documentary evidence we have suggests high levels of private land ownership.[113] Despite the aridity of the environment, careful water-management techniques allowed the Nabataeans to practice a highly productive form of intensive agriculture that formed a significant source of wealth for elites and, probably, for more humble members of society as well.

One final actor requires comment: the city of Petra itself. Petra was the ideological center of the Nabataean community from the Hellenistic period at the latest, and the residence of the Nabataean king.[114] It was also a major city in the first century CE and beyond, with a peak population of perhaps 30,000 people and a mix of very wealthy and more humble residents.[115] As such, it was a major center of consumption, not only of the products of its hinterland, but of imports as well. Already in the second century BCE, Nabataean elites were importing amphora-borne products (probably wine) and ceramics from the Mediterranean.[116] These include fish plates, implying the import of fish. From later periods, faunal remains demonstrate that the wealthier residents at least regularly consumed seafood from both the Mediterranean and the Red Sea.[117] The residents of Petra did not just trade in aromatics but consumed them as well, as demonstrated by finds of incense burners and even burnt incense itself.[118]

109 Kouki 2013, 329.

110 Kouki 2013, 326.

111 Kennedy 2020a.

112 Cotton 1997.

113 For the coexistence of private and communal land ownership among nineteenth-century tribal societies in the area, see van der Steen 2013, 172–173.

114 Fiema, Schmid, and Kolb 2016 for a possible identification of the palatial quarter of Petra.

115 Joukowsky 2001, 2 for the population estimate. For the urban development of Petra, see Parr 2007. For the early history of Petra, see the contributions in Mouton and Schmid 2013; for Roman Petra, Fiema 2003. Recent decades have seen a great deal of archaeological research performed in and around Petra, the results of which are still being published. Graf (2022, 291–292) provides a convenient, up-to-date overview of the most important publications.

116 Renel and Mouton 2013, 62–72.

117 Studer 2007, 262–263. Most of the fish come from the Red Sea, whereas mollusks come from both the Red Sea and the Mediterranean.

118 Incense burners: Rosenthal-Heginbottom 2003, 29 with further literature. A quantity of burnt myrrh and other aromatics was found outside of a late first-century BCE tomb, indicating the use of incense in mortuary rituals (Farajat and al-Nawafleh 2005, 375). This tomb is fairly simple, but it is

Recent excavations of first-century CE shaft tombs, less impressive than the famous facade tombs, have yielded bronze and copper jewelry with semiprecious stones as well as some gold jewelry, attesting to the consumption capacity of Petra's less-exalted residents.[119] Petra was clearly not simply a transshipment point, but a major consumption center in its own right.

III Modes of Interaction and Institutional Development

In examining Nabataean economic actors on the one hand and the larger-scale political and trade networks in which the Nabataeans participated on the other, I have left a critical gap in the analysis: the collective formed by the Nabataeans. In our era of nation states, it is easy to take collectivity for granted, but in antiquity we must ask whether this collective noun actually corresponded to a community that ever functioned as a group with any sort of internal cohesion. It is an especially important question to ask of the Nabataeans because modern scholars often state that they competed with their neighbors over trade, which assumes an alliance between state and mercantile interests (see below). This section examines the Nabataean collective from a network perspective, asking what institutions fostered the creation and maintenance of intra-Nabataean ties, how those institutions and the collective as a whole changed over time, and how that collective might have engaged with its neighbors around the issue of long-distance trade.

III.1 Pottery and Banqueting

Social relationships in Nabataean society, as in many others, were formed and negotiated through the practice of banqueting. In the Nabataean case, this practice involved a particular set of material cultural accoutrements that allow us to trace its geographic extent, namely, banqueting facilities (*triclinia*) and a distinctive type of fine painted ceramic drinking bowl.[120] Together, these classes of evidence, along with associated epigraphy, provide insights into the structure of Nabataean social networks, their extension from Petra into peripheral areas, the impact of Roman conquest, and the way in which these networks extended over great distances in the context of trade.

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still a facade tomb in a prominent location. Simpler shaft tombs have produced residues that could come from perfumed oils (Sachet 2009, 109; Ramsay and Perry 2022, 57).

119 Perry 2016, 392.

120 See most recently Schmid 2021; Durand 2017. In addition to *triclinia*, with three benches, there are also *biclinia*, with two, and *stibadia*, which are circular.

We begin, however, with literary evidence. Strabo, relying on the eyewitness account of a friend who had visited Petra, was struck by the fact that Nabataean elites served each other at these banquets, rather than relying on slaves:

> They have few slaves, and are served mostly by their own kind, by each other, or serve themselves. This custom even extends to the kings. They make common meals for thirteen people, with two singers for each banquet. The king holds many symposia in a great fashion, but no one drinks more than eleven cups, each time drinking from a different golden one. The king is so egalitarian that, in addition to serving himself, he serves others.[121]

The act of serving clearly articulated a social bond between host and guest, but we should not be misled to think that this was one between equals or that all guests were equal. The spatial configuration of *triclinium*, which had a single, central focal point, implies a social hierarchy, and there are a few epigraphic attestations of a banquet leader.[122] We also know that Aretas IV (r. 9/8 BCE–40 CE) used a banquet to establish his differentiated esteem for Roman imperial elites, giving large golden crowns to members of Augustus's family and smaller ones to the other guests.[123] Recent analysis of ceramic assemblages from *triclinia* in Dumata and Hegra may indicate a similar process of differentiation. In both places, the assemblage was dominated by drinking bowls, but most were locally produced with a much smaller number of fine painted bowls imported from Petra.[124] If the two types of vessels were used in the same event (which is not at all certain), they would have clearly marked out a small elite stratum from the rest of the participants. As in most banqueting traditions, then, the Nabataean banquet was a tool for negotiating social status and power.

Because this aspect of banqueting was so widely understood in the ancient world (Strabo used the Greek term '*symposion*,' assuming that the event was essentially similar to the Greek banquet and only commenting on the peculiarly Nabataean aspects), it was also a perfect venue for establishing relationships across communal boundaries. This is why Aretas IV was hosting Roman elites in the first place. But in the Nabataean case, it may have had a further political resonance.[125] First of all, the painted drinking bowls look very distinctive, from a Mediterranean standpoint. While most Nabataean ceramic forms fit very well into an eastern Mediterranean Hellenistic *koine*, the use of painted decoration sets these bowls apart. The decorative patterns seem to have been inspired by precious-metal vessels produced in Parthian and Seleu-

121 Strabo 16. 4. 26, trans. Roller.

122 Space: Schmid 2013; banquet leader: al-Salameen and Falahat 2012.

123 Tacitus *Annals* 2. 57.

124 Durand 2017. There is one type, the 'two red lines' group of drinking bowls, that is very similar to Petraean types but found mostly in Hegra. Recent archaeometric analysis has now proven these vessels were not made in Petra, so they are probably a local product. Their function in articulating belonging to Nabataean networks, however, was the same (Durand and Gerber forthcoming).

125 Durand 2017; Schmid 2013; 2021.

kid workshops, and they have parallels among contemporary Parthian pottery.[126] Second, these bowls were produced almost exclusively in the region around Petra and, while they are common in the territory of the Nabataean kingdom, they are rarely found outside the kingdom.[127] It is likely, then, that the users of these vessels understood them to be particularly associated with Petra and possibly the Nabataean rulers. If banqueting had political overtones, the appearance of *triclinia* and large quantities of Nabataean painted bowls outside of the Petra region can be taken as evidence for the extension of Nabataean political networks (see below). This would also explain certain changes that occurred after the annexation of the Nabataean kingdom. Although painted pottery continued to be made, Schmid has identified a break in its stylistic evolution, which had been continuous from the end of the second century BCE through the beginning of the second century CE.[128] Some important banqueting and funerary complexes in Petra were destroyed or drastically renovated at this time as well.[129] Roman annexation, then, might have entailed the destruction of certain banqueting traditions that bound together key groups in Nabataean society as a way of disrupting old political networks.

Banqueting also articulated subgroups within Nabataean society. Petra and its environs contain numerous *triclinia*, usually associated with tomb complexes or sanctuaries but also situated within houses. The architecture and setting of these banqueting facilities set them apart as a special space to which access was strictly controlled.[130] Groups of graffiti, signatures carved into rock walls and often associated with rock-cut monuments in the areas around Petra, can be taken as indications of social groups that were strictly segmented: no individual wrote their name in more than one group of graffiti.[131] How we should understand these groups is not obvious. We hear of commensal associations, called *marzēḥā*, dedicated to the worship of a particular deity, and it has been suggested that some were also defined by profession.[132] We also know that kinship-based groups were articulated through feasting.[133] It would be very interesting to know how these divisions mapped onto each other, but at present it is impossible to say.

The occurrence, albeit in very small quantity, of painted Nabataean pottery outside of the territory of the kingdom provides some evidence for long-distance trade as well.[134] The scarcity of this pottery outside the Nabataean kingdom indicates that

126 Schmid 2004a; Vickers 1994.
127 Durand 2017, 95; Schmid 2004b. See n. 124 for the one type produced in Hegra.
128 Schmid 2021, 455.
129 Durand 2017, 98; Schmid 2013, 258–261.
130 Schmid 2013.
131 Nehmé 2013.
132 Healey 2001, 165–169; al-Salameen and Falahat 2012, though cf. n. 83 above.
133 Schmid 2013, 254–255.
134 Schmid 2004b for the following. See also Glanzman 2014 for more detail on the South Arabian context.

it was not a trade commodity, so its presence attests to the presence of people who imported it for their own use. The distribution of this pottery suggests that Nabataeans were traveling throughout the Arabian Peninsula, including to the Persian Gulf.[135] It appears in the major ports of southern Arabia (Qana and Khor Rori), on the Farasan islands, and in Myos Hormos and Berenike, attesting to Nabataean involvement in maritime trade. The earliest pottery in these more distant regions dates to the last quarter of the first century BCE, and it extends into the later first century CE.[136] What role the pottery played in this trade can only be guessed at. Given the paucity of sherds, we must assume it was used by only a few people on certain occasions. In light of what has been said above, it seems likely that Nabataean fine ware was a network standard, deployed to emphasize the Nabataean identity of its users.[137] Perhaps it was owned by resident Nabataeans who used it when hosting Nabataean visitors. In this scenario, the expatriate Nabataeans might have facilitated the formation of ties between the Nabataean visitors and their host community in the same way that trading communities did on a larger scale.[138] We could also imagine Nabataean travelers bringing these vessels with them so that they could engage in proper banqueting rituals even when away from home. Whatever the case, these sherds attest to the importance of intra-Nabataean relationships to Nabataean traders abroad

III.2 Currency Networks

The production, distribution, and use of Nabataean coins also played an important role in defining and articulating the Nabataean network throughout its history.[139] We argued in volume 2 that the production of coinage could be understood by considering the various constituencies that formed the state and their relationships to the users of the coins.[140] In the Nabataean case, where we have few details about state constituencies, we will have to be vague, speaking as if coin production was carried out simply in response to the will of the king and rarely distinguishing different groups of users aside from soldiers. Nevertheless, by examining the Nabataean coins them-

135 It is notable that Nabataean pottery appears at Qaryat al-Faw, in Saudi Arabia, because this was on a route from the incense-bearing regions to the Persian Gulf, not to Petra.

136 Glanzman (2014, 174, 176) argues that none of the pottery in southern Arabia postdates ca. 80 CE. With such small sample sizes, however, chronological conclusions are highly susceptible to alteration from new evidence.

137 For network standards, see Grewal 2008.

138 For trading communities in the Mediterranean, see Terpstra 2013. The only evidence for a whole Nabataean trading community is the corpus of inscriptions related to the temple of Dushara in Puteoli, discussed above.

139 Rachel Barkay has recently put the study of Nabataean coins on a new footing with the publication of an up-to-date, comprehensive study and catalog (2019).

140 Weaverdyck and Fabian, vol. 2, ch. 8.A, III.2.

Fig. 1: Early anonymous Nabataean bronze half-unit, overstruck on a Ptolemaic coin, late third century BCE. Obv. head of Athena, rev. winged Nike. Diameter 17.8 mm, 4.26 g. Barkay type 1. ANS 2010.55.14. © American Numismatic Society.

selves and the currency networks in the region, we can see how coins proclaimed and reinforced the idea of a Nabataean ethnic community, placed the royal family at the center of that community, and even erected barriers around it, reinforcing the coextension of Nabataean ethnic, political, and economic networks.

We must start by recognizing that Nabataean coins were relative latecomers. The earliest Nabataean coins were produced in the final decades of the third century BCE,[141] but coins were circulating and even being produced in the Levant and Egypt from the fifth century BCE, and the volume of coinage in circulation had exploded at the end of the fourth century when Alexander minted and dispersed the Achaemenid silver reserves.[142] Nabataean traders, if not all Nabataeans, would have been familiar with coinage for centuries before the first Nabataean coins were ever produced. That production, then, cannot be explained through the diffusion of information or economic convenience. The explanation, rather, is political.

For most of the third century BCE, the Ptolemies were the most powerful imperial polity operating in the region. Among the earliest coins found in Petra, heavily worn, large bronzes of Ptolemy II (r. 285–246 BCE), are fairly common.[143] This makes the iconography of the earliest Nabataean coins somewhat surprising (fig. 1). The first Nabataean coins, overstruck on Ptolemaic bronzes, carried iconography reminiscent of Seleukid coinage.[144] These were well-made coins, a planned issue, struck over older coins that date, at the latest, to 234–222 BCE. It is not unlikely, then, that they should be understood in the context of the fourth Syrian war (219–217 BCE). Polybios lists

141 Barkay 2019, 7–11.

142 For the regional numismatic context, see Duyrat 2016 (Hellenistic Syria) and Huth and van Alfen 2010 (Arabia).

143 Augé 2013. Also common are less worn, third-century bronzes from Arados, a commercially important island in the northern Levant. Finding civic bronzes so far from their place of production is unusual, but similar coins have also been found in the Negev at key points along the route between Petra and Gaza. One explanation is that the Ptolemies controlled Arados for approximately 20 years in the second half of the third century, and that this somehow brought the Aradian bronzes into circulation in the southern Levant (Graf et al. 2005, 436–438).

144 Barkay 2019, 7–11. These coins bear no legend, but they are found almost exclusively in Nabataean regions and are universally accepted as Nabataean emissions.

"Arabs and neighboring tribes" among Antiochos III's army at the battle of Raphia.[145] This coinage, then, could be seen as an expression of Nabataean autonomy and alignment with the Seleukids.[146] Perhaps it was even used to pay the troops fighting at Raphia? If so, this was a break with tradition. The Nabataeans had never minted coins to pay soldiers before, despite the fact that a third-century poem associates a Nabataean king with mounted warriors (see below). Did the soldiers need an extra incentive to fight this battle? Perhaps the Nabataean king was trying to mobilize people with whom he had a less close relationship, e.g., from "neighboring tribes"? If the first Nabataean coins were produced to extend the reach of the network through which the king raised fighting men (and this is speculative), this could have helped to extend the whole Nabataean social network by providing a distinctive network standard that they could all use for economic transactions. Versions of this coinage continued to be produced (on fresh flans) throughout the second century BCE. In Syria, royal Seleukid bronze coins constitute the bulk of bronzes in circulation in the second century,[147] but they are rare in Nabataean regions, where Nabataean bronzes tend to dominate.[148] Even though this coinage bears no legend and the iconography is Hellenistic, its distribution (and the lack of Seleukid bronzes) still seems to indicate a fairly closed currency zone in which coins were used for payments by and to other 'Nabataeans.'

For reasons that are not entirely clear, Nabataean kings did not produce Nabataean coinage for most of the first century BCE.[149] Then, in 34/33 BCE, late in his reign, Malichus I (r. ca. 59/58–30 BCE) began to produce a multidenominational, bimetallic currency in silver and bronze that would inaugurate a new, distinctively Nabataean coinage system (fig. 2). The reason, again, was political. It is tempting to identify the need to pay soldiers as the cause of Malichus's coin production because Josephus records a series of three battles between the king and Herodes, in which Malichus was either defeated or won only with the unexpected help of one of Kleopatra's generals.[150] But that is not the whole story. The final decades of Malichus's reign were a tumultuous time in the region.[151] The Late Republican Roman civil wars were in

145 5. 82. 12.

146 Barkay 2019, 10.

147 Duyrat 2016, 460–468.

148 Augé (2013, 132–133), uncertain of the chronology of the Nabataean issues, suggests a second-century date could help explain the paucity of Seleukid coins.

149 Two Nabataean kings produced coins in the first half of the century: Obodas I (ca. 99–82 BCE) and Aretas III (82/1–59/8 BCE) (Barkay 2019, 13–18). The latter's coins are actually Damascene civic issues, minted at a time when Aretas ruled the city. The former's coins look like normal, Hellenistic issues with a Greek legend reading "[Coin of] King Obodas," but they are represented by only three examples: two unprovenanced silver *drachms* and one silver *tetradrachm* found in a hoard in Yemen. It has been suggested that they were minted for the purposes of trade (Barkay 2019, 14).

150 Battles: Joseph. *AJ* 15. 108–160; Bowersock 1983, 42–43. Coin production as a result of the need to pay soldiers: Meshorer 1975, 20–21; Barkay 2019, 20; but cf. Huth 2010, 217 for contrary arguments.

151 Bowersock 1983, 37–44 for an overview of the political history; Pearson 2011, 24–41 for a more detailed and nuanced account.

Fig. 2: Silver quarter-shekel of Malichus I, 34/33 BCE. Obv. Head of Malichus, rev. eagle with legend "Malichus the King, king of the Nabataeans." Diameter 15 mm, 3.25 g. Barkay type 10. ANS 2017.38.118. © American Numismatic Society.

their final phases, the Hasmonaean dynasty that had ruled in Judaea collapsed and Herodes was struggling to assert his dominance, and the Ptolemaic ruler Kleopatra VII was seeking to reassert Ptolemaic control over the southern Levant through her alliance with the Roman general, Antony. In 39 BCE, Malichus was forced to pay a hefty fine to the Romans after supporting the Arsakids when they took Jerusalem, soon after he was required to pay certain taxes to Kleopatra via Herodes, and the Ptolemaic queen succeeded in acquiring a portion of his territory. Josephus reports that, after Herodes's army defeated him for the final time, Malichus's soldiers declared Herodes the patron of the nation.[152] The Nabataean kingdom, then, was in a very precarious state when Antony's defeat at Actium (31 BCE) and Kleopatra's subsequent downfall reset the geopolitical stage. Seen in this light, Malichus's coins take on added significance. They were minted on the same standard as the Tyrian *shekel*, and they bore many Tyrian motifs, but the portrait was of Malichus and the legend was written in Nabataean Aramaic. It read, "Malichus the king, king of the Nabataeans." No prior Nabataean coin had borne a Nabataean legend, let alone named the Nabataeans as a community.[153] Malichus produced his coinage not simply to pay troops, but to strengthen the communal identity of his people and his own position as their king at a time of deep instability.

It is notable that Malichus's coinage was struck on the Tyrian *shekel*, the most common weight standard used in the southern Levant at the time. Despite its explicitly Nabataean legend, the coins would have been easy to use outside of his realm. At first, Malichus's successor, Obodas II (r. 30–9 BCE),[154] continued in his predecessor's footsteps. He minted coins that communicated the importance of the Nabataean royal family, frequently and often in small numbers, on the common *shekel* standard. Then, in 23/22 BCE, he issued a new silver coin, weighing 4.4 g instead of the 6.6 g half-*shekel*. This new coin, called the *sela'*, would be the standard silver denomination for the

152 Joseph. *AJ* 15. 159.

153 For earlier, ephemeral issues with Greek legends, see n. 149 above.

154 This king is sometimes referred to as Obodas III based on the hypothesis that another king named Obodas ruled briefly from 62/61–60/59, but see Barkay 2019, 23–24, for a refutation of this hypothesis with further literature.

remainder of the Nabataean kingdom.[155] By minting a coin that was not easily exchangeable with the *shekel*, Obodas was creating a distinct Nabataean currency zone. As with other closed currency zones, Obodas might have hoped to prevent the outflow of silver and to profit from the exchange of high-quality foreign coins, but in any case, the result was a closer alignment between political and economic geography. In some ways, this is similar to the situation that prevailed in the second century BCE, but the denominational diversity suggests that these coins were used more frequently as a means of exchange than the old anonymous issues. The Nabataean politico-economic network was more monetized than before, making the coins even more powerful agents of integration.

It is remarkable that, only 10 years after Malichus issued his first coins, Obodas could impose a standard that erected barriers between the network of Nabataean coin users and others in the region. Why the users accepted this new coin is not entirely clear, but they did, for no subsequent king ever returned to the *shekel*, and non-Nabataean coins are rarely found in the Nabataean heartland.[156] Even when a power struggle broke out after Obodas's death in 9 BCE, both claimants minted *sela'in* and fractions thereof.[157] The successful claimant, Aretas IV (r. 9 BCE–40 CE), solidified the standard, minting *sela'in* in large numbers over the course of his long reign.[158] Seen as a network standard, the success of the *sela'* implies that the network defined by the use of Nabataean coins was attractive enough that people did not abandon it for the *shekel*-using network (although individuals could participate in both). The state, which must have made and demanded payments in *sela'in*, surely contributed greatly to the *sela*'s network power, but it seems unlikely that it was the sole contributor. Rather, individuals who used *sela'in* by virtue of their relationship to the Nabataean state ('citizens,' for short) must also have formed an attractive network themselves. This implies that a large portion of Nabataean citizens' monetary transactions were carried out with other citizens. This economic network obviously connected to other economic networks, but the *sela*' allows us to see that a distinctively Nabataean economic network not only existed, but thrived.

After provincialization, the silver coinage minted in the former Nabataean kingdom continued to articulate a distinct monetary network, but it also began to integrate that network with its neighbors. The latest datable silver coin of a Nabataean king was minted in 91/2 CE.[159] By this time, the fineness of the *sela*' had declined to

155 There is some debate as to how to understand this denomination. Meshorer (1975, 29–30) thought the intrinsic value of the coin might have been related to the *denarius*, but I follow Barkay (2019, 32, 34 n. 14) in seeing it as a distinct, local standard.

156 Bowsher 2007.

157 Exception: Aretas IV minted ten silver types in the first year of his reign of which one (Barkay 2019, no. 84) was a *shekel* represented by a single example. In the second year of his reign, he minted one *shekel* type (Barkay 2019, no. 99) and three *sela'* types.

158 Barkay 2019, 43–61.

159 Barkay 2019, no. 234.

Fig. 3: Trajanic Arabian silvers minted on the Nabataean *sela* standard, 103–111 and 114–116 CE (not to scale). Above: Obv. Head of Trajan, rev. Personified Arabia holding a branch over a dromedary and cinnamon. Diameter 18 mm, 3.62 g. RIC II Trajan 142, BMC 297. ANS 1948. 19. 1148. © American Numismatic Society. Below: Obv. Head of Trajan, rev. Bactrian camel. Diameter 18 mm, 3.1 g. ANS 1956.127.2241. © American Numismatic Society.

around 50 percent, and the weight had declined to approximately 3.4 g. After conquest, between 111 and 116 CE, the emperor Trajan minted several silver coin types that circulated more or less exclusively in Arabia and Judaea.[160] Two of these types, one bearing a personification of Arabia holding a bundle of cinnamon sticks and standing over a dromedary and the other bearing a Bactrian camel on the reverse (fig. 3), were continuations of Nabataean *sela'in* in weight and fineness. Indeed, those with personified Arabia were often overstruck on older Nabataean *sela'in*.[161] The other types were heavier but still lighter than the *tetradrachms* produced at the same time in the neighboring province of Syria. Their silver content suggests they were exchangeable with Syrian issues at rates of 1:1 and 4:3, depending on the specific Syrian coin. While distinct, these coins were not incompatible with the larger Syrian currency network.

Trajan's Arabian silvers were obviously different from the other coins in the region. The fact that Syrian *tetradrachms* are found in Arabia attests to the integration of the region into larger coinage networks, but the fact that Arabian silvers do not circulate outside of Arabia and Palestine suggests that a certain level of distinctiveness remained. Just as the Nabataean kings used coins to bolster the communal identity of the Nabataeans, so the Romans used them to create the new, Roman provincial identity of Arabians. People accustomed to using *sela'in* would recognize the weight and fineness of the new smaller silvers. But where they used to see their king and queen, they saw the Roman emperor, named as such in Greek, and a representation

160 Amandry and Burnett 2015, 3:528–535; Butcher 2012.

161 Butcher (2012, 207) notes that these coins look very much like contemporary *denarii*, and indeed they have approximately the same weight, but Trajan's *denarii* contained 80 percent silver rather than 50 percent (Woytek et al. 2007).

of their new community as seen from the imperial perspective: Arabia, the importer of spices.

III.3 The Nabataean State

Nabataean coins participated in the creation and maintenance of the Nabataean community network, but they also helped to center that network around the person of the king and the royal family. This raises questions about the institution of kingship and, by extension, the Nabataean state. Understanding Nabataean state formation and its causes would help us to test the core–periphery model of frontier development alluded to in the introduction to this chapter. It would also help us to better understand the relationships between the Nabataeans and their neighbors by clarifying the types of collective action one could plausibly expect from the Nabataeans. Finally, it would allow us to better understand the 'internal' Nabataean economy in several ways. As we saw in volume 2, state power can be used to mobilize and concentrate resources in the hands of those with an institutionalized claim on that power, thereby increasing wealth inequality. Concentrated resources can also be reinvested into public goods, especially infrastructure and security. Finally, states could provide third-party adjudication or enforcement of agreements, reducing transaction costs.

Unfortunately, our evidence is too meager to trace the process of Nabataean state formation in any detail, so we must rely on a more visible proxy: sovereignty.[162] In anthropological theory, sovereignty is a type of power that can operate with or without a state structure. It is "a tentative and always emergent form of authority grounded in violence that is performed and designed to generate loyalty, fear, and legitimacy from the neighborhood to the summit of the state."[163] Sovereignty is especially useful when studying groups with a strong mobile element because it centers the body, rather than a territory, as the site and object of power relations.[164] Because sovereignty is the power that gives certain people the right to legitimately punish and kill others, it combines both the coercive and consensual forms of power that allow governmental institutions to work. Without sovereignty, there is no state capacity.

Sovereignty has the practical advantage of being somewhat easier to see in the archaeological record than state capacity. Adam T. Smith has argued that sovereignty requires three conditions that must be continuously reproduced: a coherent, distinct public; a sovereign figure marked out as separate from the community; and a method of making the polity itself an object of devotion.[165] We have already seen how ban-

162 For overviews, see Hansen and Stepputat 2006; Humphrey 2004. See Smith 2015 for the role of material culture.

163 Hansen and Stepputat 2006, 297.

164 Control over territory is a central pillar of most definitions of a state, for which, see Scheidel 2013.

165 Smith 2015, 6, 91–93.

queting and coins contributed to the creation of a coherent, distinct public and, in the case of coins, a sovereign figure. Whether or not the Nabataean polity was an object of devotion is harder to say, but one could interpret the cult of Dushara, sometimes called the Nabataeans' national deity, in this way.[166] Treatment of the city of Petra, as the Nabataean capital, might also reflect ideas about the Nabataean polity as a whole. This section will concentrate on the sovereign figure, tracing the emergence and development of the institution of kingship and the increasing power of the king over the course of the last three centuries BCE. The development of Petra will be a secondary focus. We will conclude the section by asking whether the concentration of sovereignty in the person of the king corresponded to increased state capacity.

III.3.1 The Development of Sovereignty

In their first appearance in the literary record, the Nabataeans are depicted as a military force to be reckoned with, defeating and then coming to terms with Hellenistic armies in 312 BCE.[167] While the passage relies heavily on Greek stereotypes of barbarians to characterize the Nabataeans, some incidental details might reflect Nabataean realities. The Nabataeans had come together for an annual festival when they were attacked, and there is no mention of a king; the embassy that negotiates with the general consists of elders.[168] In the late fourth century, then, Nabataean sovereignty seems decentralized, residing in (probably) kinship-based groups that convened regularly but temporarily.

The site of the festival in Diodorus's account is thought to be Petra, but this is not certain.[169] Recent archaeological investigations have revealed modest architectural and artifactual evidence (including Attic fine ware and Rhodian and Koan amphorae) dating back to the late fourth and third centuries BCE.[170] Also in the third century BCE, Eratosthenes referred to "Nabataean Petra" in his geographical work, giving its distance from Babylonia.[171] Already in the third century, then, Petra served as a focal point for the Nabataeans and as a node in larger networks.

The figure of the king also emerged sometime in the third century BCE. A highly fragmentary poem of the mid-third century contains the tantalizing lines "… Naba-

166 In a recent analysis, Robert Wenning avoids characterizing Dushara as a national, state, or imperial god only because he rejects the terms nation, state, and imperium as descriptors of the Nabataean kingdom (2016b, 190). See also Healey 2001, 80–119.

167 Diod. Sic. 19. 94–100. Diodorus wrote in the first century BCE, but he relies here on Hieronymos of Kardia, a contemporary of the events described.

168 Diod. Sic. 19. 97. 6.

169 Wenning 2013, 13–15.

170 Graf 2013; Renel and Mouton 2013, 57–62.

171 Quoted by Strabo (16. 4. 2).

taean / … king of Arabian fighting horsemen,"[172] and an inscription from the Hauran, paleographically dated to the end of the third century, refers to another anonymous king.[173] The earliest coins found in Petra date to the mid-third century BCE, and the earliest Nabataean coinage has recently been dated to the last decades of the century (see above). The beginnings of political centralization, then, can be assigned to the third century BCE. Kings apparently led armies (as implied by the poem), received demonstrations of loyalty (the inscription), and issued coinage, which must have required some resource concentration, but we have little evidence for any other administrative functions at this point. The third century is also the period when the earliest hilltop forts guarding the road from Petra to Gaza across the Negev Desert were built,[174] and it is probable, though by no means certain, that the authority of the king lay behind their construction and operation.

The first king whose name we know is Aretas I, mentioned in 2 Maccabees in a story about Jason, a claimant to the Jewish high priesthood.[175] The story is worth examining because it has been taken as evidence for Nabataean territorial control northeast of the Dead Sea in the first half of the second century BCE.[176] After committing atrocities in Jerusalem, Jason is driven out and takes refuge "in the country of the Ammonites," northeast of the Dead Sea. The author then describes how Jason was "accused before Aretas, ruler of the Arabians" (the Greek is '*tyrannon*' rather than '*basilea*,' which would be 'king') and subsequently forced to flee from city to city (or "out of the city" according to some manuscript traditions),[177] hated and pursued by all. The story illustrates the social power of the Nabataean (?) ruler and his role as dispenser of justice, but the geographic extent of that power is actually ambiguous. Between the description of Jason's misdeeds in Jerusalem and flight to Ammonite territory and the narration of his accusation before Aretas and subsequent persecution, the author inserts a transitional phrase: "At last he came to a miserable end." The narrative that follows is an illustration of an evil man getting his just deserts, but the causal connection between the two sections of the story could easily be cosmic rather than literal. The transitional phrase leaves it uncertain that Jason's accusation before Aretas had anything to do with his actions in Jerusalem or anything he may have done in the Ammonite territory.

We know from other stories about the wars of Judas Maccabaeus and his brothers and from the Zenon papyri that Nabataeans were present in the area north and east of the Dead Sea during the third and second centuries BCE,[178] and that they had

172 Graf 2006.
173 Milik 2003.
174 Erickson-Gini 2006; Erickson-Gini and Israel 2013.
175 2 Maccabees 5. 7–8.
176 Sartre 2005, 17.
177 Hackl, Jenni, and Schneider 2003, 593–595.
178 *PSI* 4. 406; 1 Maccabees (1 Macc) 5. 25–27; 9. 32–42; Joseph. *AJ* 12. 335; 13. 7–11.

enough power to secure an army's baggage,[179] so it is possible that Aretas had some form of influence over some people in the area, but it cannot be taken as certain that he ruled territory in this area. Certainly the attack of the "sons of Amaraios" against a Jewish force near Madaba shows that the Nabataeans could not guarantee security here.[180]

In contrast, forts in the Negev Desert along the Petra–Gaza road show signs of heavy occupation in the second half of the second century BCE, and an inscription from Elusa in this area names "Aretas the king of the Nabataeans."[181] This Aretas could be the same as the one mentioned in 2 Maccabees, or it could be Aretas II, who ruled in the late second century BCE. In any case, it appears that Nabataean kings were involved in providing security to trade in the Negev by the second half of the second century at the latest.

In Petra, excavations have revealed a phase of occupation in the valley floor stretching from possibly as early as the third to the mid-first century BCE that is characterized by well-built stone houses exhibiting specialization of rooms and spaces.[182] It appears that Nabataean elites were residing permanently at Petra from at least the second century BCE if not before. The high places surrounding the valley were also being used by the late second century BCE as places where groups (most likely kinship-based) gathered for commensal rituals to strengthen internal ties (see above for banqueting).[183] In one of these places, a rock-cut *triclinium* contains an inscription dedicating it to the god Dushara "for the life of Obodas, king of Nabaṭū, son of Aretas, king of Nabaṭū. Year one."[184] The date is debated, but 96/5 BCE is the best option.[185] This is the earliest evidence we have for a regnal dating scheme, a further indication of the growing centrality of the king. By the late second or early first century, then, Petra was a central place not only for elite residence, but for the performance and reinforcement of intratribal relations. Those performances, though, were also venues for the expression of loyalty to the king.

The late second century is also the time when Petra and the Nabataeans begin to appear in the Mediterranean. In an inscription of 129 BCE,[186] the city of Priene in Asia Minor honors a prominent citizen for services rendered to the community, including embassies undertaken "to kings and cities."[187] One such trip was "to Alexandria to

179 1 Macc 9. 32–42; Joseph. *AJ* 13. 7–11.

180 Joseph. *AJ* 13. 11.

181 Hackl, Jenni, and Schneider 2003, 394–395.

182 This paragraph based on Renel and Mouton 2013, 62–72. For dating, see Renel et al. 2012.

183 Durand and Mouton 2013; Gorgerat and Wenning 2013.

184 Trans. Wenning and Gorgerat 2012, 133.

185 Wenning and Gorgerat 2012, 132–136; Gorgerat and Wenning 2013, 223–225 for discussion. There, Wenning and Gorgerat consider 96/5 and 62/1 BCE to be equally likely, but the latter date is predicated on the existence of a King Obodas who ruled from 62/1 to 60/59 BCE, attested only through coinage. More recent numismatic analysis has shown that there was no such king (Barkay 2019, 23–24).

186 *I. Pri.* 108; Hackl, Jenni, and Schneider 2003, 126–127.

187 *I. Pri.* 108, l. 165.

King Ptolemy and to Petra in Arabia."[188] This shows that Petra was recognized by a Greek *polis* as a city capable of maintaining diplomatic relations, and the fact that it was paired with Alexandria in a single diplomatic mission suggests that Priene's interest in the two places was similar. Most likely, the city saw both as a source of aromatics. It is also telling, though, that in contrast to Ptolemy, no king of the Nabataeans is named. They certainly had a king at this point, but to Priene, that king was not as important as the city of Petra.

Josephus provides literary evidence for Nabataean monarchs from the beginning of the first century BCE through the middle of the first century CE, largely in the context of relations with Judaean rulers. The Nabataean kings appear as major regional players, operating on a par with Hasmonaean rulers and claimants to the Seleukid throne. The city of Gaza called on Aretas II for aid when threatened by Alexander Jannaeus at the very beginning of the first century BCE.[189] Over the next few decades, Nabataean kings engaged in a series of battles not only with Hasmonaean and Herodian rulers but also with Seleukids, and they were heavily involved in power politics involving the Ptolemies and the Arsakids as well.[190] Notably, on several occasions, Josephus describes cities being used as bargaining chips between kings, suggesting that the Nabataean kings were exercising more territorial political power than they had in the 160s.[191] Indeed, in 84 BCE, the Damascenes invited the Nabataean king Aretas III to rule their city, a testament to the strength of Nabataean power in the region north and east of the Dead Sea. The literary evidence, then, seems to indicate that Nabataean rulers were becoming more prominent, that more sovereign power was concentrated in the person of the king than before.

Also in the first century BCE, we begin to see Nabataean kings using Petra to stage their power through monumental architecture. At some point in the first half of the century, the route into Petra was leveled and an underground aqueduct bringing water from a nearby spring was constructed. This was destroyed in the middle of the century by a flash flood. Subsequently, a massive, 12.8 m tall diversion dam and a 90 m long tunnel that would carry flood water away from the city were constructed.[192] Such a large-scale investment in infrastructure can (cautiously) be taken as a sign of concentration of resources and authority in the hands of the ruler. An even more overt sign of centralization is the planned destruction at some point in the mid-first century BCE of the earlier elite houses to construct a large cult complex built on a completely different orientation.[193] While the precise date of this destruction is not entirely clear, one part of the complex has been dated to the last third of the first

188 *I. Pri.* 108, ll. 167–168.
189 Joseph. *AJ* 13. 350–361.
190 Bowersock 1983, 24–44; Pearson 2011, 19–34.
191 Joseph. *AJ* 13. 382; 14. 18.
192 Bellwald 2012.
193 Renel et al. 2012, 51; Renel and Mouton 2013, 75; Augé et al. 2016.

century BCE.[194] The second half of the first century BCE is a period of monumentalization in Petra, a trend that was taken to completion by Aretas IV (r. 9 BCE–40 CE), who was responsible for many of the grand monuments still visible today.[195] This monumentalization program did not only entail the destruction of older houses and tombs to make way for new buildings. Christopher Angel has recently demonstrated that the orientation of these buildings and their positioning relative to water resources created a new visual and perceptual experience for anyone walking through Petra that reinforced the power of the king with every step.[196] Petra had already been the capital of the Nabataeans, but now it was a royal city as well.

The concentration of sovereign power in the figure of the king, then, seems to have accelerated significantly in the first century BCE. The monumentalization of Petra, the beginnings of the new Nabataean coinage, and, as we will see, the territorial expansion of the kingdom and foundation of new settlements put the culmination of this process in the last decades of that century. The causes of this development are not entirely clear, but it is tempting to point to the wars that raged throughout the first three-quarters of the century.[197] We hear (almost exclusively from Josephus) that the Nabataeans went to war on three occasions between 93 and 82 BCE and six more times between 67 and 40 BCE; in 31 BCE, they fought three battles against Herodes and burned Kleopatra's ships.[198] Then, about five years later, they accompanied a Roman expedition to southern Arabia (see below). The Nabataeans may have fought other battles that Josephus did not consider relevant to his story. In this model, frequent war-making would allow the king to win glory through military success, bring allied tribal leaders into closer sustained contact with the king, force common people to become accustomed to cooperating under royal leadership, and require the mobilization of resources on a larger scale than before. If this is true, the *Pax Augusta* might have threatened the status of the king, encouraging him to seek other means – such as monumental architecture, coin production, and city foundation – to reinforce his position. This is all rather tidy. To be convincing, we would require a better understanding of Nabataean war-making strategies as well as more details about the actions and motives of individual kings. Aretas IV's troubled succession could explain in part his building activity in Petra, for example.[199] Nevertheless, war as a driving force for the development of sovereignty remains an attractive hypothesis.

194 Augé et al. 2016, 285.

195 Schmid 2012; Tholbecq 2018, 27–30.

196 Angel 2017, 171–178.

197 Tilly 1990 is the foundational work on war and state formation. For recent reanalyses of Tilly's work, see contributions in Kaspersen and Strandsbjerg 2017.

198 For an analysis of the Nabataean wars in this period, see Bowersock 1983, 24–44; Pearson 2011, 19–34.

199 Angel (2017, 176–178) makes this connection. The best account of Aretas's background and succession, relying not only on literary evidence but on recent epigraphic discoveries, is Barkay 2019, 43–45.

III.3.2 Nabataean State Capacity

If sovereign power became increasingly concentrated in the person of the king in the later first century BCE, can we detect any impact on Nabataean state capacity? The timing of territorial expansion and the development of an administration to govern new territories suggest that we can.

Josephus describes Nabataean kings fighting in the regions east and north of the Dead Sea in the first half of the first century BCE, and cities in this area were among those exchanged between the Nabataeans and the Jewish kings.[200] Bostra became the major center of Nabataean power in this area and was later the capital of the Roman province of Arabia. This city had been a major urban center in the Bronze Age, and it is described as one of several large fortified cities in the 160s, when it was sacked by Judas Maccabaeus.[201] One might expect, then, that the city would be a stronghold of the Nabataeans already in the first part of the first century, but excavations have revealed very little from this period. Instead, a Nabataean presence is detectable only from the late first century BCE. Large quantities of Nabataean fine-ware pottery from this period are found throughout the city, and at least one section of the Bronze Age fortifications was rebuilt, providing the city with a new, urban identity.[202] This was presumably the result of royal initiative. Royal investment in Bostra would continue, with two separate, major urban construction programs in the second half and at the end of the first century CE.

Nabataean conquests to the south and east are similarly attested in the late first century BCE. Hegra, discussed above, was incorporated into the Nabataean kingdom in the late first century BCE.[203] Aretas IV minted a bronze coin with the legend "Hegra" at some point between 9/8 BCE and 15/16 CE, possibly commemorating its conquest.[204] After Petra, it was one of the Nabataeans' most important urban centers, with a city wall enclosing over 50 ha and numerous rock-cut tombs reminiscent of those in the capital.[205] Epigraphic evidence also attests to numerous officers resident there from the end of the first century BCE through the first century CE.[206]

Dumata, the other independent oasis polity discussed above, was incorporated into the Nabataean kingdom at some point before 26 CE (the date of a funerary inscription using a Nabataean regnal date), and a military garrison was installed.[207] This brought some Nabataean material culture, but much of the material remained

200 For a detailed discussion, see Ji 2009.
201 1 Macc 5. 26–28.
202 Dentzer, Blanc, and Fournet 2002; Dentzer et al. 2010, 141–143.
203 The chronology continues to be refined with ongoing excavations (Rohmer and Charloux 2015; Durand and Gerber forthcoming).
204 Barkay 2019, 50–51.
205 Nehmé 2019.
206 Hackl, Jenni, and Schneider 2003, 308–345 for the epigraphic evidence from Hegra.
207 Charloux, Cotty, and Thomas 2014.

regionally distinct, with strong ties to Mesopotamia.[208] Particularly notable is the discovery of a monumental open-air *triclinium*, with a capacity of 30–35 people. The tableware found dates most probably from the last third of the first century BCE to the first third of the first century CE, with no later or earlier pottery, indicating a relatively brief period of use.[209] We have seen how important banqueting was in articulating Nabataean social and political relations. This *triclinium* and the banquets that took place inside it, then, must have been important tools for integrating the local residents of Dumata into the Nabataean social and political network.

A similar process might have played out at al-Qusayr, likely a port connecting Hegra to the Red Sea.[210] The site has long been known for a Nabataean monumental building, which was interpreted as a temple. However, recent reexamination has raised the possibility that the building was a *triclinium*.[211] Published plans suggest it could have had a capacity of approximately 20–25 people.[212] Near this building are traces of other monumental structures and a settlement. The surface ceramic assemblage reveals a remarkably tight chronology, ranging from the mid-first century BCE to the first third of the first century CE, corresponding remarkably well to the chronology of the Dumata *triclinium*. This is despite the fact that the overall nature of the al-Qusayr assemblage, in terms of the imported wares and functional classes present, resembles more closely that of Myos Hormos, the major difference being that Nabataean fine ware is rare at Myos Hormos and common at al-Qusayr.[213]

Al-Qusayr was one of several settlements that the Nabataeans established around this time. The port of Aynuna was occupied for longer than al-Qusayr and is therefore more difficult to interpret, but settlement there seems also to have begun in earnest in the first century BCE or first century CE.[214] The beginning of Aila is dated quite closely to the last third of the first century BCE.[215] The foundation of Hawara, an inland city half way between Aila and Petra, could have occurred at the same time, but this is less certain. According to later literary sources, the city was founded by Aretas son of Obodas.[216] Although usually identified as Aretas III (r. 82/81–59/58 BCE), the king in question could very well be Aretas IV (r. 9 BCE–40 CE).[217] The city has been excavated for decades and turned up no Nabataean painted pottery from the earlier first century BCE, and a later date would be less surprising given the regional dynamics under discussion.

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208 Charloux, Cotty, and Thomas 2014; Charloux et al. 2016.

209 Charloux et al. 2016.

210 Fiema et al. 2020.

211 Fiema et al. 2020, 86–88.

212 Charloux et al. (2016, 26) use 1 m per participant to calculate capacity, and Fiema et al. 2020, plate 6.6 depicts a *triclinium* with an interior perimeter of approximately 23 m.

213 Fiema et al. 2020, 90–91.

214 Gawlikowski, Juchniewicz, and al-Zahrani 2021.

215 Parker 2009.

216 Stephanus Byzantinus, *s. v.* 'Auara.'

217 I follow Parker (2012, 925), but see Oleson 2010, 1:50–53 for a full discussion.

These foundations represent significant investments in infrastructure. Hawara was endowed with a magnificent system of hydraulic infrastructure that suggests royal involvement.[218] Investment in the forts and caravanserais in the Negev also increases in the late first century BCE, and there was even a major project to carve a pass through the wall of the Ramon Crater, shortening the journey from Petra to Gaza significantly.[219] The provision of security for travelers had long been a function of the Nabataean state, but this upswing in investment implies that increased state capacity may have improved security.

We also see the emergence of new institutions, though whether these developed in the late first century BCE to early first century CE or just became visible at this time is harder to say. Epigraphic evidence for ranked military offices dates from the end of the first century BCE through the first century CE.[220] The most commonly attested title is that of *strategos*, a position that seems to have combined military and nonmilitary administrative functions.[221] Inscriptions mentioning a *strategos* are found almost exclusively in the southern and northern peripheries of the kingdom.[222] We cannot say when the office became institutionalized within the Nabataean military,[223] but it clearly became a linchpin in the kingdom's rule over its peripheral territories. Around 27 CE, Aretas IV's daughter fled her Herodian husband, who was planning to divorce her. Prior to her flight, she had communicated with the *strategos* of a border region, who made preparations for her journey, and she was conducted to her father by a chain of *strategoi*.[224] *Strategoi*, therefore, governed either contiguous territories or segments of routes, and in inscriptions they are associated with specific locations, "houses of authority."[225] They could also marshal resources and maintained contact with each other. In Hegra, one is named as the recipient of the payment of a fine, and another is even used in a dating formula.[226] Named *strategoi* were often the sons of *strategoi*, suggesting the office could have been hereditary, but the number of *strategoi* known from dated inscriptions in Hegra suggests the term of office was not long.[227] We also hear of at least one *strategos* who served in a lower office first.[228] It seems likely that the upper echelons of the Nabataean administration were reserved for a small number of elite families, and that this, rather than a system of appoint-

218 Oleson 2007; 2010.
219 Erickson-Gini 2006; Erickson-Gini and Israel 2013.
220 Graf 1994.
221 Graf 1994, 275–279; Nehmé 2015.
222 Nehmé 2015, 112–113.
223 Josephus (*BJ* 1. 381) mentions a *strategos* commanding troops during a conflict in 32 BCE, but we cannot discount the possibility of anachronism.
224 Joseph. *AJ* 18. 111–112.
225 Nehmé 2015, 115.
226 Nehmé 2015, nos. 15, 19.
227 Graf 1994, 277.
228 Nehmé 2015, 116–117.

ment based on kinship, could explain the frequency with which sons and fathers were both *strategoi*. In any case, the *strategoi* represent an administrative institution whose power to rule must ultimately have derived from the sovereign power of the king.

State involvement in the enforcement of agreements is also visible from this period. The earliest attestation of a Nabataean legal system comes from Strabo, but ironically this had more to do with non-Nabataeans: "He [Athenodoros] said that he found many Romans and many other foreigners spending time there [Petra], and he saw that the foreigners often had legal disputes with each other and with the locals, but the locals did not make accusations against each other."[229] This suggests the existence of two ways of settling disputes, one that was easily recognizable by a Hellenized elite and that could accommodate people of varying origins, and another that served exclusively Nabataeans. Other traces of Nabataean legal practice, all of which postdate Athenodoros's visit, do not seem particularly unusual, though.[230] Tomb inscriptions from Hegra (dating from the late first century BCE through the first century CE) and papyri from the Babatha archive (second half of the first through the early second century CE) demonstrate the existence of a formulaic Nabataean legal system that does not seem radically out of step with others in the Mediterranean.[231] Religious and civic institutions both provide enforcement functions, but this is not unusual in the larger eastern Mediterranean context. We hear of archives held in temples,[232] and fines for the misuse of the tombs are payable to gods, to the king, or to both.[233] In one case, a fine was even payable to the *strategos* and to the king.[234] On the other hand, the combination of fines and curses for the protection of tombs is a peculiar feature, which seems to combine Arabian and Graeco-Roman methods of enforcement.[235] We have nothing prior to the period of centralization with which to compare these documents, but they do reveal that from the end of the first century BCE through the first century CE, the Nabataean state played a role in legal enforcement, even as temples did too.

Thus, while the precise causes and effects remain somewhat murky, we can see a gradual concentration of sovereign power in the hands of the Nabataean king that facilitated an expansion of state capacity. This process culminated in the last third of the first century BCE, at precisely the time when Augustus's victory at Actium put an

229 Strabo 16. 4. 21.

230 The precise date of Athenodoros's visit to Petra is not agreed upon. Graf argues that the most likely date falls between 63 and 50 BCE (2009), but Tholbecq prefers to place the visit in the aftermath of the battle of Actium in 31 BCE (2009, 48–50).

231 Healey 2013; 2018. For other Mediterranean legal systems, see Weaverdyck and Fabian vol. 2, ch. 8.A, V.

232 Healey 2013, 167–168.

233 Hackl, Jenni, and Schneider 2003, 311, 313, 315, 317, 322, 324, 327.

234 Hackl, Jenni, and Schneider 2003, 334.

235 Healey 2013, 173–174.

end to the Roman civil wars. This confluence of events allowed the Nabataean king to take steps to capitalize on increased consumption of imports into the Mediterranean, despite Augustan-period investments in infrastructure in the Red Sea that might have threatened the overland trade routes that the Nabataeans had long controlled.

III.4 Economic Competition and the Control of Trade

The development of sovereign power and state capacity, monetization, and banqueting all reveal something about the workings of the network of relationships that constitute 'Nabataean' society. This network was integrated into larger networks through long-distance trade in aromatics as well as personal and political relationships. Above, I briefly mentioned some of the evidence for the ways that individuals and groups of merchants formed links beyond the Nabataean network. But one of the major subjects of scholarship on the Nabataeans has been the ways that these links were mediated or bypassed by people operating using various state-level institutions. This scholarship is usually framed in terms of competition over trade and trade routes. Most prominent is the question of competition between overland and maritime trade routes, and therefore between the Nabataeans and Ptolemaic or Roman Egypt, but the territorial struggles between the Nabataeans and the Judaean dynasties is also sometimes seen as competition for the trade routes through the Negev.[236] But what did this competition actually entail, and what were the consequences?

Before addressing these issues, we must be careful to clarify our thinking about what it means to control trade routes. Do we mean the ability to extract revenue from merchants passing through a certain territory or certain nodes, either through tolls or the provision of services, such as security and supplies? Or do we ask if states tried to influence which routes traders traveled? Or do we imagine that states sought to control who could convey goods through their territory, or that they restricted who could convey goods to their own constituents? Or do we simply mean that a state sought to promote the interests of its trading constituents at the expense of others? In most cases, evidence that would definitively indicate what states hoped to achieve is lacking, but if any progress is to be made, we must at least be clear about the questions that we are asking.

The evidence for competition between the Nabataean and Hasmonaean states over the Negev section of the trade network is clearest. This route had a long history and was clearly important to the Nabataeans from an early date. There are several hilltop forts and stopping points, some dating back to the third century BCE and many

236 See Young 2001, 90–101, with references to earlier scholarship. For subsequent discussions, see Fiema 2003, 39–43; Hackl, Jenni, and Schneider 2003, 71–76; Schmid 2004a, 476–478; 2004b, 418–420; Erickson-Gini and Israel 2013, 24–39; Wenning 2013, 17–18; Lewin 2021, 113–117.

showing heavy occupation in the second half of the second century BCE.[237] In 99 BCE, Alexander Jannaeus, king of Judaea, conquered Gaza and built a series of forts along the Petra–Gaza route, capturing the profits previously enjoyed by the Nabataean kings.[238] In 65 BCE, Jannaeus's son, in conflict with his brother for the throne, ceded control of these places to Aretas III in exchange for military support. Subsequently, more caravanserais were built, and stops such as Elusa, Nessana, and Oboda grew into permanent settlements and cities.[239] Here we have literary evidence attesting to shifting 'ownership' of certain nodes and archaeological evidence that states exerted military control from those nodes. We hear nothing of the identity of the merchants involved, so this seems like a competition for fiscal profit. At the same time, the Nabataean project to cut a pass through the wall of the Ramon Crater (see III.3.2 above), assuming it required royal support, attests to the rulers' interest in increasing the profitability of the trade itself.

Competition with the Ptolemies is not as clear. The idea that the Nabataeans were locked in long-term economic competition with Ptolemaic Egypt, sometimes even described as "economic warfare,"[240] is based on a small set of observations: Beginning with Ptolemy II (r. 283–246 BCE), the Ptolemaic rulers sponsored expeditions to explore the Red Sea and developed a series of harbors, mostly on the Egyptian coast.[241] Red Sea trade seems to have increased, and there is evidence for South Arabians present in Egypt. These developments are assumed to have drawn traffic away from the overland routes and therefore threatened Nabataean interests.[242]

Given the state of our evidence, it is perhaps not surprising that it is difficult to find any concrete information about the impact of increased Red Sea trade on Nabataean fortunes. However, we can address the actions of the states to some extent. The most explicit testimony we have comes from Diodorus Siculus, relying on the second-century BCE work of Agatharchides of Knidos:[243]

> Now in ancient times these men [the Nabataeans] observed justice and were content with the food which they received from their flocks, but later, after the kings in Alexandria had made the ways of the sea navigable for the merchants, these Arabs not only attacked the shipwrecked, but fitting out pirate ships preyed upon the voyagers, imitating in their practices the savage and

237 Erickson-Gini 2006; Erickson-Gini and Israel 2013.

238 Erickson-Gini and Israel 2013, 32–39.

239 Erickson-Gini 2006; Erickson-Gini and Israel 2013.

240 E.g., Schmid 2004a, 466.

241 See von Reden, ch. 8, III, this volume.

242 Hackl, Jenni, and Schneider 2003, 72–74 for an example of the basic outlines of the argument. Cobb 2019 for a recent overview of these observations with further literature.

243 The episode in which the Nabataeans burned Kleopatra's ships in the Red Sea after the battle of Actium (Cass. Dio 51. 7. 1) cannot be taken as evidence for long-standing economic competition, as Schmid (2004a, 467) does, but is better seen in the context of contemporary territorial conflicts between the Nabataeans and the Ptolemies and the Roman civil war.

> lawless ways of the Tauri of the Pontus; some time afterward, however, they were caught on the high seas by some quadriremes and punished as they deserved.[244]

The question we must ask is, did these raids constitute a coordinated effort on the part of the Nabataeans to make the maritime route less attractive to merchants, encouraging them to use the old, overland routes that the Nabataeans controlled? The events described are often connected to Ptolemy II's activities in the Red Sea in the third century BCE, but a date in the late second century is also a good possibility.[245] The latter date would correspond with growing Nabataean prominence in the Mediterranean and, perhaps, the earlier stages of sovereignty concentration, so such coordinated action is not implausible.[246] But Diodorus is not explicit. He writes only that the Ptolemaic monarchs secured shipping for merchants in the Red Sea (presumably by building ports), which caused the Nabataeans to take up piracy and the Ptolemies to retaliate in a naval battle. Diodorus clearly ties Nabataean raids to the increase in maritime commerce that resulted from Ptolemaic power. He does not say, however, that the Nabataean raiders were working on behalf of a ruler or group who felt their interests threatened by maritime commerce. Such raiding could easily have been opportunistic.

Pliny's description of the incense trade indicates that certain groups held monopolies over certain parts of the network,[247] and in the nineteenth century, each segment of the Hajj and caravan routes was under the protection of a different tribe.[248] If we imagine that a similar system existed in antiquity, then the new maritime route would have sat outside of it. Without an agreed upon protector or monopoly, this traffic would have been an appropriate target for raiding. Whether or not the rulers knew of, approved of, or instigated these raids is never stated. It is not impossible. A 'raid mentality,' in which predation was a valid source of income, had long been common in the Mediterranean, and Diodorus's comments were part of an ongoing debate about its legitimacy.[249] In the southern Levant, small-scale violence and predation were endemic, and rulers often worked with bandits for political purposes.[250] But this does not amount to 'economic warfare.' A state-directed, sustained campaign of violence intent on changing the economic geography of trade routes is completely unattested. Piracy was not a normal strategy to gain any sort of control of trade.

The question of Nabataean competition with the Romans, like that of competition with the Ptolemies, focuses on the Red Sea. In contrast to the Ptolemies, however, the

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244 Diod. Sic. 3. 43. 5, trans. Oldfather. A similar notice is preserved in Strabo (16. 4. 18).

245 As argued most recently by Gallo 2019. Wenning 2013, 17 for further literature and discussion.

246 Cf. Hackl, Jenni, and Schneider 2003, 437–438, where the authors argue that the incident does not resemble the actions of a developed state, and for that reason prefer an earlier date. On the other hand, they also cite this passage as evidence for "regelrecht Seekrieg auf dem Roten Meer" (355).

247 Plin. *HN* 12. 54 (Minaeans); 12. 63 (Gebbanites). See Beeston 2005.

248 Bienkowski and van der Steen 2001, 33.

249 Gabrielsen 2001; De Souza 2008.

250 Isaac 1984.

Nabataean kings maintained an unequal alliance with the Roman state. The Nabataean kingdom is usually considered a client state of Rome from the moment Pompey's armies invaded Syria in the mid-60s BCE until the annexation of the kingdom in 106 CE.[251] This characterization risks obscuring the specific relationship between the Nabataean kings and the Roman state, however. In contrast to the Herodians, who seized the Judaean throne with the backing of Roman military and economic power, the Nabataean kings had a much stronger local power base. The capital of Petra, in the desert, was also much more difficult for Roman armies to access. As a result, the Nabataean rulers had more autonomy than many other client kings.[252]

Soon after the annexation of Egypt in 30 BCE, Roman generals led major military expeditions down both coasts of the Red Sea, and the harbors of Berenike and Myos Hormos received significant infrastructural investment. At the same time, Strabo provides explicit literary evidence for a shift in trade from Nabataean to Egyptian space:

> Goods used to be carried from Leuke Kome to Petra, then to Rhinokoloura (which is in Phoenicia near Egypt), and then to elsewhere. Today, for the most part, they go by the Nile to Alexandria, landing from Arabia and Indike at Myos Hormos, and then are carried by camels over to Koptos in the Thebaid, located on a canal of the Nile and then to Alexandria.[253]

Many have seen this confluence of evidence as an indication of a deliberate plan by Augustus to channel trade through Roman territory to the detriment of the Nabataeans.[254] Young argued forcefully against such an interpretation, pointing out the abundant evidence for the continued vitality of overland trade through Nabataean territory well into the first century CE and beyond.[255] Even if overland trade through Nabataean space continued, questions remain: what type of control, if any, did the Roman emperors hope to achieve over trade routes in and around the Red Sea, and what type of control, if any, was left to the Nabataean kings?

In 25/24 BCE, the Roman governor of Egypt, Aelius Gallus, launched a military campaign into southern Arabia with Nabataean support.[256] The "Brother of the King," Syllaeus, was his guide, and 1,000 Nabataean soldiers, along with 500 Judaeans, accompanied Gallus's 10,000 Roman soldiers. Soon after, a similar expedition targeted

251 E.g., Hackl, Jenni, and Schneider 2003, 50–51. For the place of client states in the Roman Empire, see Weaverdyck, vol. 1, ch. 7, III.2.1.

252 Pearson 2011.

253 Strabo 16. 4. 24, trans. Roller with modifications.

254 Young (2001, 260 n. 50), arguing against this view, provides bibliography. See Parker 2009, 687–688 for a more recent recapitulation of this argument.

255 Young 2001, 99–112.

256 Wiegels 2015, 36–45 for an overview. Strabo (16. 4. 22–24) describes the expedition as a complete failure and places the blame firmly on Syllaeus, but Anderson (2009) argues that Syllaeus serves as a literary device, allowing Strabo to illustrate the duplicitous nature of Arabia as a whole, apparently civilized but barbaric at heart. Lewin (2021) argues that the expedition was successful in establishing alliances between Rome and at least one South Arabian kingdom.

the Aithiopians and the lands to the south of Egypt.[257] According to Strabo, who was a friend of Aelius Gallus and therefore had access to firsthand knowledge, the purpose of both expeditions was "to reconnoiter these peoples and places … He [Augustus] hoped to have dealings with wealthy friends or subdue wealthy enemies."[258]

Michael Speidel has recently argued that the political 'friendship' (which could also be achieved by subduing enemies) of which Strabo speaks had real economic impacts.[259] First, such a relationship allowed Roman governors to urge other polities to suppress piracy. Second, it provided legal protection to Romans and their property. A second-century CE jurist wrote that, in cases where such a relationship was lacking, "anything which belongs to us and passes under their control becomes their property, and a free man of ours who is captured by them becomes their slave."[260] Matthew Cobb objects that a political relationship was not necessary for trade and that the Roman state had little ability to enforce any claims that might arise anyway. This is undoubtedly true, and Cobb is also surely correct that interpersonal relationships between merchants were probably more important than interstate political relationships.[261] However, transactions that happened in southern Arabia, even if beyond the reach of Roman law, were part of a network of relationships between people and things that included actors within the Empire.[262] The implications of events in southern Arabia rippled back to spaces where Roman law was in force. The opinion cited above is part of a larger discussion about the right of *postliminium*, which determined the status of persons and things that had returned to Roman space. It illustrates that the status of a foreign polity was legally relevant when considering the implications of events that occurred there. The author of the *PME* certainly thought it relevant to his readers that Charibaël, king of two nations in southern Arabia, was a "friend of the emperors."[263] The campaign of Aelius Gallus could, then, have been an effort to make it easier for merchants from the Roman Empire to conduct business in southern Arabia.

The campaign was not, however, an attempt to exclude Nabataean merchants from conducting business there. After all, the Nabataeans themselves were intimately involved in the campaign, and Strabo accused Syllaeus of wanting to establish his own supremacy over the territory. Even if untrue, it was understood that the involvement of Nabataeans in the campaign gave them the opportunity to establish new relationships in southern Arabia. And it seems that they did. We saw above that Nabataean pottery begins to appear in southern Arabia starting in the last quarter of the first century BCE. In 2004, a bilingual Nabataean/Sabaean inscription was found

257 Wiegels 2015, 45–50.
258 Strabo 16. 4. 22, trans. Roller.
259 Speidel 2016; 2017.
260 *Digest* 49. 15. 5. 2, translated at Speidel 2017, 116.
261 Cobb 2018, 122.
262 Weaverdyck, vol. 2, ch. 12.C.
263 *PME* 23.

in the temple of Al-maqah, the primary deity of the Sabaeans, at Sirwah, the second most important city in the kingdom.[264] The inscription records the dedication of a stele and base to the Nabataean god Dushara in the third year of Aretas IV (7/6 BCE). Similar bilingual dedications have been found from approximately the same period in the Mediterranean, but what they indicate about Nabataean presence in these areas is unclear.[265] Some see the Sirwah inscription as evidence for the regular, possibly even permanent, presence of Nabataean traders.[266] Others see the dedicator as an envoy, indicating a political relationship.[267] This interpretation would make it comparable to the dedications that Syllaeus made to Dushara a few years prior in Delos and Miletos (the latter, like the Sirwah stele, erected in the temple of the main political deity).[268] The pottery and inscription combined indicate that Nabataean merchants were operating regularly in the kingdoms of southern Arabia in the years following Aelius Gallus's campaign. If the Nabataean rulers did maintain diplomatic relations with their South Arabian counterparts, it seems likely that, like the Roman emperors, they were attempting to facilitate the commercial activities of their constituents. In neither case, however, can we see evidence for an attempt to exclude other merchants from participating in the incense trade.

Beyond diplomatic and military activity, infrastructural investment in Red Sea ports has been seen as a way that Roman and Nabataean rulers tried to draw merchants into their territory and extract revenue from them.[269] We should state at the outset that it is very difficult to disentangle the agency of central states from local initiative in infrastructural improvement. Indeed, as we argued in volume 2, such investment is almost always the result of a combination of state and local efforts.[270] The near-simultaneous foundation of the Nabataean ports described above seems to indicate a state-sponsored program, but a spontaneous, local response to suddenly increasing maritime trade is also possible.[271] On the Egyptian side of the sea, the two most important ports were Myos Hormos and Berenike. Both were Ptolemaic

264 Glanzman 2014, 172–173; Speidel 2015, 247–249; Bowersock 2019. For Sirwah, see Gerlach 2005.

265 Roche 1996; Hackl, Jenni, and Schneider 2003, 107–135; Terpstra 2015. Nehmé (2021, 202–203) also connects the Sirwah inscription to those in the Mediterranean. It is notable that the Nabataean regnal dating formula appears in both the Sabaic and Nabataean texts in the inscription from Sirwah, while the Latin and Greek versions never contain the regnal dates that are present in corresponding Nabataean texts in the Mediterranean.

266 Gerlach 2005, 37; Speidel 2015, 248.

267 Glanzman 2014, 172.

268 Roche 1996, 80–85; Hackl, Jenni, and Schneider 2003, 124–128.

269 E.g., Parker 2009; Sidebotham 2011, 251–253. For Roman interest in the revenues of Red Sea trade, see Wilson 2015.

270 Fabian and Weaverdyck, vol. 2, ch. 8.A, IV.

271 Strabo (2. 5. 12) famously asserted that the number of ships leaving Myos Hormos increased from 20 under the Ptolemies to 120 under Augustus. Cobb (2018, 45–47) argues that trade was already increasing from the late second century BCE onward, without denying a significant uptick in the Augustan period; see also von Reden, ch. 8, III.4, this volume.

foundations, but they were further developed in the early Roman period. At Myos Hormos, a jetty made of amphorae was constructed sometime in the late first century BCE to the early first century CE, and, while the chronology of the architecture on land is not entirely clear, many of the small finds date from the Augustan period into the first century CE.[272] In Berenike, two sea walls were also built at some point in the late first century BCE to early first century CE, but literary and documentary evidence suggests that activity here picked up slightly later than in Myos Hormos, late in the reign of Augustus or under his successor Tiberius (r. 14–37 CE).[273] Infrastructural investment in the two Roman ports was probably not simultaneous, and therefore not part of a larger coherent program.

It is, nevertheless, striking that so much harbor investment occurred on both sides of the Red Sea in the decades surrounding the turn of the millennium. The Nabataean ports, with the partial exception of Aila, are not as well explored as the Roman ones, but even when they are more fully revealed, the uncertainty inherent in archaeological chronology will make it impossible to determine if the Nabataean investments followed the Roman investments in Myos Hormos and can therefore be seen as a response to them, as the excavator of Aila has proposed.[274] It is tempting to see the Roman annexation of Egypt and the subsequent Red Sea campaigns as catalyzing a mutually reinforcing process of increased maritime traffic and harbor construction, and this could be the case. But the Nabataeans benefited from Gallus's campaign by extending their networks farther into southern Arabia than they had before, and their ports must have captured at least some of the profit from increased Red Sea traffic. Strabo's report notwithstanding, we know from the *PME* that Leuke Kome continued to be important in the mid-first century CE.[275] Nabataean commerce does not seem to have suffered as a result of Roman competition in the Red Sea.

The Nabataean state, however, might have suffered. The passage in the *PME* that reveals the continued prosperity of Leuke Kome also sheds crucial light on the control of revenues extracted from trade:

> To the left of Berenike, after a voyage of two or three runs eastward from Myos Hormos past the gulf lying alongside, there is another harbor with a fort called Leuke Kome, through which there is a way inland up to Petra, to Malichus, king of the Nabataeans. This harbor also serves in a way the function of a port of trade for the craft, none large, that come to it loaded with freight from Arabia. For that reason, as a safeguard there is dispatched for duty in it a customs officer to deal with the (duty of a) fourth on incoming merchandise as well as a centurion with a detachment of soldiers.[276]

272 Blue 2007; Cobb 2015, both with further literature.
273 Sidebotham 2011, 62–63.
274 Parker 2009.
275 *PME* 19.
276 *PME* 19–20, trans. Casson.

Whether the customs officer, centurion, and soldiers were collecting the duty of a fourth (*tetarte*) for the Roman government or the Nabataean has caused some controversy, but most scholars now see them as agents of the Roman government.[277] This reveals an aspect of empire that is easy to forget in our modern context, dominated as it is by sovereign nation states. Leuke Kome was still part of the Nabataean kingdom. Strabo is explicit that the port was Nabataean at the time of Aelius Gallus's expedition,[278] the author of the *PME* draws a direct connection to Malichus, and there is no indication, archaeological or textual, that the Romans annexed any Nabataean territory in this region prior to the annexation of the entire kingdom. These facts led Bowersock to declare it "inconceivable that the port of Leuke Kome was being administered by Roman officials."[279]

The collection of one particular tax, however, is not the same as general administration. In fact, there is good evidence that the organizational structures that funneled money into Roman coffers extended beyond the territories of provinces, where the Roman governor administered justice and carried out other functions.[280] Most relevant to the current discussion is the character of Fabatus, a *dioiketes* of Augustus who appears in Josephus as a prominent figure in the conflict between Syllaeus and Herodes, taking bribes from both in return for influence.[281] What Fabatus's official duties were is not known, but as a *dioiketes* he must have overseen some sort of financial organization, and his dealings with both Nabataean and Herodian courts suggest his purview extended beyond the borders of Syria. It is, therefore, entirely conceivable that Leuke Kome was, in general, administered by the Nabataeans, but that the *tetarte* levied on goods coming from southern Arabia was collected there by the Romans. There were surely other revenues, such as taxes on goods coming from Egypt and harbor fees, that the Nabataeans retained. But in the competition for control over the bulk of the revenues arising from the incense trade in the Red Sea, the Romans won.

The fact that it was worthwhile to tax trade coming through Leuke Kome is rarely commented upon, but it raises important questions about the nature of the trade passing through this port. Discussions about the tax tend to assume that the cargo

277 Nappo (2018, 98–107) provides an up-to-date discussion.

278 Strabo 16. 4. 23.

279 Bowersock 1983, 70 followed by Casson (1989, 145) and Pearson (2011, 69–70).

280 Haensch 2009. Raschke (1978, 983), arguing that the officials were Roman, pointed out long ago that the Roman government was able to interfere in the affairs of client kings. He cited as examples an episode in which Augustus appointed a *procurator* to administer the Kommagenean kingdom when its king was mentally unfit and an epitaph recording the career of a Roman soldier who served as an officer in a Judaean king's army. Neither example is actually pertinent since *procuratores* managed property for the benefit of its owner, and the soldier, while possibly loyal to Rome, was operating within a Judaean organization. Neither case illustrates the extension of Roman organizations across the political boundary between Roman provincial territory and that of a client king in the way that the evidence assembled by Haensch does.

281 Joseph. *BJ* 1. 575–576; *AJ* 17. 54–55; Haensch 2009, 224.

from southern Arabia is ultimately destined for the Mediterranean. Young influentially argued that the *tetarte* at Leuke Kome cannot have been Nabataean because merchants would have had to pay such a high tax twice, once to the Nabataeans and again to the Romans. In such a situation, they would surely all choose to go through Egypt, where they would pay only once, and the Nabataean economy would be ruined.[282] The logic is sound, but it leaves an important question unasked: why would merchants destined for the Mediterranean go through Leuke Kome at all? Once at sea, it is just as easy to get to Myos Hormos as it is to get to Leuke Kome (easier even, if we identify Aynuna as Leuke Kome). The overland portion of the journey is often assumed to be the most expensive, and the trek from Myos Hormos to the Nile is much shorter than that from Leuke Kome, no matter where it is, to Gaza.[283] Absent a massive tax incentive, why go from the Red Sea through Nabataean space at all?

Possible answers, which I offer merely as suggestions for further research, fall into three categories. The first is infrastructural. Perhaps the Egyptian ports could not handle all the traffic, or perhaps it was difficult to arrange transport either across the Eastern Desert or down the Nile. It is worth remembering that caravans had been traveling the Arabian Peninsula for centuries before the Egyptian ports made it necessary to carry large cargoes across the Eastern Desert. The Eastern Desert caravans carried both small cargoes from southern Arabia and larger cargoes from India, particularly pepper. The demand for transport could easily have outstripped the supply, making the longer, Arabian route a viable option. The second possibility is social. Economic transactions are carried out across social relationships. The contract recorded on the Muziris Papyrus, for example, specifies that the merchant is to use a trusted caravan leader.[284] The existence of social relationships with caravan leaders operating out of Leuke Kome might have been enough to draw merchants there. The third is market geography. As described above, the incense trade followed a network of routes, not all of which led to the Mediterranean. Petra itself would have been a major consumer of aromatics. The smaller Nabataean cities, the Decapolis, all would have consumed aromatics, and all could be accessed without ever entering the Mediterranean Sea. It is easy to think of the incense trade as occurring between southern Arabia and the Mediterranean via either the Red Sea or overland caravans, but that is a drastic oversimplification. When we remember the complexity of market geographies, the variety of social relationships and physical infrastructural constraints involved, and the different meanings of control, the incense trade ceases to be a route over which polities compete and becomes instead a flow consisting of a multitude of social and physical processes that polities can influence and profit from, but never entirely control.

282 Young 1997.

283 Straight-line distances, approximate as they are, illustrate the difference: Myos Hormos–Nile, ca. 150 km; Aynuna–Gaza, ca. 380 km.

284 *SB* XVIII 13167 *recto* l. 2. For this reading, which differs from the *editio princeps*, see Morelli 2011, 200–201.

IV Conclusion

We began this chapter by questioning the core–periphery model of frontier-zone development and asking what role the networks that constituted Nabataean society played in their mercantile activities. Now, some answers have begun to emerge. We will begin with the impact of their frontier position by reframing the question as follows: What role did imperial peripherality play in the social development of the Nabataeans? Proceeding chronologically, Ptolemaic control of the southern Levant influenced the coins that they used, but little else can be said about the third century BCE. The conflict between the Seleukids and the Ptolemies might have had a larger impact. If the first Nabataean coins were produced to pay for soldiers to fight in the fourth Syrian war, and if these coins were necessary because the Nabataean king was mobilizing more troops than he had in the past, then this episode stimulated the expansion of the Nabataean network and the strengthening of the position of the Nabataean king. The decline of Seleukid power, i.e., imperial retreat from the frontier zone, was similarly influential, in that it seems to have spurred a variety of smaller polities to develop and expand, leading to regional-scale conflict that furthered the concentration of sovereign power in the king and perhaps a more territorial basis for that power.

The expansion of Roman power into the region in the 60s BCE was not a watershed in Nabataean history, but it did perhaps expand Nabataean networks, which were already established in the Aegean, into the western Mediterranean. The temple of Dushara in Puteoli was built in 50/49 BCE, meaning the Nabataeans had established a trading colony in Rome's most important port a mere 15 years after the first Roman armies moved into Syria.[285] More influential was Augustus's consolidation of power. First, this discouraged warfare between the Judaeans and Nabataeans. The peace dividend enjoyed by the Nabataeans and, if my speculation above is correct, the king's need to find new avenues for maintaining his position encouraged the monumentalization of Petra and the expansion of Nabataean political networks over new territory. Perhaps as importantly, Augustus decided to launch a campaign into southern Arabia, allowing the Nabataeans to renegotiate their relationships with their South Arabian partners to the detriment of the latter. This is on top of the general prosperity that the end of the civil wars brought to the Mediterranean, which in turn led to increased consumption of imports. The Nabataeans seem to have profited, then from their position on the Roman frontier, but the rulers, at least, paid a price: they were forced to sacrifice the revenue that the Romans exacted as import duties in the Nabataean harbor of Leuke Kome. In this account, imperial peripherality is an important factor in Nabataean social development, but not in the way that the core–periphery model predicts. Imperial power was one element in a set of multifocal, multiscalar inter-

285 Bowersock 1983, 28–37; Pearson 2011, 25–30 for Nabataean–Roman relations in this early period.

actions, and its effects were inconsistent. Indeed, its absence could be as influential as its presence.

The Nabataean society that developed had a strong, internal network. This is reflected in the distribution of fine-ware pottery and Nabataean coins. The coinage in particular attests to a strong, 'domestic' economy made up of transactions primarily between Nabataeans. The brief account of economic actors given in section II.3 hints at a diversified economy, consisting of pastoralism, agriculture, and craft production alongside long-distance trade. The relationships that formed the ties in this network were defined by a variety of institutions, such as kinship, commensal groups organized around cultic activities, and the capital of Petra. In the nineteenth century, kinship was one way in which agricultural and pastoral production were integrated, with members of a tribe or even a family being split between different activities at different times of the year.[286] If the Nabataeans acted similarly, then kinship institutions would have served to integrate different sectors of the Nabataean economy and make the Nabataeans as a whole more flexible in their economic strategies, emphasizing different sectors as conditions changed. Banqueting played a major role in maintaining all types of relationships and extending them to outsiders as well. Petra provided a geographic space in which Nabataeans could act out their membership in both the Nabataean community as a whole and the subgroups that formed it. But Petra, as an urban center, also made the Nabataeans legible to the *polis*-based societies of the Aegean, as shown by the inscription from Priene. Religion has not been a major focus, but the worship of Dushara seems also to have articulated ties between Nabataeans and, judging by the Latin inscriptions in Puteoli, perhaps non-Nabataeans as well. Nabataean society, then, was a dense network consisting of strong ties that were defined through a variety of institutions. They also had institutionalized methods of creating relationships beyond that network, but these relationships did not dissolve the cohesion of the Nabataean network itself, which was constantly reinforced through a distinctive coinage, the use of particular forms of pottery in banquets, and other institutions that are not as visible to us today.

The Nabataean kings seem to have been successful at placing themselves at the center of these networks, claiming increasing sovereign power especially in the first century BCE. But most Nabataean networks survived the end of Nabataean kingship.[287] Increased state capacity likely contributed to the prosperity of at least the wealthy Nabataeans by facilitating infrastructural investment, extending the territorial reach of Nabataean networks, and possibly playing a role in conflict resolution. More importantly, it allowed the Nabataeans to negotiate effectively with their neighbors and take advantage of imperial projects to further their own interests. The Nabataean state, then, may have helped to consolidate and preserve Nabataean society, but we should not confuse the one with the other.

286 Van der Steen 2013, 175–177.
287 Graf 2007.

There is, then, a connection between Nabataean identity and their role as merchants that helps explain their persistent involvement in long-distance trade. Nabataean identity was a label for membership in a tight-knit society that facilitated the creation of trust networks, had a long history of involvement in long-distance trade with all the path-dependent advantages that that brings, and was ideologically centered on a city and a territory whose geographic position both protected it from most imperial incursions and allowed the Nabataeans to dominate the segment of the Arabian trade networks that abutted the urbanized Levant, Egypt, and the Mediterranean.

References

Almasri, E., F. Alawneh, and F. Bala'awi. 2012. "Nabataean jewellery and accessories." *Ancient Near Eastern Studies* 49, 150–175.

Al-Otaibi, F. M. 2015. "Nabatean ethnicity: *Emic* perspective." *Mediterranean Archaeology and Archaeometry* 15.2, 293–303.

Al-Qudrah, H. and M. Abdelaziz. 2008. "Kinship terms in the Nabataean inscriptions." *Arabian Archaeology and Epigraphy* 19, 193–197.

Al-Rawabdeh, N. 2015. "About the Nabataean minister Syllaeus from new silver coins." *Mediterranean Archaeology and Archaeometry* 15.1, 73–82.

Al-Salameen, Z. M. M. 2004. "The Nabataean economy in the light of archaeological evidence." PhD diss., University of Manchester.

Al-Salameen, Z. M. M. and H. Falahat. 2012. "Two new Nabataean inscriptions from Wādī Mūsā, with discussion of Gaia and the *marzēaḥ*." *Journal of Semitic Studies* 57.1, 37–51.

Amandry, M. and A. Burnett. 2015. *Roman provincial coinage*. Vol. 3, *Nerva, Trajan and Hadrian (AD 96–138)*. London: British Museum Press.

Anderson, B. 2009. "Double-crossing Jordan: Strabo's portrait of Syllaeus and the imagining of Nabataea." *Studies in the History and Archaeology of Jordan* 10, 391–397.

Angel, C. C. 2017. "The spatial ordering of Nabataea: An integrated analysis of the geography, architecture, and morphology of Nabataean Petra." PhD diss., University of Arkansas.

Augé, C. 2013. "Coin circulation in early Petra: A summary." In Mouton and Schmid (2013), 129–134.

Augé, C., L. Borel, J. Dentzer-Feydy, C. March, F. Renel, and L. Tholbecq. 2016. "Le sanctuaire du Qasr al-Bint et ses abords: Un état des lieux des travaux de la mission archéologique française à Pétra, Jordanie (1999–2013)." *Syria: Archéologie, art et histoire* 93, 255–310.

Avanzini, A. 2016. "From south to north in ancient Arabia." In M. Luciani (ed.), *The archaeology of north Arabia: Oases and landscapes. Proceedings of the international congress held at the University of Vienna, 5–8 December, 2013*, 337–344. Vienna: Austrian Academy of Sciences Press.

Barkay, R. 2019. *Coinage of the Nabataeans*. Jerusalem: The Hebrew University of Jerusalem.

Beeston, A. F. L. 2005. "The Arabian aromatics trade in antiquity." *Proceedings of the Seminar for Arabian Studies*, 53–64.

Bellwald, U. 2012. "Die Wasserversorgung Petras in der Antike." In S. G. Schmid and E. van der Meijden (eds.), *Petra: Begleitbuch zur Ausstellung "Petra – Wunder in der Wüste. Auf den Spuren von J. L. Burckhardt* alias *Scheich Ibrahim,"* 120–126. Basel: Schwabe.

Bessac, J.-C. 2007. *Le travail de la pierre à Pétra: Technique et économie de la taille rupestre*. Paris: Éditions Recherche sur les Civilisations.

–. 2012. "Handwerker und Felsbaustellen in Petra." In S. G. Schmid and E. van der Meijden (eds.) *Petra: Begleitbuch zur Ausstellung "Petra – Wunder in der Wüste. Auf den Spuren von J. L. Burckhardt* alias *Scheich Ibrahim,"* 207–211. Basel: Schwabe.

Bienkowski, P. and E. van der Steen. 2001. “Tribes, trade, and towns: A new framework for the Late Iron Age in southern Jordan and the Negev.” *Bulletin of the American Schools of Oriental Research* 323, 21–47.

Blue, L. 2007. “Locating the harbour: Myos Hormos/Quseir al-Qadim: A Roman and Islamic port on the Red Sea coast of Egypt.” *The International Journal of Nautical Archaeology* 36.2, 265–281.

Bouchaud, C. 2015. “Agrarian legacies and innovations in the Nabataean territory.” *ArcheoSciences* 39, 103–124.

Bouchaud, C., C. Jacquat, and D. Martinoli. 2017. “Landscape use and fruit cultivation in Petra (Jordan) from Early Nabataean to Byzantine times (2nd century BC–5th century AD).” *Vegetation History and Archaebotany* 26, 223–244.

Bowersock, G. W. 1983. *Roman Arabia*. Cambridge, MA: Harvard University Press.

–. 2019. “The Nabataeans under Augustus.” In *Hommage à Jean-Louis Ferrary: Philorhômaios kai philhellèn*, 225–233. Geneva: Droz.

Bowsher, J. M. C. 2007. “Monetary interchange in Nabataean Petra.” In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 337–343. Stuttgart: Franz Steiner.

Butcher, K. 2012. “The silver coinage of Roman Arabia.” In D. M. Jacobson and N. Kokkinos (eds.), *Judaea and Rome in coins 65 BCE–135 CE: Papers presented at the international conference hosted by Spink, 13th–14th September 2010*, 203–213. London: Spink.

Casson, L. 1989. *The* Periplus Maris Erythraei*: Text with introduction, translation and commentary*. Princeton, NJ: Princeton University Press.

Charloux, G., T. AlMalki, and A. AlQaeed. 2021. “The ‘walled oases’ phenomenon: A study of the ramparts in Dūmat al-Jandal and other pre-Islamic sites in north-western Arabia.” Supplement, *Arabian Archaeology and Epigraphy* 32.S1, 256–290.

Charloux, G., C. Bouchaud, C. Durand, H. Monchot, and A. Thomas. 2016. “Banqueting in a northern Arabian oasis: A Nabataean triclinium at Dûmat al-Jandal, Saudi Arabia.” *Bulletin of the American Schools of Oriental Research* 375, 13–34.

Charloux, G., M. Cotty, and A. Thomas. 2014. “Nabataean or not? The ancient necropolis of Dumat. First stage: A reassessment of al-Dayel’s excavations.” *Arabian Archaeology and Epigraphy* 25, 186–213.

Cimadomo, P. 2018. “The controversial annexation of the Nabataean Kingdom.” *Levant* 50.2, 258–266.

Cobb, M. A. 2015. “The chronology of Roman trade in the Indian Ocean from Augustus to the early third century CE.” *Journal of the Economic and Social History of the Orient* 58, 362–418.

–. 2018. *Rome and the Indian Ocean trade from Augustus to the early third century CE*. Leiden: Brill.

–. 2019. “From the Ptolemies to Augustus: Mediterranean integration into the Indian Ocean trade.” In M. A. Cobb (ed.), *The Indian Ocean trade in antiquity: Political, cultural and economic impacts*, 17–51. London: Routledge.

Cotton, H. M. 1997. “Land tenure in the documents from the Nabataean kingdom and the Roman province of Arabia.” *Zeitschrift für Papyrologie und Epigraphik* 119, 255–265.

De Souza, P. 2008. “Rome’s contribution to the development of piracy.” *Memoirs of the American Academy in Rome. Supplementary Volumes* 6, 71–96.

Dentzer, J.-M., P.-M. Blanc, and T. Fournet. 2002. “Le développement urbain de Bosra de l’époque nabatéenne à l’époque byzantine: Bilan des recherches françaises 1981–2002.” *Syria* 79, 75–154.

Dentzer, J.-M., P.-M. Blanc, T. Fournet, M. Kalos, and F. Renel. 2010. “Formation et développement des villes en Syrie du Sud de l’époque hellénistique à l’époque byzantine: Les exemples de Bosra, Suweida, Shahba.” In M. al-Maqdissi, F. Braemer, and J.-M. Dentzer (eds.), *Hauran V: La Syrie du Sud du Néolithique à l’Antiquité tardive, recherches récentes. Actes du colloque de Damas, 2007*, Vol. 1, 139–170. Beirut: Institut français du Proche-Orient.

Dolinka, B. 2003. *Nabataean Aila (Aqaba, Jordan) from a ceramic perspective: Local and intra-regional trade in Aqaba ware during the first and second centuries AD. Evidence from the Roman Aqaba Project*. Oxford: Archaeopress.

Durand, C. 2009. "The Nabataeans and oriental trade: Roads and commodities (fourth century BC to first century AD)." *Studies in the History and Archaeology of Jordan* 10, 405–412.

–. 2012. "Crossing the Red Sea: The Nabataeans in the Egyptian Eastern Desert." In D. A. Agius, J. P. Cooper, A. Trakadas, and C. Zazzaro (eds.), *Navigated spaces, connected places: Proceedings of Red Sea Project V held at the University of Exeter 16–19 September 2010*, 85–90. Oxford: Archaeopress.

–. 2017. "Banqueter pour mieux régner? À propos de quelques assemblages céramiques provenant de Pétra et du territoire nabatéen." *Syria: Archéologie, art et histoire* 94, 85–98.

Durand, C. and Y. Gerber. 2014. "The pottery production from Hegra/Madāʾin Sālih (Saudi Arabia) during the Nabataean period: Preliminary results, 2008–2011." *Proceedings of the Seminar for Arabian Studies* 44, 153–167.

–. Forthcoming. "When the Nabataeans settled in Hejaz: New data from the Nabataean painted fine ware found in Hegra/Madāʾin Sālih (Northwest Arabia)." *Studies in the History and Archaeology of Jordan* 14.

Durand, C. and M. Mouton. 2013. "A late second century BC Nabataean occupation at Jabal Numayr: The earliest phase of the 'Obodas Chapel' sanctuary." In Mouton and Schmid (2013), 205–222.

Duyrat, F. 2016. *Wealth and warfare: The archaeology of money in ancient Syria*. New York, NY: American Numismatic Society.

Erickson-Gini, T. 2006. "'Down to the sea': Nabataean colonization in the Negev highlands." In P. Bienkowski and K. Galor (eds.), *Crossing the Rift: Resources, routes, settlement patterns and interactions in the Wadi Arabah*, 157–166. Oxford: Oxbow Books.

Erickson-Gini, T. and Y. Israel. 2013. "Excavating the Nabataean incense road." *Journal of Eastern Mediterranean Archaeology & Heritage Studies* 1.1, 24–53.

Farajat, S. and S. al-Nawafleh. 2005. "Report on the Al-Khazna courtyard excavation at Petra (2003 season)." *Annual of the Department of Antiquities of Jordan* 49, 373–393.

Feuer, B. 2016. *Boundaries, borders, and frontiers in archaeology: A study of spatial relationships*. Jefferson, NC: McFarland & Company.

Fiema, Z. T. 2003. "Roman Petra (AD 106–363): A neglected subject." *Zeitschrift des Deutschen Palästina-Vereins* 119.1, 38–58.

Fiema, Z. T., N. A. al-Qanoor, C. Durand, W. Kennedy, B. Abu Hassan, I. al-Dayel, and M. al-Faqeer. 2020. "The 2016 season of the Al-Wajh – Al-ʿUla Survey Project: Preliminary report." *Journal of Saudi Arabian Archaeology ATLATL* 29, 81–112.

Fiema, Z. T., S. G. Schmid, and B. Kolb. 2016. "A palatial quarter in Petra: Preliminary results of the North-Eastern Petra Project." *Studies in the History and Archaeology of Jordan* 12, 747–763.

Gabrielsen, V. 2001. "Economic activity, maritime trade and piracy in the Hellenistic Aegean." *Revue des Études Anciennes* 103.1/2, 219–240.

Gallo, L. 2019. "The Greeks and the Arabian coast of the Red Sea." In A. Manzo, C. Zazzaro, and D. J. De Falco (eds.), *Stories of globalisation: The Red Sea and the Persian Gulf from late prehistory to early modernity*, 292–300. Leiden: Brill.

Gawlikowski, M. 2019. "Looking for Leuke Kome." In A. Manzo, C. Zazzaro, and D. J. De Falco (eds.), *Stories of globalisation: The Red Sea and the Persian Gulf from late prehistory to early modernity*, 281–291. Leiden: Brill.

Gawlikowski, M., K. Juchniewicz, and A. al-Zahrani, eds. 2021. *Aynuna: A Nabataean port on the Red Sea. Seven seasons of Saudi–Polish excavations (2014–2018)*. Warsaw: Polish Centre of Mediterranean Archaeology; Riyadh: Saudi Commission for Tourism and Heritage.

Gerber, Y. 2014. "Comparing pottery traditions from South Transjordan and from Middle and North Transjordan during the Nabataean/Roman periods (1st to 5th centuries AD)." In B. Fischer-Genz and H. Hamel (eds.), *Roman pottery in the Near East: Local production and regional trade. Proceedings of the round table held in Berlin, 19–20 February 2010*, 189–203. Oxford: Archaeopress.

Gerlach, I. 2005. "Sirwah: New research at the Sabaean city and oasis." In A. C. Gunter (ed.), *Caravan kingdoms: Yemen and the ancient incense road*, 34–41. Washington D.C.: Freer Gallery of Art and Arthur M. Sackler Gallery, Smithsonian Institution.

Glanzman, W. D. 2014. “Pottery, people, and politics: A case from southern Arabia.” *Proceedings of the Seminar for Arabian Studies* 44, 169–180.

Gorgerat, L. and R. Wenning. 2013. “The International Aṣlaḥ Project (2010–2012): Its contribution to ‘Early Petra.’” In Mouton and Schmid (2013), 223–236.

Graf, D. F. 1990. “The origin of the Nabataeans.” *Aram* 2, 45–75.

–. 1994. “The Nabataean army and the *cohortes Ulpiae*.” In E. Dabrowa (ed.), *The Roman and Byzantine army in the East*, 265–311. Krakow: Uniwersytet Jagielloński.

–. 2006. “The Nabateans in the early Hellenistic period: The testimony of Posidippus of Pella.” *Topoi* 14.1, 47–68.

–. 2007. “The Nabataeans under Roman rule (after AD 106).” In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 173–186. Stuttgart: Franz Steiner.

–. 2009. “Athenodorus of Tarsus and Nabataea: The date and circumstances of his visit to Petra.” *Studies in the History and Archaeology of Jordan* 10, 67–74.

–. 2013. “Petra and the Nabataeans in the early Hellenistic period: The literary and archaeological evidence.” In Mouton and Schmid (2013), 35–56.

–. 2022. “The Nabataeans.” In T. Kaizer (ed.), *A companion to the Hellenistic and Roman Near East*, 281–292. Hoboken, NJ: Wiley Blackwell.

Graf, D. F., L.-A. Bedal, S. G. Schmid, and S. E. Sidebotham. 2005. “The Hellenistic Petra Project: Excavations in the civic center, preliminary report of the first season, 2004.” *Annual of the Department of Antiquities of Jordan* 79, 417–441.

Graf, D. F. and S. E. Sidebotham. 2003. “Nabataean trade.” In G. Markoe (ed.), *Petra rediscovered: Lost city of the Nabataeans*, 65–73. New York, NY: Thames & Hudson.

Grewal, D. S. 2008. *Network power: The social dynamics of globalization*. New Haven, CT: Yale University Press.

Gupta, S. 2019. “The western Indian Ocean interaction sphere: Significance of the Red Sea and the Arabian/Persian Gulf routes from the Mediterranean to India (first century BCE–third century CE).” In A. Manzo, C. Zazzaro, and D. J. De Falco (eds.), *Stories of globalisation: The Red Sea and the Persian Gulf from late prehistory to early modernity*, 353–393. Leiden: Brill.

Hackl, U., H. Jenni, and C. Schneider. 2003. *Quellen zur Geschichte der Nabatäer: Textsammlung mit Übersetzung und Kommentar*. Freiburg: Universitätsverlag Freiburg Schweiz.

Haensch, R. 2009. “Not official, but permanent: Roman presence in allied states. The examples of Chersonesus Taurica, the Bosporan kingdom and Sumatar Harabesi.” In C. Eliers (ed.), *Diplomats and diplomacy in the Roman world*, 209–225. Leiden: Brill.

Halamus, M. 2018. “Annexing the Near East and the long-lasting Bosporan autonomy.” *Eos* 105, 221–238.

Hansen, T. B. and F. Stepputat. 2006. “Sovereignty revisited.” *Annual Review of Anthropology* 35, 295–315.

Hatke, G. and R. Ruzicka, eds. 2021. *South Arabian long-distance trade in antiquity: “Out of Arabia.”* Newcastle upon Tyne: Cambridge Scholars Publishing.

Hausleiter, A. 2012. “North Arabian kingdoms.” In D. T. Potts (ed.), *A companion to the archaeology of the ancient Near East*, 816–832. Malden, MA: Wiley-Blackwell.

Hausleiter, A. and R. Eichmann. “The archaeological exploration of the oasis of Taymāʾ.” In A. Hausleiter, R. Eichmann, and M. al-Najem (eds.), *Taymāʾ*. Vol. 1, *Archaeological exploration, palaeoenvironment, cultural contacts*, 3–58. Oxford: Archaeopress.

Hawkins, C. 2012. “Manufacturing.” In W. Scheidel (ed.), *The Cambridge companion to the Roman economy*, 175–194. Cambridge: Cambridge University Press.

Healey, J. F. 2001. *The religion of the Nabataeans: A conspectus*. Leiden: Brill.

–. 2013. “Fines and curses: Law and religion among the Nabataeans and their neighbours.” In A. C. Hagedorn and R. G. Kratz (eds.), *Law and religion in the Eastern Mediterranean from antiquity to early Islam*, 165–186. Oxford: Oxford University Press.

–. 2018. "'This is the house that Jack built': In what sense are the Nabataean tomb inscriptions legal texts?" In Z. M. M. Al-Salameen and M. B. Tarawneh (eds.), *Refereed proceedings of the first conference on the archaeology and tourism of the Maan governate, 3rd–4th October, 2017, Petra-Jordan*, 34–55. Maan: The Deanship of Scientific Research and Graduate Studies, Al-Hussein Bin Talal University.

Humphrey, C. 2004. "Sovereignty." In D. Nugent and J. Vincent (eds.), *A companion to the anthropology of politics*. Oxford: Blackwell.

Huth, M. 2010. "Some Nabataean questions reconsidered." In Huth and van Alfen (2010), 213–226.

Huth, M. and P. G. van Alfen, eds. 2010. *Coinage of the caravan kingdoms: Studies in the monetization of ancient Arabia*. New York, NY: The American Numismatic Society.

Isaac, B. H. 1984. "Bandits in Judaea and Arabia." *Harvard Studies in Classical Philology* 88, 171–203.

Ji, C.-H. C. 2009. "Drawing the borderline. The Nabatean, Hasmonean and Herodian kingdoms in Central Jordan." *Studies in the History and Archaeology of Jordan* 10, 617–632.

Johnson, D. J. 1987. "Nabataean trade: Intensification and culture change." PhD diss., University of Utah.

–. 1990. "Nabataean piriform unguentaria." *Aram* 2, 235–248.

Joukowsky, M. S. 2001. "Nabataean Petra: Introduction." *Bulletin of the American Schools of Oriental Research* 324, 1–4.

Kaspersen, L. B. and J. Strandsbjerg, eds. 2017. *Does war make states? Investigations of Charles Tilly's historical sociology*. Cambridge: Cambridge University Press.

Kennedy, W. M. 2020a. "Investigating the socio-political make-up of rural Petra: The Petra Hinterland Social Landscapes Project." *Jordan Journal for History and Archaeology* 14.4, 249–271.

–. 2020b. "The Nabataeans as travellers between the desert and the sown." In P. M. M. G. Akkermans (ed.), *Landscapes of survival: The archaeology and epigraphy of Jordan's north-eastern desert and beyond*, 235–254. Leiden: Sidestone Press.

Kosmin, P. 2013. "Rethinking the Hellenistic gulf: The new Greek inscription from Bahrain." *Journal of Hellenic Studies* 133, 61–79.

Kouki, P. 2013. "The intensification of Nabataean agriculture in the Petra region." In Mouton and Schmid (2013), 323–333.

Koulianos, P. K. 2015. "The economy of Petra from the first century BC through the fourth century AD: An analysis of the perfume industry." MA thesis, North Carolina State University.

Lewin, A. 2021. "I Nabatei, i popoli della penisola arabica e l'impero romano: Commerci e frontiere." In D. Nappo and G. D. Merola (eds.), *Economia e frontiera nell'impero romano*, 111–130. Bari: Edipuglia.

Loreto, R. 2021. "The role of Adummatu among the early Arabian trade routes at the dawn of the southern Arabian cultures." In Hatke and Ruzicka (2021), 66–110.

Macdonald, M. C. A. 1991. "Was the Nabataean kingdom a 'Bedouin state'?" *Zeitschrift des Deutschen Palästina-Vereins* 107, 102–119.

–. 2022. "The desert and its peoples." In T. Kaizer (ed.), *A companion to the Hellenistic and Roman Near East*, 339–345. Hoboken, NJ: Wiley Blackwell.

Maigret, A. de. 1997. "The frankincense road from Najrān to Ma'an: A hypothetical itinerary." In A. Avanzini (ed.), *Profumi d'Arabia*, 315–331. Rome: L'Erma di Bretschneider.

Meshel, Z. 2006. "Were there gold mines in the eastern Arabah?" In P. Bienkowski and K. Galor (eds.), *Crossing the Rift: Resources, routes, settlement patterns and interactions in the Wadi Arabah*, 231–238. Oxford: Oxbow Books.

Meshorer, Y. 1975. *Nabataean coins*. Jerusalem: Institute of Archaeology, Hebrew University of Jerusalem.

Milik, J. T. 2003. "Inscription nabatéenne archaïque." In *Hauran II: Les installations de Sī 8*. Vol 1, 275. Beirut: Institut français d'archéologie du Proche-Orient.

Morelli, F. 2011. "Dal Mar Rosso ad Alessandria: Il verso (ma anche il recto) del 'papiro di Muziris' (SB 18, 13167)." *Tyche* 26, 199–233.

Morley, N. 2010. *The Roman Empire: Roots of imperialism*. London: Pluto.

Mouton, M. and S. G. Schmid, eds. 2013. *Men on the rocks: The formation of Nabataean Petra. Proceedings of a conference held in Berlin 2–4 December 2011*. Berlin: Logos.

Nappo, D. 2010. "On the location of Leuke Kome." *Journal of Roman Archaeology* 23, 335–348.
–. 2018. *I porti romani nel Mar Rosso da Augusto al Tardoantico*. Naples: FedOA Press − Federico II University Press.
Nehmé, L. 1997. "L'espace cultuel de Pétra à l'époque nabatéenne." *Topoi* 7.2, 1023–1067.
–. 2012. *Pétra: Atlas archéologique et épigraphique.* Vol. 1, *De Bāb as-Sīq au Wādī al-Farasah*. Paris: Académie des Inscriptions et Belles-Lettres.
–. 2013. "The installation of social groups in Petra." In Mouton and Schmid (2013), 113–127.
–. 2015. "*Strategoi* in the Nabataean kingdom: A reflection of central places?" *Arabian Epigraphic Notes* 1, 103–122.
–. 2018a. "Les artisans et professions 'libérales' dans le domaine nabatéen." In L. Nehmé and A. Al-Jallad (eds.), *To the madbar and back again: Studies in the languages, archaeology, and cultures of Arabia dedicated to Michael C. A. Macdonald*. Brill: Leiden.
–. 2018b. "The Nabataean and Nabataeo-Arabian inscriptions." In L. Nehmé (ed.), *The Darb al-Bakrah: A caravan route in north-west Arabia discovered by Ali I. al-Ghabban. Catalogue of the inscriptions*, 25–224. Riyadh: Saudi Commission for Tourism and National Heritage.
–. 2019. *Archéologie au pays des Nabatéens d'Arabie. Guide de Hégra*. Paris: Hémisphères éditions.
–. 2021. "New insights into the Nabataean long-distance trade." In M. Luciani (ed.), *The archaeology of the Arabian Peninsula 2: Connecting the evidence. Proceedings of the workshop held at the 10th ICAANE in Vienna, April 2016*, 199–213. Vienna: Austrian Academy of Sciences Press.
Nehmé, L. and M. C. A. Macdonald. 2015. "*Bny*, *ʾl* and *ʾhl* in Nabataean and Safaitic." In G. Charloux and R. Loreto (eds.), *Dûma 3: The 2012 Report of the Saudi–Italian–French Archaeological Project at Dûmat al-Jandal, Saudi Arabia*, 69–76. Riyadh: Saudi Commission for Tourism and National Heritage.
Oleson, J. P. 2007. "Nabataean water supply, irrigation, and agriculture: An overview." In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 217–249. Stuttgart: Franz Steiner.
–. 2010. *Humayma Excavation Project*. Vol. 1, *Resources, history and the water supply system*. Boston, MA: American Schools of Oriental Research.
Parker, S. T. 2009. "The foundation of Ayla: A Nabataean port on the Red Sea." *Studies in the History and Archaeology of Jordan* 10, 685–690.
–. 2012. "Water and more at Humayma." *Journal of Roman Archaeology* 25, 924–926.
Parr, P. J. 2007. "The urban development of Petra." In K .D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 273–300. Stuttgart: Franz Steiner.
Pearson, J. E. 2011. "Contextualizing the Nabataeans: A critical reassessment of their history and material culture." PhD diss., University of California, Berkeley.
Perry, M. 2016. "New light on Nabataean mortuary rituals in Petra." *Studies in the History and Archaeology of Jordan* 12, 385–398.
Porter, A. 2010. "From kin to class – and back again! Changing paradigms of the early polity." In D. R. Bolger (ed.), *The development of pre-state communities in the ancient Near East: Studies in honour of Edgar Peltenburg*, 72–78. Oxford: Oxbow Books.
Potts, D. T. 1988. "Trans-Arabian routes of the Pre-Islamic period." In J.-F. Salles (ed.), *L'Arabie et ses mers bordières*, 127–162. Lyon: Maison de l'Orient.
Prust, A. and A. Hausleiter. 2020. "Camel exploitation in the oasis of Taymāʾ– caravan or consumption?" In D. Agut-Labordère and B. Redon (eds.), *Les vaisseaux du désert et des steppes: Les camélidés dans l'Antiquité (Camelus dromedarius et Camelus bactrianus)*, 95–121. Lyon: MOM Éditions.
Purcell, N. 2016. "Unnecessary dependences: Illustrating circulation in pre-modern large-scale history." In J. Belich, J. Darwin, M. Frenz, and C. Wickham (eds.), *The prospect of global history*, 65–79. Oxford: Oxford University Press.
Ramsay, J. and M. Perry. 2022. "Funerary dining or offerings for the dead? An archaeobotanical analysis of remains from shaft tombs in Petra, Jordan." *Levant* 54.1, 50–64.

Raschke, M. G. 1978. “New studies in Roman commerce with the East.” In H. Temporini (ed.), *Aufstieg und Niedergang der römischen Welt*, Part 2, vol. 9.2, 604–1363. Berlin: De Gruyter.

Renel, F. and M. Mouton. 2013. “The architectural remains and pottery assemblage from the early phases at the Qasr al-Bint.” In Mouton and Schmid (2013), 57–77.

Renel, F., M. Mouton, C. Augé, C. Gauthier, C. Hatté, J.-F. Saliège, and A. Zazzo. 2012. “Dating the early phases under the temenos of the Qaṣr al-Bint at Petra.” In L. Nehmé and L. Wadeson (eds.), *Proceedings of the Seminar for Arabian Studies* 42, 39–54.

Robin, C. J. 2016. “Gerrha d’Arabie, cité séleucide.” In F. Duyrat, F. Briquel-Chatonnet, J.-M. Dentzer, and O. Picard (eds.), *Henri Seyrig (1895–1973)*. Supplement, *Syria: Archéologie, art et histoire* 3, 223–250.

Robin, C. J. and A. Prioletta. 2013. “Nouveaux arguments en faveur d’une identification de la cité de Gerrha avec le royaume de Hagar (Arabie orientale).” *Semitica et Classica* 6, 131–185.

Roche, M.-J. 1996. “Remarques sur les Nabatéens en Méditerranée.” *Semitica* 45, 73–99.

Rohmer, J. and G. Charloux. 2015. “From Liḥyān to the Nabataeans: Dating the end of the Iron Age in north-west Arabia.” *Proceedings of the Seminar for Arabian Studies* 45, 297–319.

Rosen, S. A. 2007. “The Nabataeans as pastoral nomads: An archaeological perspective.” In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 345–373. Stuttgart: Franz Steiner.

Rosenthal-Heginbottom, R. 2003. “Artists and artisans: Reflections on Nabatean minor art – clay, metal, and stone.” In R. Rosenthal-Heginbottom (ed.), *The Nabateans in the Negev*, 23–29. Haifa: Reuben and Edith Hecht Museum.

Rossi, I. 2014. “The Minaeans beyond Maʿīn.” *Proceedings of the Seminar for Arabian Studies* 44, 111–123.

Sachet, I. 2009. “Refreshing and perfuming the dead: Nabataean funerary libations.” *Studies in the History and Archaeology of Jordan* 10, 97–112.

Sartre, M. 2005. *The Middle East under Rome*. Cambridge, MA: Harvard University Press.

–. 2013. “Co-opting the conqueror: The East from Augustus to Trajan.” In D. Hoyos (ed.), *A companion to Roman imperialism*, 277–290. Leiden: Brill.

Scheidel, W. 2013. “Studying the state.” In P. F. Bang and W. Scheidel (eds.), *The Oxford handbook of the state in the ancient Near East and Mediterranean*, 5–58. Oxford: Oxford University Press.

Schmid, S. G. 2004a. “Les Nabatéens et leurs contacts avec la Mésopotamie et la région du Golfe Arabo-Persique.” In V. Chankowski and F. Duyrat (eds.), *Le roi et l’économie: Autonomies locales et structures royales dans l’économie de l’empire séleucide. Actes des rencontres de Lille (23 Juin 2003) et d’Orléans (29–30 janvier 2004)*. Supplement, *Topoi* S6, 463–484.

–. 2004b. “The distribution of Nabataean pottery and the organisation of Nabataean long distance trade.” *Studies in the History and Archaeology of Jordan* 8, 415–426.

–. 2007. “Nabataean pottery.” In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 309–326. Stuttgart: Franz Steiner.

–. 2012. “Petra als Hauptstadt der Nabatäer: Geschichte einer explosionsartigen Entwicklung.” In S. G. Schmid and E. van der Meijden (eds.), *Petra: Begleitbuch zur Austellung “Petra – Wunder in der Wüste. Auf den Spuren von J. L. Burckhardt* alias *Scheich Ibrahim*,” 135–141. Basel: Schwabe.

–. 2013. “Foucault and the Nabataeans or what space has to do with it.” In Mouton and Schmid (2013), 251–269.

–. 2021. “Was there a Nabataean identity – and if yes, how many?” In M. Blömer, S. Riedel, M. J. Versluys, and E. Winter (eds.), *Common dwelling place of all the gods: Commagene in its local, regional and global Hellenistic context*. Stuttgart: Franz Steiner.

Seland, E. H. 2013. “Networks and social cohesion in ancient Indian Ocean trade: Geography, ethnicity, religion.” *Journal of Global History* 8.3, 373–390.

Sidebotham, S. E. 2011. *Berenike and the ancient maritime spice route*. Berkeley, CA: University of California Press.

Smith, A. T. 2015. *The political machine: Assembling sovereignty in the Bronze Age Caucasus*. Princeton, NJ: Princeton University Press.

Speidel, M. A. 2015. "'Almaqah in Rom? Zu den Beziehungen zwischen dem kaiserzeitlichen Imperium Romanum und Südarabien im Spiegel der dokumentarischen Überlieferung." *Zeitschrift für Papyrologie und Epigraphik* 194, 241–258.

–. 2016. "Fernhandel und Freundschaft zu Roms *Amici* an den Handelsrouten nach Südarabien und Indien." *Orbis Terrarum* 14, 155–193.

–. 2017. "Wars, trade and treaties: New, revised, and neglected sources for the political, diplomatic, and military aspects of imperial Rome's relations with the Red Sea basin and India, from Augustus to Diocletian." In K. S. Mathew (ed.), *Imperial Rome, Indian Ocean regions and Muziris: New perspectives on maritime trade*, 83–128. London: Routledge.

–. 2021. "From Nabataea to Arabia: Some economic consequences of becoming a Roman frontier province in the East." In D. Nappo and G. D. Merola (eds.), *Economia e frontiera nell'impero romano*, 95–110. Bari: Edipuglia.

Stein, P. 2020. "Die reichsaramäischen Inschriften der Kampagnen 2005–2009 aus Taymāʾ." In M. C. A. Macdonald (ed.), *Taymāʾ II: Catalogue of the inscriptions discovered in the Saudi-German excavations at Taymāʾ 2004–2015*, 21–80. Oxford: Archaeopress.

Studer, J. 2007. "Animal exploitation in the Nabataean world." In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 251–272. Stuttgart: Franz Steiner.

Terpstra, T. 2013. *Trading communities in the Roman world: A micro-economic and institutional perspective*. Leiden: Brill.

–. 2015. "Roman trade with the far east: Evidence for Nabataean middlemen in Puteoli." In F. De Romanis and M. Maiuro (eds.), *Across the ocean: Nine essays on Indo-Mediterranean trade*, 73–94. Leiden: Brill.

Tholbecq, L. 2009. "Strabon et Athénodore de Tarse: À propos de la description de Pétra à la fin du 1er s. av. J.-C. (Géogr., XVI, 4, 21 et 26)." *Revue belge de Philologie et d'Histoire* 87.1, 47–68.

–. 2018. "Pétra aux époques nabatéenne, romaine et byzantine: Un état de la question." In L. Tholbecq (ed.), *Mission archéologique française à Pétra (Jordanie): Rapport des campagnes archéologiques 2017–2018*, 21–44. Brussels: Presses Universitaires de Bruxelles.

Tilly, C. 1990. *Coercion, capital, and European states, AD 990–1990*. Cambridge, MA: Basil Blackwell.

Van der Steen, E. 2013. *Near Eastern tribal societies during the nineteenth century: Economy, society and politics between tent and town*. London: Routledge.

Vickers, M. 1994. "Nabataea, India, Gaul, and Carthage: Reflections on Hellenistic and Roman gold vessels and red-gloss pottery." *American Journal of Archaeology* 98.2, 231–248.

Wenning, R. 1997. "Bemerkungen zur Gesellschaft und Religion der Nabatäer." In R. Albertz (ed.), *Religion und Gesellschaft. Studien zu ihrer Wechselbeziehung in den Kulturen des antiken Vorderen Orients*, 177–201. Münster: Ugarit-Verlag.

–. 2007. "The Nabataeans in history." In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 25–44. Stuttgart: Franz Steiner.

–. 2011. "Tribale Frömmigkeit und royale Religionspolitik: Gottesverehrung der Nabatäer." In A. Lykke and F. T. Schipper (eds.), *Kult und Macht: Religion und Herrschaft im syro-palästinensischen Raum. Studien zu ihrer Wechselbeziehung in hellenistisch-römischer Zeit*, 279–304. Tübingen: Mohr Siebeck.

–. 2013. "Towards 'Early Petra': An overview of the early history of the Nabataeans in its context." In Mouton and Schmid (2013), 7–22.

–. 2016a. "Herodes und Petra: Eine vielschichtige Nachbarschaft." In J. K. Zangenberg (ed.), *Herodes: König von Judäa*, 47–60. Darmstadt: Philipp von Zabern.

–. 2016b. "The many faces of Dushara: A critical review of the evidence." *Studies in the History and Archaeology of Jordan* 12, 189–209.

Wenning, R. and L. Gorgerat. 2012. "The International Aṣlaḥ Project, Petra: New research and new questions." In L. Nehmé and L. Wadeson (eds.), *Proceedings of the Seminar for Arabian Studies* 42, 127–141.

Wiegels, R. 2015. "Fern von Germanien: Römische Grenzpolitik in Ägypten und Arabien zu Beginn der Herrschaft des Augustus." In G. A. Lehman and R. Wiegels (eds.), *"Über die Alpen und über den Rhein…": Beiträge zu den Anfängen und zum Verlauf der römischen Expansion nach Mitteleuropa*, 9–68. Berlin: De Gruyter.

Wilson, A. 2015. "Red Sea trade and the state." In F. De Romanis and M. Maiuro (eds.), *Across the ocean: Nine essays on Indo-Mediterranean trade*, 13–32. Leiden: Brill.

Woytek, B. E., K. Uhlir, M. Alram, M. Schreiner, and M. Griesser. 2007. "The denarius under Trajan: New metallurgical analyses." *The Numismatic Chronicle* 167, 147–163.

Young, G. K. 1997. "The customs-officer at the Nabataean port of Leuke Kome (*Periplus Maris Erythraei* 19)." *Zeitschrift für Papyrologie und Epigraphik* 119, 266–268.

–. 2001. *Rome's eastern trade: International commerce and imperial policy, 31 BC–AD 305.* London: Routledge.

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12.B Aromatics and Agriculture: A Spatial Approach to Long-Distance Trade and the Local Economy of the Nabataeans

I Introduction

This chapter is an attempt to probe the limits of the economic impact of long-distance trade in a frontier-zone economy. As the Nabataeans are regarded as a crucial link in long-distance trade networks between the Mediterranean and southern Arabia and the Indian Ocean, the local impact of 'Silk Road' trade should be especially evident here. Diodorus's introduction to the fourth-century BCE Nabataeans puts trade immediately at the forefront:

> While there are many Arabian tribes who use the desert as pasture, the Nabataeans far surpass the others in wealth although they are not much more than ten thousand in number; for not a few of them are accustomed to bring down to the sea frankincense and myrrh and the most valuable kinds of spices, which they procure from those who convey them from what is called Arabia Eudaemon.[1]

Although agriculture became more important in later centuries, modern scholars generally retain Diodorus's view on the importance of trade in the Nabataean economy. In a subsection titled "The economic significance of the [aromatics] trade in the Nabataean kingdom," Gary Young points to the spectacular monuments in Petra as evidence of Nabataean prosperity and concludes that the source of such wealth must have been the incense trade.[2] Robert Wenning is even more direct, writing "trade was the backbone of the economy and power of the Nabataeans."[3]

There is a slippage here, though. Diodorus, having no concept of a national economy, says that trade made the Nabataeans wealthy. Young sees great Nabataean wealth derived from trade as evidence for the importance of trade in the Nabataean economy. But exceptional wealth of the kind that produces a jewel like Petra may say more about the ways that a few people can capture huge fortunes than the fundamental structures that shape the economic activities of a whole group. Diodorus says that the Nabataeans are pastoralists, of whom "not a few" are also engaged in trade. No one believes that all Nabataeans were traders, of course, but the quote from Wenning is indicative of a train of thought that sees long-distance trade as the most important

1 Diodorus Siculus (Diod. Sic.) 19. 94. 4–5, trans. Oldfather.

2 Young 2001, 104–106.

3 Wenning 2007, 299.

https://doi.org/10.1515/9783110607628-015

process structuring the Nabataean economy, especially in the first centuries BCE and CE, when agriculture took on greater significance.[4]

I.1 Two Competing Scenarios of Nabataean Agriculture and Trade

Nabataean agriculture has long interested historians because the earliest literary descriptions of the Nabataeans depict them as pure mobile pastoralists, while later descriptions imply cultivation.[5] Archaeological surveys in various parts of the Nabataean kingdom consistently identify a significant increase in site numbers during the 'Nabataean/Early Roman' period relative to the Hellenistic period, i.e., in the first centuries BCE and CE, implying widespread agricultural extensification and confirming the literary evidence for a major change in the Nabataean economy.[6]

Explanations for this shift often invoke changes in long-distance trade. At first it was thought that the development of maritime trade in the Red Sea reduced Nabataean fortunes so critically that they turned to agriculture as an alternative.[7] Then, in an influential 1987 dissertation, David Johnson argued that Nabataean trade did not decline but actually intensified and became more specialized as a result of competition in the context of surging demand.[8] This, he argued, had major social and economic consequences, including sedentarization and the growth of permanent settlements at strategic trade nodes.[9] Later scholars have taken up Johnson's ideas, seeing sedentarization (and therefore agricultural extensification) as either an intentional strategy to maintain a competitive advantage in the increasingly lucrative long-distance aromatics trade or a consequence of that trade.[10]

Other explanations downplay the role of trade in Nabataean sedentarization. These tend to see the process as one instance of a longue durée oscillation between settled agriculture and mobile pastoralism that has characterized the region since the Bronze Age.[11] In these accounts, trade, when it is present at all, is one cause among

4 This train of thought is similar to the one that sees Kushan prosperity as fundamentally a product of their position on long-distance trade routes, critiqued by Morris (vol. 1, ch. 16).

5 Compare Diod. Sic. 19. 94. 3, describing the situation in the late fourth century BCE, with Strabo 16. 4. 26, writing about the first century BCE; Weaverdyck, ch. 12.A, II.3, this volume.

6 MacDonald 2015 summarizes the results of five surveys, including the Wadi el-Hasa project, one of the surveys on which I rely heavily in this chapter (see II.1, below). For other prominent surveys showing increased settlement in this period, see Ibach Jr. 1987; Miller 1991; Parker 2006; Ji and Lee 2007; Mattingly et al. 2007; Parker and Smith II 2014; Knodell et al. 2017; Politis 2021.

7 Negev 1977, 639; 1986, 45–46; Bowersock 1983, 64.

8 Johnson 1987.

9 Johnson 1987, 32–35.

10 Fiema 1996; Wenning 2007; Schmid 2008, 361–366.

11 LaBianca 1990, 159–200; Hill 2006, 49–52; Twaissi 2007; MacDonald 2015, 49–51.

many, with greater weight being given to climatic improvement and geopolitical stability brought about by imperial expansion.[12] Saad Twaissi has proposed the most detailed model that is specifically focused on the Nabataean period.[13] He argues that Nabataean population growth would have made mobile pastoralism increasingly difficult by the first century BCE, and that a shift in subsistence strategy was the only reasonable response given the economic and political situation of the wider region.[14]

These different types of explanation for sedentarization have very different implications for how we understand the role of long-distance trade in the Nabataean agricultural economy. The explanations that see sedentarization as a response to increased trade imply that Nabataean farmers' surpluses were going mainly to traders or to the specialists whose activities supported the traders. In the strongest versions of this scenario, long-distance trade directly or indirectly structures the whole Nabataean economy, making it fundamentally different from most other economies in the ancient Mediterranean. Given how lucrative this trade was and the Nabataeans' national reputation as merchants among Graeco-Roman writers,[15] we should not dismiss this possibility out of hand. The Nabataeans might really have been an outlier. The explanations that downplay long-distance trade imply that the Nabataeans were much more normal, with an economy based on agriculture and animal husbandry and exchange networks that operated primarily at local and regional scales. In this scenario, long-distance trade may have been a crucial component of the vast fortunes of the wealthy, but it would not have been a major factor in the day-to-day lives of most Nabataeans.

I.2 Choosing between Scenarios

It is difficult to choose between these two scenarios on the basis of the evidence normally mobilized in traditional historical and archaeological research. The most important goods – agricultural surpluses and aromatics – are perishable, leaving scant trace in the archaeological record. Furthermore, the question is actually quite complex. What is the local Nabataean economy and how would one measure the importance of long-distance trade within it? In the current state of affairs, the choice of which scenario to follow depends on which economic activities the researcher considers to be important and the assumptions that they consider most plausible. That is to say, the conclusion depends on the (often implicit) theoretical background with which the scholar approaches the inadequate evidence.

12 See Rambeau and Black 2011 for an overview of paleoclimate reconstructions from multiple proxies.

13 Twaissi 2007.

14 Twaissi argues that state formation also contributed to sedentarization, but his arguments in this vein are less convincing.

15 Apuleius *Florida* 6. 1 is a particularly clear statement of this reputation from the second century CE.

I propose that we can make progress by taking an inductive, quantitative, model-based approach. As Keith Hopkins wrote, "historians are forced to impose plausible and simplifying fictions on a complex and largely irrecoverable past";[16] and "one of the persistent problems in each generation is how to choose between competing fictions."[17] Traditional historical accounts construct these "simplifying fictions" as explanatory narratives in which data about the past is presented in a rhetorical framework that makes the conclusions seem like natural, almost inevitable consequences of a reasonable reading of the relevant evidence. What counts as reasonable depends on one's theoretical approach. Models are simplifying fictions that are constructed in an explicit and intentional way to help clarify a particular aspect of reality. In a good model-based approach, the conceptual framework should be laid out clearly, and what counts as reasonable depends on how well the available evidence fits within that framework. A model can be challenged by pointing out logical flaws in the conceptual framework or by presenting a different model that better fits the available data.[18] This is a question of comparison. In volume 1 of this handbook, I argued that the great advantage of the recent push toward quantification is that it allows us to draw clear comparisons.[19] Quantitative modeling, then, is a powerful tool that can help us "choose between competing fictions."[20]

In the present case, I simplify the question of the impact of long-distance trade on the Nabataean economy by focusing on one crucial aspect of the local economy – agriculture – and asking how it relates to exchange networks. While in reality exchange happened at a variety of scales, I make a further simplification, distinguishing long-distance exchange from regional exchange. The choice between the scenarios outlined above can then be reframed as a comparative question: Which exchange network, the regional or the long-distance, influenced agriculture more? The challenge, then, is to quantify the influence of each exchange network on agriculture. This will allow us to choose between the "competing fictions" outlined above more on the basis of empirical evidence than theoretical predispositions.

We can achieve this quantification through spatial analysis focused on central places.[21] The economic processes of agriculture and exchange meet in central places, locations that served both as nodes in exchange networks and as destinations where agriculturalists would bring their surpluses. For each central place, we can quantify (1) its importance as a destination for agricultural surplus and (2) its importance in

16 Hopkins 1978, 215.

17 Hopkins 1978, x.

18 Hopkins (1995–1996) 2000.

19 Weaverdyck, vol. 1, ch. 8.A, 317–318.

20 For the utility of quantitative models in choosing between different historical interpretations, see Weaverdyck 2022.

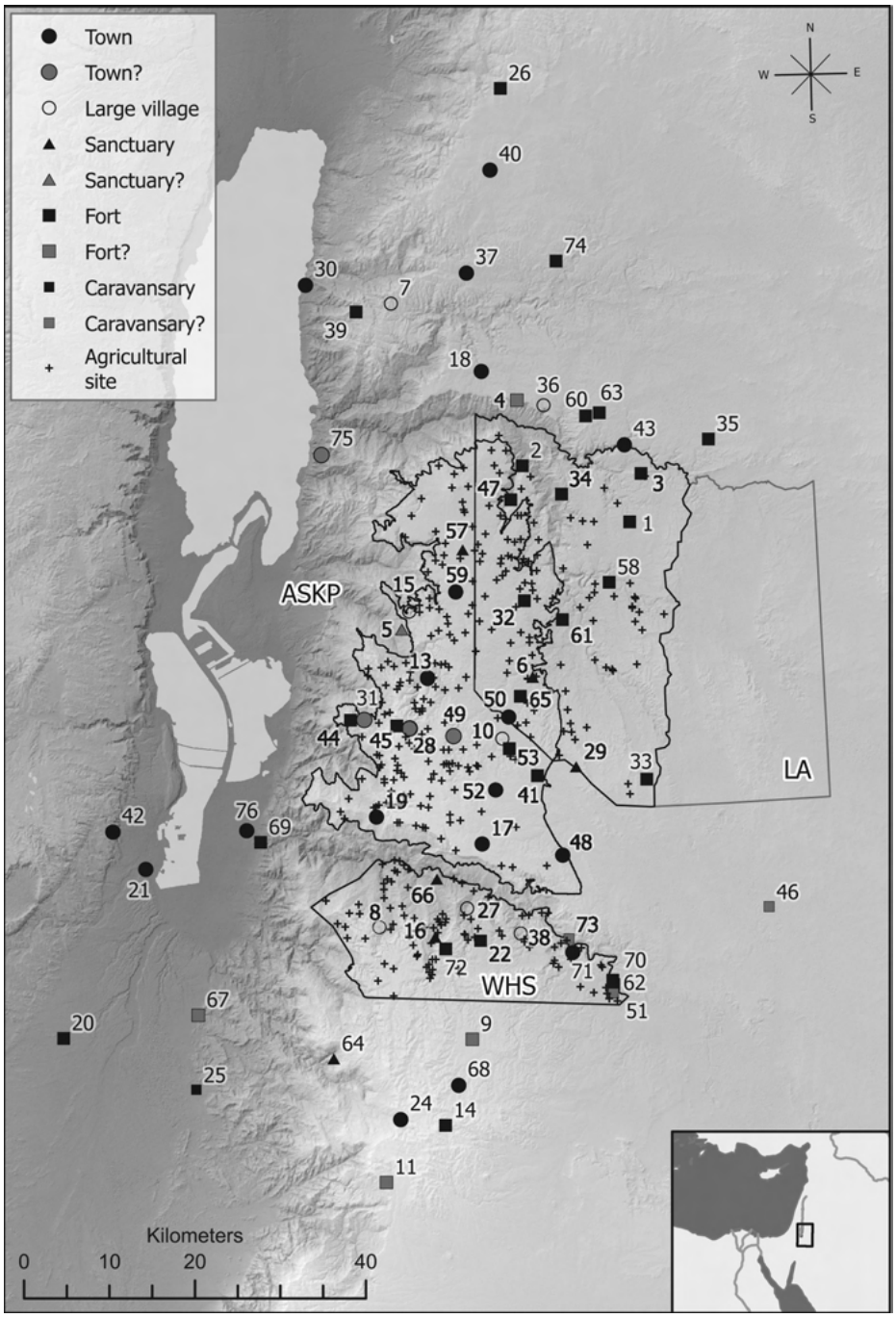
21 For landscape-scale, GIS analysis in the study of ancient economic history, see Weaverdyck, vol. 1, Ch. 8.A, II. For a methodological overview of spatial analysis in archaeology, see Gillings, Hacıgüzeller, and Lock 2020.

(a) the regional exchange network and (b) the long-distance exchange network. By taking these three measurements at every central place in a region, we can quantify and compare the relationships 1–2a and 1–2b. That is to say, we can compare how well agricultural importance (1) correlates with importance in the regional (2a) versus long-distance (2b) exchange networks. We can determine, then, on the basis of empirical evidence (the locations of agricultural production and central places), whether the regional or the long-distance exchange network influenced agriculture more.

This analytical process derives historical evidence from location data, which will be unfamiliar to many readers. Therefore, it is worth stating very clearly the logical premises on which it rests. (1) Nabataean agriculturalists made strategic decisions about where to cultivate in an attempt to at least satisfy their needs if not maximize their utility. (2) These decisions were shaped by a variety of factors, some of which – like the influence of the environment – are knowable. We can identify these factors by measuring the spatial relationships between agricultural site locations and environmental factors and asking whether such a relationship is likely to have arisen by chance. (3) The primary goal of most agriculturalists was to maintain production levels above a certain minimum threshold (subsistence). In addition, however, many may also have attempted to position themselves so as to minimize the costs of transporting their surplus to a point of exchange, a central place. (4) Therefore, we can identify which places were important points of exchange for agricultural producers by measuring the distances between agricultural sites and potential central places. After controlling for the impact of environmental variables influencing productive capacity, we can identify those central places with more agricultural sites in the vicinity than would be expected if these sites were distributed randomly – the attractive central places.

A second set of premises allows us to relate the attractiveness of a central place within the local-scale agricultural economy to its importance in regional and long-distance exchange networks. (1) In general, the long-distance overland trade in aromatics was carried out by caravans of camels, while local and regional trade was more often carried out by donkeys led by humans on foot.[22] The different biomechanics of these modes of transportation mean that the experienced distances between places depended in part on mode of transportation. This allows us to model two different traffic networks across a single set of central places, one in which the length of the links between nodes is measured in terms of camel travel (the camel network) and the other in which the length of the links corresponds to pedestrian travel costs

22 The Trajanic Arabian silvers depicting camels discussed in the previous chapter demonstrate the association between these animals and the long-distance aromatics trade in antiquity. See Studer and Schneider 2008 for evidence of actual Nabataean camel use. Less attention has been paid to donkeys, but Rabbinic literature, relating to Judaea, clearly shows their importance in regional trade networks (Safrai 1994, 232–239). The difference in the spatial scope of donkey versus camel transport is reflected in the different frequencies with which husbands owe sex to their wives: once a week for donkey drivers, once a month for camel drivers (*Mishnah Ketubot* 5. 6).


Town
Town?
Large village
Sanctuary
Sanctuary?
Fort
Fort?
Caravansary
Caravansary?
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N
W
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Kilometers
0
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40

(the donkey network). (2) Following established tenets of formal network analysis, the importance of each central place within the different traffic networks can be estimated by calculating measures of centrality that reflect the central place's position within that network.[23] (3) Therefore, if long-distance trade fundamentally structured the Nabataean agricultural economy, the central places that were important in the camel network should also attract agricultural sites. If, on the other hand, regional-scale exchange networks were more important, the central places that were important in the donkey network should be more attractive.

I.3 The Limits of This Study

Before proceeding to the implementation of this analysis, I must be clear about the scope of the current study. I do not attempt to analyze the entirety of the Nabataean kingdom, but rather its northern part, the area stretching from the Wadi al-Hasa and its tributaries in the south across the Kerak Plateau to the Wadi Mujib in the north (map 1). This is a fertile region, densely settled in the Nabataean period and home to major sanctuaries such as Tannur and Dharih as well as significant towns such as Rabbathmoba and Characmoba. The towns of Dhiban, Madaba, and Zoara are nearby. Fergus Millar described this area as the "central zone of the Nabataean kingdom,"[24] and a significant portion of Nabataean agriculture took place in this area. This zone is also ideal for the type of spatial analysis undertaken here because precipitation levels are high enough that agriculture is possible across a relatively large area. In

◂ **Map 1:** Overview of the study area, with agricultural sites and central places displayed according to type. The boundaries of the survey zones in which agricultural sites were analyzed are indicated in black. The portion of the *Limes Arabicus* survey zone that was excluded from analysis is outlined in gray. © Eli J. S. Weaverdyck.

Key to Central Places:

1: Abu al-Kharaqah, 2: Abu Samen, 3: Al, 4: Ara`ir, 5: ASKP 159, 6: ASKP 231/LA 469, 7: Ataruz, 8: Bahlul, 9: Basha, 10: Batra, 11: Bir, 12: Bostra (Not shown), 13: Characmoba, 14: Dabbah, 15: Deir, 16: Dharih, 17: Dhat Ras, 18: Dhiban, 19: Dubab, 20: En Hosb, 21: En Tamar, 22: Faridiyyeh, 23: Gerasa (Not shown), 24: Gharandal, 25: Hassiya, 26: Hesban, 27: Ja`is, 28: Jeljul, 29: Juwein, 30: Kalliroe, 31: Kathrabba, 32: LA 157, 33: LA 532, 34: LA 57, 35: LA 7, 36: Lehun, 37: Libb, 38: Mabra, 39: Machaerus, 40: Madaba, 41: Mahri, 42: Mampsis, 43: Medeineh (on Wadi Saliyeh), 44: Meidan, 45: Meiseh, 46: Mesheish, 47: Meshideh, 48: Mhay, 49: Middin, 50: Mreigha, 51: Mugharaia al-Erham, 52: Nakhl, 53: Naser, 54: Oboda (Not shown), 55: Petra (Not shown), 56: Philadelphia (Not shown), 57: Qasr, 58: Qasr al-Bayda/Rishan, 59: Rabbathmoba, 60: Rama, 61: Rujm Bani Yaser, 62: Ruweihi, 63: Saliyeh, 64: Sela`, 65: Sharif, 66: Tannur, 67: Telah, 68: Tuwaneh, 69: Umm al-Tawabin, 70: Umm Hraga, 71: Umm Ubtulah, 72: WHS 296, 73: WHS 892, 74: Za`feran II, 75: Zegev Castle, 76: Zoara.

23 Koschützki et al. 2005.

24 Millar 1993, 391.

areas where agricultural potential is very tightly constrained by the environment, it is difficult to detect the influence of central places on agricultural sites because the range of possibilities is so narrow to begin with. In the Kerak Plateau and its wadis, agriculturalists had more opportunities to minimize distance to central places without sacrificing productive potential.

The importance of this zone in the long-distance aromatics trade is less clear, but there are reasons to think that camel caravans passed through regularly. Most accounts of the 'incense route' emphasize the importance of the route from southern Arabia to Gaza via Petra, which passes to the south of our study area.[25] There was also a major route linking the Arabian Peninsula to the heavily urbanized Levant northeast of the Dead Sea via Dumata and the Wadi Sirhan, far to the east of our area.[26] On the other hand, any caravans traveling between Petra and Bostra must have passed through the Kerak Plateau. Soon after the absorption of the Nabataean kingdom, Trajan built the monumental Via Nova Traiana, connecting the province of Syria to the Red Sea at Aila via the Kerak Plateau.[27] It is often asserted that this road follows the route of an older 'King's Highway,' but the topography of the route, which crosses major wadis at very steep inclines, suggests that camel caravans would have followed a route a little further to the east.[28] In any case, as I argued in the previous chapter, the aromatics trade is better seen as taking place across of series of circuits rather than a few routes linking the Mediterranean with southern Arabia, and those circuits surely crossed our study area.

This chapter, then, analyzes the economic importance not of 'The Incense Route' but of long-distance caravan trade on the agricultural heartland of the Nabataean kingdom. Furthermore, it takes the perspective of the agriculturalists, asking which central places were attractive to them and whether that attractiveness can be better explained with reference to long-distance or regional-scale exchange networks. Many factors will be left out of this analysis. I take no formal consideration of, for example, the function of each central place, treating towns, forts, and sanctuaries as examples of the same phenomenon and relying entirely on network structure and the spatial distribution of agricultural sites to differentiate them. But this is a strategic simplification of reality that allows me to clarify the nature of the relationship between two characteristics of central places – importance in exchange networks and importance in the local agricultural economy. Understanding that relationship, in turn, brings us one step closer to understanding the role of long-distance trade in the Nabataean economy.

25 E.g., Young 2001, 82–89.

26 Loreto 2016.

27 See Speidel 2019 for the ideological program behind this construction project.

28 Borstad 2008. Hackl, Jenni, and Schneider (2003, 8) describe these as two, parallel routes.

II Materials and Methods

This analysis relies on a range of archaeological and environmental data as well as a variety of statistical and machine-learning techniques. Fig. 1, to be read from top to bottom, provides a schematic overview of the method. The left side shows the steps taken to arrive at measures of network centrality, while the right shows those taken to measure attractiveness to agricultural sites. The analytical strategy can be summarized briefly before going into detail, starting with the right side of the diagram.

In order to identify which central places attracted agricultural sites, we first need to identify where sites would be located if they were responding purely to environmental factors. I take an inductive approach. I begin with a set of environmental factors that seem likely to have influenced settlement location and collect the available data, e.g., slope or springs. Each factor must then be converted into one or more variables that can be measured (see II.3 for details). Slope, for example, gets classified into discrete categories. I have chosen to focus my attention not on the values of variables at the precise locations of agricultural sites, but in the area around sites. Agriculture takes place in the surroundings of a settlement, not under the floorboards, as it were. A geographic study of the Middle East published in 1976 found that cereals were grown within three to four km of a village, but that tree crops could be cultivated in areas further away.[29] Because both cereals and tree crops were major components of Nabataean agriculture, I analyze the territory within five km of agricultural sites. At the same time, greater proximity to a settlement allows for greater investments of labor, so I also analyze the territory within 500 m of a settlement. Specifically, I measure the prevalence of each variable in these territories. To determine the significance of these measurements, I also measure the prevalence of each variable in the territories around a set of comparison points that represent the null hypothesis, i.e., that agricultural sites were located randomly across the landscape. Univariate statistical tests allow me to identify those variables whose prevalence in the territories around agricultural sites is significantly different from their prevalence in the territories around comparison points (II.4). I then use these variables to create a multivariate predictive model that quantifies the likelihood of finding an agricultural site in a location with a given combination of values of environmental variables (II.5). This model forms the basis for a new set of comparison points representing a new null hypothesis: that agricultural sites were positioned purely in relation to environmental variables with no regard for the locations of central places. By counting the number of agricultural sites within a certain distance of each central place and comparing that count to the counts resulting from the comparison points, I can identify which central places have more agricultural sites in their vicinity than expected (II.6). These are the attractive central places.

29 Beaumont, Blake, and Wagstaff 1976, 164.

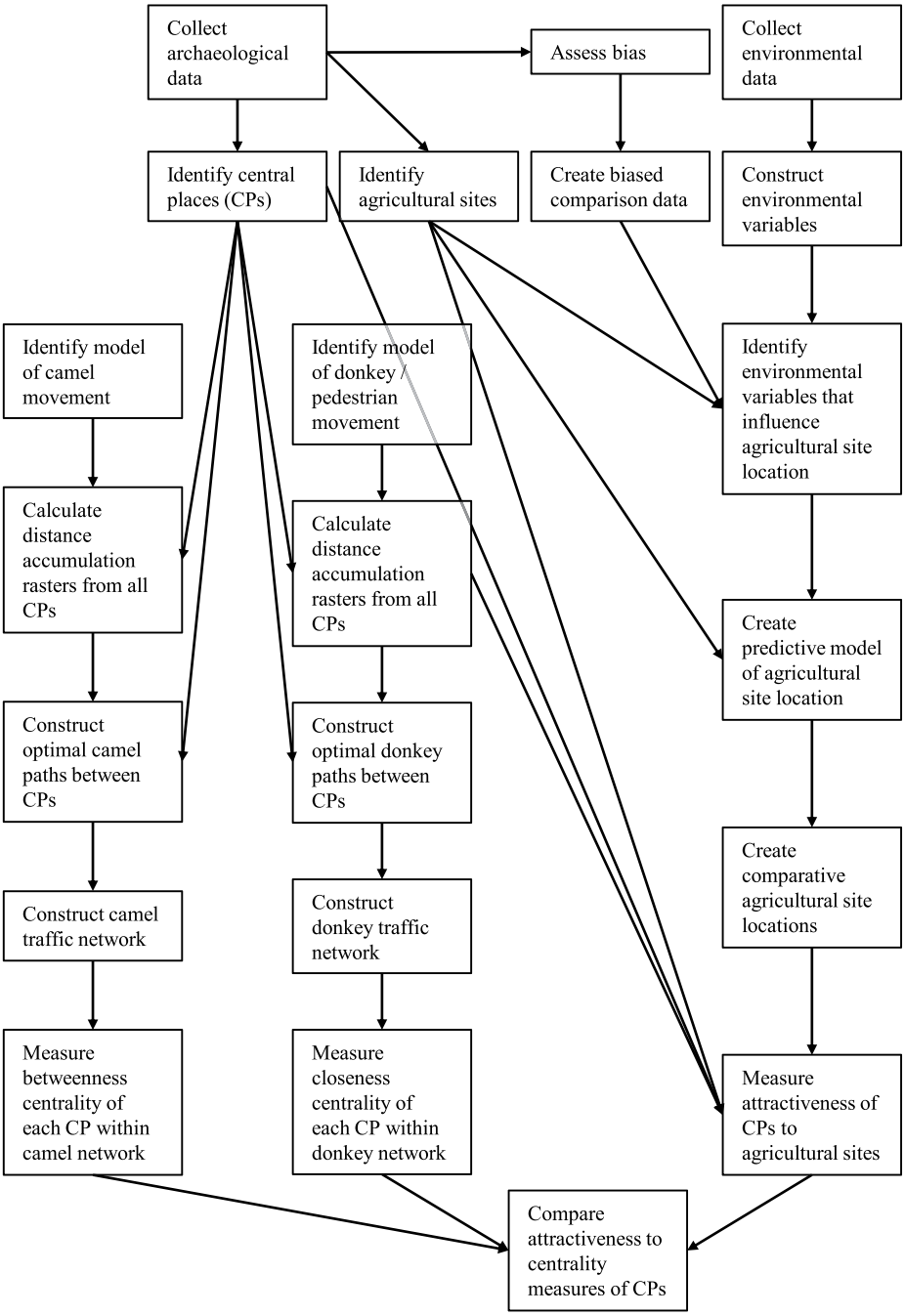

Fig. 1: Overview of the methodological steps taken in this chapter.

To calculate the two measures of network centrality, I first calculate two sets of least-cost paths between every central place and every other central place (II.7). These are another strategic simplification. They are not meant to accurately represent a particular route that was actually traveled (though they might have been). Rather, they are measures of the minimum experienced distance between every central place and an estimate of the routes that are likely to have been traveled. The resulting network, in which every node is directly connected to every other node, is then pruned back to a more realistic representation of connectivity between central places (II.8). Finally, centrality statistics are calculated using the cost distance to weight the links in the network (II.9). I can then test to see if the centrality of attractive central places is higher than the centrality of other central places, and if so, which centrality measure better correlates with attractiveness (II.10).

What follows is a fairly detailed account of the actual steps I took in implementing this analytical strategy. This level of detail is necessary because the analytical results follow directly from the myriad decisions made about what data to use, how to transform them into measurable variables, and the techniques employed to extract information from them. I also hope that the details provided here will allow others to replicate this analysis in the future. To that end, I have made all the data used in this chapter available on Zenodo.[30] Readers uninterested in these details may skip ahead to the results section.

II.1 The Study Area and Sources of Archaeological Data

The study area, as mentioned above, stretches from the southern tributaries of the Wadi al-Hasa in the south to the Wadi Mujib in the north. The western part includes the highlands that rise precipitously from the Jordan valley and the Dead Sea, and the terrain slopes down toward the east, fading into steppe and desert.[31] Rainfall, similarly, is highest in the western highlands, decreasing as one moves east, ranging from less than 100 mm in the east to over 300 mm in the west.[32] The soils mirror elevation and rainfall, with relatively fertile inceptosols (Terra Rossa) in the western plains, dryer aridosols to the east, and entisols in the valleys.[33]

The area was surveyed in the late 1970s and 1980s by three projects: the Wadi el Hasa Archaeological Survey, directed by Burton MacDonald (WHS); the Archaeological Survey of the Kerak Plateau, directed by J. Maxwell Miller and Jack M. Pinkerton (ASKP); and the *Limes Arabicus* Project directed by S. Thomas Parker (LA).[34] Others

30 https://zenodo.org/record/7443364; https://zenodo.org/record/7548543.
31 Al-Bilbisi 2013.
32 Ababsa 2013.
33 Lucke, Ziadat, and Taimeh 2013.
34 MacDonald 1988; Miller 1991; Parker 2006.

have conducted surveys in the area since, but these three cover the largest area and have been published most thoroughly. They provide the core of the archaeological data used in this analysis. The boundaries of the three survey zones, drawn from maps and descriptions in the survey publications, are shown on map 1. In the course of analysis, it became clear that agricultural sites discovered by the WHS survey, which was focused on valleys, differed from those found by the ASKP and LA surveys, focused primarily on the plateau. Therefore, the WHS and the ASKP/LA survey zones were analyzed separately.

All of the agricultural sites analyzed here fall within these boundaries. The central places under analysis extend beyond these arbitrary boundaries for two reasons. First, agricultural sites on the edge of the survey areas would have interacted with nearby central places beyond these edges. Second, understanding the network location of the central places in the study area requires that they be contextualized in the larger network of which they were a part. Therefore, I have included major cities that lie far beyond the boundaries of the study area – Petra, Bostra, Gerasa, Oboda, and Philadelphia – important central places that fall within 25 km of the study area, and all central places that fall within 15 km of the study area. In the course of analysis, however, it proved necessary to exclude the most distant cities (see II.8, below). Location data for almost all of the sites under investigation here come from the Digital Archaeological Atlas of the Holy Land (DAAHL), which compiles data from a number of other digital databases, including the national archaeological databases of both Jordan and Israel.[35] Other sources of data, used to fill out the collection of central places, are described below (II.2.3).

II.2 Constructing Archaeological Datasets

Using these sources, I compiled two archaeological datasets: one consisting of agricultural sites and the other of potential central places. However, when using archaeological site locations for analysis, one must be wary of factors that might bias the archaeological record, lest the resulting model reflect factors influencing the discovery of sites in the twentieth century rather than the locations of agriculture in antiquity.

II.2.1 Assessing Bias in the Archaeological Record and Creating Biased Comparison Data

The three surveys on which this study is based had slightly different methodologies for sampling the landscape, but all three employed a type of extensive, motorized-

35 Savage and Levy 2014; https://daahl.ucsd.edu/DAAHL/Home.php (last accessed December 2, 2022). I am grateful to Julian Michgehl and Lukas Gemein for scraping data from the DAAHL on my behalf, and to Dr. Stephen Savage, the webmaster of DAAHL, for his assistance with this.

vehicle-based prospection as a significant element.[36] For this reason, it might be suspected that our knowledge of the archaeological remains in the study area is biased by visibility from modern roads, with sites invisible from a road being less likely to be discovered and recorded than visible sites. To test this hypothesis, we digitized all roads that appeared on the US military K737 maps used by the survey teams and conducted a viewshed analysis.[37] This allowed us to determine the visibility of every site in the DAAHL that fell within one or more of the three survey zones. The majority of these sites were recorded by one of the three major surveys, but there are also some sites from other sources as well. Eliminating these sites might result in a cleaner analysis, but it was not practical given the structure of the data.

The chi-square test was used to determine whether there was a relationship between visibility and site density. Across the three survey areas, most of the territory (81.67 percent) was visible from a modern road. However, the 18.33 percent of the landscape that was invisible contained only 10 percent of all archaeological sites.[38] The chi-square test indicates that this difference is almost certainly not the result of chance.[39]

At first blush, it seems that visibility from modern roads is indeed a factor that biases the archaeological data. It is important to keep in mind, though, that a third factor, precipitation, might be correlated both with modern road density and thus visibility and with ancient settlement patterns.[40] To rule out this possibility, I compared annual precipitation values at all archaeological sites in the survey areas to the values for the survey areas as a whole.[41] Three statistical tests of equality, the K-S test, Student's t-test, and a comparison of kernel-smoothed density distributions, all produced the same result: the precipitation values at archaeological sites are not significantly different from the values across the area as a whole.[42] Therefore, we can more confidently conclude that visibility from modern roads is indeed a biasing factor that must be accounted for.

To account for this bias when analyzing the locations of Nabataean agricultural production, we can create a comparison dataset that is biased in the same way as the

36 Banning 1988; Miller 1991, 17–20; Parker 2006, 25–27.

37 USA Army Map Service 1970. I am grateful to Julian Michgehl for digitizing these invaluable data. The digitized roads fall between 35.5° and 36.25° E and 30.75° and 31.5° N, corresponding to K737 map sheets 3151-I, 3151-IV, 3152-I, 3152-II, 3152-III, 3152-IV, 3251-IV, 3252-III, and 3252-IV. Viewshed analysis was conducted using Esri's ArcGIS Pro software (Esri 2022).

38 The bias varied between the three surveys. The WHS zone showed no evidence of bias ($p = 0.97$), whereas the ASKP and LAS zones both showed evidence of statistically significant bias ($p = 0.02$ and 0.00 respectively).

39 Chi-square test p-value: 0.00.

40 Indeed, within the survey areas, the average annual precipitation in areas visible from modern roads is 217.74 mm, whereas invisible areas receive 191.54 mm on average. The survey areas as a whole receive 212.70 mm annually on average, with a standard deviation of 44.94 mm.

41 Precipitation data from CHELSA (see II.3, below).

42 K-S test p-value: 0.67; t-test p-value: 0.57; density-comparison p-value: 0.87.

archaeological record as a whole.[43] This comparison dataset represents a sort of null hypothesis: that ancient places of agricultural production were randomly distributed throughout the survey areas, but the discovery and recording of the traces that these ancient places left behind was not random. Any statistically significant differences that we observe between this comparison dataset and the archaeological sites that reflect the locations of Nabataean agricultural production, then, can be ascribed to real tendencies in the location patterns of ancient places rather than archaeological discovery bias.

The degree of bias that visibility from modern roads imposes on the archaeological data can be easily quantified. Within the surveyed area there are 1,210 sites in the DAAHL, of which 121, 10 percent, are invisible from modern roads. If the sites were randomly distributed with respect to road visibility, one would expect the portion of sites that are invisible to be the same as the portion of the territory that is invisible: 18.33 percent, which works out to 221.8 sites. Dividing the observed number of sites by the expected number of sites produces a quantitative measure of bias: 121 / 221.8 = 0.5455. Put another way, invisibility from a modern road reduces the chance that archaeological remains will be discovered and recorded as an archaeological site by almost half. Therefore, as a comparison dataset, I created a weighted sample of random points in which points are only 0.5455 times as likely to be placed in invisible areas as compared to places that are visible from a road. Using Esri's Create Spatially Balanced Points tool with a reclassified visibility raster, I created 10,000 points whose distribution across the survey areas is biased in the same way as the archaeological record as a whole. After the study area was reduced (see II.2.2, below), there remained 7,683 comparison points.

II.2.2 Identifying Agricultural Sites

Creating a dataset of places that were characterized primarily by agricultural production was not a simple matter. The goal was not to collect all locations where agricultural production occurred in the Nabataean period. Not only would this be impossible given the vagaries of archaeological preservation, it would also be methodologically flawed. To use locational data to understand the forces influencing the agricultural economy, one must create a dataset of locations that reflect, primarily, those forces. The decision to cultivate crops (and animals) in one place as opposed to another can be the result of myriad influences, some of which have little to do with the agricultural economy. The garrison manning a watchtower might tend a garden or even produce some significant portion of their own food, but the location of these practices is determined by the military factors that influenced the location of the watchtower. Including such a location in our analysis would only serve to make the data noisy.

43 For this approach to handling bias in archaeological data, see Kempf and Weaverdyck 2023.

There are also problems of archaeological interpretation. Small-scale agricultural production can leave scant archaeological traces, if it leaves traces at all. The three major surveys that provide the bulk of our data identified almost 2,000 archaeological sites,[44] and compared to surveys in less arid parts of the Mediterranean, the number of sites with standing architecture preserved is impressive. However, most sites contain pottery from multiple periods, making the architecture very difficult to date with any degree of certainty. Without significant excavation, it is usually impossible to determine the precise functions of a place in any particular period. This is particularly problematic in the Nabataean case. In societies where sedentary agriculture is the primary mode of subsistence, one can reasonably assume that a large (if ultimately unknowable) portion of rural archaeological sites represents settlements whose inhabitants were primarily engaged in agricultural production. The Nabataeans, however, continued to practice mobile pastoralism on a large scale even after the expansion of sedentary agriculture.[45] Some significant portion of archaeological sites with Nabataean material, then, probably reflect ancient campsites or other places whose locations represent a response to factors influencing pastoralism rather than agriculture.

The strategy adopted to address these difficulties was to start with an expansive set of locations and slowly whittle it down. I began by extracting all sites in the DAAHL with site elements dated to periods contemporary with the Nabataean period,[46] then extracting only those that fell within the boundaries of the three surveys and eliminating all sites that had been identified as a potential central place. Then I examined each remaining site. In the vast majority of cases, this meant reading its description in one or more of the survey publications, but a small number of sites were also treated in other publications. I eliminated all sites where a function other than agricultural production had been suggested. In most cases, these were towers, cairns, or tombs. I also eliminated rock shelters, whose location depends on geology rather than agriculture. In addition, I eliminated most of the sites where only one Nabataean sherd had been identified unless no other periods had been identified or there was good reason to believe that much of the ancient material had been lost. I also eliminated sites for which I could find no further literature.

In a final step, I mapped all the agricultural sites within the survey boundaries to see if there were prominent gaps. Such gaps could indicate a large-scale factor restricting agriculture. Filling such gaps with comparison points would skew the results of the analysis. This map revealed that the eastern part of the *Limes Arabicus* survey zone contained only three putatively agricultural sites.[47] The terrain in this

44 WHS: 1,074, ASKP: 443, LA: 537. Some sites were surveyed by both the ASKP and LA surveys.

45 See Weaverdyck, ch. 12.A, II.3, this volume, with literature.

46 See https://daahl.ucsd.edu/DAAHL/Periods.php (accessed December 2, 2022) for DAAHL's periodization.

47 One site (no. 390) consists of a dam and several stone rings. The surveyors speculate that the dam could have served either agricultural or pastoral purposes and note the absence of any trace of fields.

area is different from the land to the west, consisting of broad swathes of low-lying flat land. The three agricultural sites are all found in the patches of rougher terrain that more closely resemble the plateau further west. It appears likely that this area was not considered suitable for agriculture, perhaps because of salinization from the evaporation of standing water.[48] The boundary of this flatter area corresponds to the boundaries of hydrological subbasins in the HydroSHEDS database for most of the survey area, so I decided to adopt these watershed boundaries as the eastern edge of my study area.[49] The final result of this whittling process was a database of 334 agricultural sites, 292 in the ASKP/LA survey area and 92 in the WHS survey area.[50]

II.2.3 Identifying Central Places

Following the principle of making the fewest assumptions possible, I use a liberal definition of 'central place.' To build a dataset of locations that could have functioned as central places, I relied on archaeological remains to identify all the places to which surplus agricultural produce might be delivered, both places where the surplus might be consumed and places where it might be exchanged or delivered for further distribution. This includes population centers – characterized as cities, towns, and large villages, although the boundaries between these categories are inevitably fuzzy – as well as locations where people might have gathered periodically for festivals and fairs, i.e., sanctuaries. It also includes forts and caravanserais because the permanent presence of soldiers and the periodic presence of traders meant that these were likely places where agricultural surpluses were consumed and possibly exchanged.

The data were gathered from a number of sources. Within the study area, I relied on the results of the three main surveys. Beyond this area, overviews of the entire Nabataean kingdom by Wenning and Al-Salameen provided a starting point, supplemented by the regional overviews of MacDonald to the south of the study area and Al-Fuqaha to the north.[51] I then compared the set of archaeological sites gleaned from this literature to digital databases to fill any prominent gaps. Pleiades and Vici.org

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The second (no. 309) consists of two rectangular structures that might have been campsites, animal enclosures, or agricultural terraces. Only three Nabataean sherds were found. The third (no. 312) is very close to no. 309 and consists of traces of substantial structures from at least two phases, along with 47 Nabataean or Early Roman/Nabataean sherds. This is an intriguing site that deserves further investigation.

48 Parts of this area are marked as mudflats on the K737 topographic maps.

49 Lehner and Grill 2013.

50 Data available on Zenodo at https://zenodo.org/record/7443364. The agricultural sites are contained in the files NabataeanAgSites_ASKPLA.geojson and NabataeanAgSites_WHS.geojson. The boundaries of the survey zones used in this analysis are found in SurveyZone_ASKPLA.geojson and SurveyZone_WHS.geojson.

51 Wenning 1987; Al-Salameen 2004; MacDonald 2015; Al-Fuqaha 2018.

are crowd-sourced databases that contain the most prominent sites from all periods of antiquity.[52] The DAAHL is much more comprehensive and records dated 'site elements.' I extracted all sites with elements from relevant periods that suggested the place might have performed central-place functions, e.g., theaters, fortresses, public buildings, caravanserais, etc. Sites from these online databases that were not in the set of central places derived from literature were investigated further for inclusion or exclusion. As a result, of this process, I identified 76 archaeological sites that might have functioned as central places in the Nabataean period.[53]

II.3 Collecting Environmental Data and Constructing Environmental Variables

The environmental factors that I analyzed relate to the availability of water and to the shape of the terrain. Up-to-date, high-resolution soil data were not available, but in Jordan, soil characteristics are heavily influenced by precipitation and topography, which I do consider.[54] In addition, Nabataean water-harvesting structures also captured sediments, altering local pedology in a way that would not be reflected in modern soil data.[55] I analyzed the availability of water from precipitation, runoff, and natural springs as well as slope, aspect, and geomorphological landforms, modeled in two ways. The terrain factors were all derived from the SRTM digital elevation model (DEM), which has a cell size of approximately 30 m.[56] Hydrological factors were derived from this same DEM along with precipitation data from the climatologies at high resolution for the earth's land surface areas (CHELSA) dataset at 1 km resolution,[57] and land-cover data from the FAO's *Jordan – Land cover atlas* with a resolution of 10 m.[58] Springs were digitized from Soviet topographic maps of the area at a scale of 1 : 100,000.[59]

II.3.1 Hydrology

Water availability is the factor that constrains agricultural potential most forcefully in the Transjordan. Although the study area receives more rainfall than most of the

52 https://pleiades.stoa.org; https://vici.org (last accessed December 2, 2022).

53 Data available on Zeondo at https://zenodo.org/record/7443364. The central places are contained in the file NabataeanCPs.geojson, with full bibliographic references given in NabataeanCPs_References.xlsx.

54 Lucke, Ziadat, and Taimeh 2013.

55 Lucke et al. 2019.

56 Farr et al. 2007.

57 Karger et al. 2017.

58 Franceschini, De Leo, and Muchoney 2019.

59 Psarëv 2005.

Nabataean kingdom, it is still semiarid. Nabataean agriculturalists, however, had access to a deep well of knowledge of hydrology and particularly of techniques for harvesting rainwater runoff from the desert.[60] I considered the availability of water in the territories around agricultural sites from three sources. Natural springs were simply counted. The other two sources were quantified on the basis of a raster, a grid of cells covering an area, each with a value. Both sources derive ultimately from precipitation. The first is the precipitation that soaks into the soil at any given cell. This value is the product of CHELSA precipitation data times the runoff coefficient described below, which estimates the portion of precipitation that will run off from a given surface. All of the cell values falling within a given territory were added together to measure the total amount water available from precipitation.

The second source of water is runoff from areas upstream, which was modeled on the basis of precipitation, terrain, and land cover. Within modern GIS software, it is fairly simple to generate a flow-accumulation surface from a DEM. For each cell, the software determines the neighboring cell at the lowest elevation, the cell into which water will flow. The result is a flow-direction raster. Then the software can trace back, for each cell, all the cells that are upstream of that cell. The result is a raster in which the value of each cell is the number of cells from which water flows, directly or indirectly, into that cell. In the real world, though, each patch of upstream land contributes a different amount of water to overall runoff, depending on the amount of precipitation it receives and the portion of that precipitation that actually flows across the surface rather than soaking in, the runoff coefficient (RC). This differential flow can be incorporated into the flow accumulation algorithm as a weight raster specifying the contribution of each cell to the accumulated flow.[61]

The amount of precipitation received by each cell is again provided by CHELSA climatology raster data. The portion that flows across the surface, the RC, has to be estimated. In her dissertation on rainwater harvesting in a portion of the Kerak Plateau, Barbara Brilmayer Bakti surveyed a variety of approaches to modeling runoff and proposed a simple algorithm for estimating the portion of rainwater that would become surface runoff in any given location based on slope and land cover.[62] In Brilmayer Bakti's RC calculation, steeper slopes and bare land result in higher RC values relative to gentler slopes and land covered by vegetation. The values are presented in table 1.[63]

Slope is easy to calculate from a DEM, but land cover is more difficult. Given our ignorance of ancient land cover, we are forced to rely on modern land cover. The FAO has recently published a detailed land-cover atlas of Jordan along with the attendant

60 Oleson 2007.

61 This is the approach taken by Esri's Flow Accumulation tool (Esri 2022).

62 Brilmayer Bakti 2020, 119–128.

63 After Brilmayer Bakti 2020, 126. Brilmayer Bakti also incorporated built-up areas as impervious terrain with a very high RC because she was focused on modern rainwater harvesting.

Tab. 1: Runoff coefficients as determined by slope and land cover.

Slope / Land cover	Bare	Vegetated
0–5 %	0.12	0.06
5–15 %	0.15	0.08
> 15 %	0.18	0.10

spatial data, which categorizes the entire territory of Jordan into 34 land-cover classes.[64] These data are the result of extensive analysis relying primarily on Sentinel-2 satellite imagery collected in 2016 at a resolution of 10 m. The relationship between modern and ancient land cover is obviously open to question. One could argue that the area covered by crops today is more extensive than in the past, a result of modern development and especially the mechanized pumping of groundwater. On the other hand, archaeological evidence and the accounts of nineteenth- and twentieth-century explorers suggest that agriculture was more extensive in the Nabataean period than it was at the beginning of the previous century, and many Nabataean agricultural sites are found in areas that are not under cultivation even now. There is a risk, then, that using modern land-cover data actually underestimates the amount of vegetated land in the Nabataean period. At present, though, this is unavoidable. One cannot simply ignore land cover when calculating runoff. Today, the western part of the Kerak Plateau is much more heavily vegetated than the eastern part. Measuring flow accumulation without land cover would systematically overestimate the amount of water available in the west and underestimate the amount of water available in the east. To make the FAO data usable, I reclassified it into vegetated and bare areas.[65] I then combined this with a slope raster to generate a RC raster, representing the portion of rain that would flow off as surface runoff. Multiplying this by the precipitation data from CHELSA produced a raster in which the value of each cell represents the amount of water, in kilograms per square meter, that would flow as surface runoff into the neighboring, downstream cell. This is the weight raster that, when included in the Flow Accumulation algorithm, produces a realistic estimate of the amount of surface runoff water flowing across the terrain in a year, a runoff accumulation raster.

The next step is to use this runoff data to determine the total amount of runoff water available in the territory around each agricultural production site. In contrast to precipitation, one cannot simply add up the values of the runoff accumulation raster because the value of each cell represents the contribution of all upstream cells without regard for the downstream cells. The same drop of water is counted in every cell that it passes through. Therefore, one must divide the territory into watersheds

64 Franceschini, De Leo, and Muchoney 2019.

65 Built-up areas could not be simply reclassified, so I used the Shrink tool in Esri's ArcGIS Pro to replace built-up areas with the land cover class that formed the majority of their surroundings.

and sum the runoff accumulation from each watershed to arrive at a total runoff water availability figure.[66] Total runoff availability is measured for each point individually. To incorporate runoff in the multivariate MaxEnt model (see II.5, below), it was necessary to interpolate runoff values between points using Kriging.

II.3.2 Terrain

The shape of the surface of the earth influences agricultural productivity in a variety of ways. Slope affects the ability of cultivators to work the land as well as soil stability and the behavior of water on a hyperlocal scale. Aspect, the direction a slope faces, affects the amount and timing of sunlight and wind exposure. Geomorphological landforms – i.e., valley bottoms, lower slopes, midslopes, upper slopes, ridges, and flat land – capture some of the same effects as slope and aspect, but with added local contextual detail that influences things like erosion patterns. Constructing variables related to these factors requires the classification of continuous data into discrete categories. The portion of a site's territory that falls into each category can then be measured.

Slope and aspect are fairly straightforward. GIS software makes it simple to calculate, for each cell in a DEM, the maximum difference in elevation with neighboring cells (slope) and the orientation of that difference (aspect). Aspect is then classified into eight categories reflecting the cardinal and intercardinal directions (north, northeast, east, etc.). For slope, I followed the scheme established by the FAO for its classification of Global Agricultural and Ecological Zones, which uses eight slope classes: 0–0.5 %, 0.5–2 %, 2–5 %, 5–8 %, 8–16 %, 16–30 %, 30–45 %, and > 45 %.[67]

Modeling geomorphological landforms is accomplished by comparing the elevation value in one cell with the average elevation in a neighborhood around that cell.[68] Positive values indicate ridges, negative values indicate valleys, and values near zero indicate midslopes or flat areas. Thresholds are then specified to classify these values into those that indicate valleys, lower slopes, midslopes/flat areas (which can be distinguished using slope), upper slopes, and ridges. There are two ways of specifying these thresholds, and I used both. The first, called topographic position index (TPI), uses the standard deviation of all values in a study area. The second, called deviation from mean elevation (DEV), uses the standard deviation of each neighborhood.[69] DEV captures subtle, local-scale variations (e.g., a low ridge in an otherwise flat area) while TPI captures features that stand out in a wider context (e.g., hills versus plains).

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66 This was accomplished using a custom script in the statistical program R. See https://zenodo.org/record/7548543 for the script and the necessary data.

67 Fischer et al. 2021, 17.

68 Tagil and Jenness 2008. For archaeological applications, see De Reu et al. 2011; De Reu et al. 2013; Argyriou, Teeuw, and Sarris 2017; Knitter et al. 2019.

69 De Reu et al. 2013.

This process is highly scale dependent, with larger neighborhood sizes capturing larger-scale features. The appropriate neighborhood size depends on the resolution of the DEM and the scale of features relevant to the study. In the case of archaeology, we must also account for the possibility of changes in topography. Larger-scale features tend to persist longer than small-scale features in a relationship that can be very roughly quantified.[70] Taking all this into consideration, I used a radius of 500 m to arrive at geomorphological features that are unlikely to have changed much in the past 2,000 years while also being relevant to ancient agriculturalists. The result is two sets of six land-form classes.

II.4 Identifying Environmental Variables That Influence Site Location

Once all variables were constructed and their values at the locations of sites and comparison points had been measured, I analyzed each variable individually to see if the values of that variable at archaeological sites were different from the values at comparison points. I used two tests for equality between groups: the Kolmogorov Smirnov (K-S) test and comparison of kernel density estimates.[71] Both are nonparametric, meaning they do not assume that the values being analyzed are normally distributed. The K-S test is well established, but it does not perform well when there are many ties between groups.[72] Some variables (e.g., ridges) are rare, meaning that the territories of many points, both agricultural sites and comparison points, have a value of 0 for that variable. Kernel density comparison can handle such situations better but is more computationally intensive and is less often used in archaeology. It generates continuous probability density curves analagous to smoothed histograms of the values in each group then shuffles the membership of each point and generates the curves again. It performs this permutation many times (1,000 in this case) to create a set of curves that would result if the values did not differ by group, then asks whether the observed values fall within or outside of this set, computing a pseudo-p-value. Variables with a p-value less than 0.01 were considered to show significant differences between the territories around agricultural sites and those around comparison points. I also calculated the Vargha Delaney A statistic for each variable (V-D A).[73] This is a measure of the likelihood that a randomly selected observation from one group will have a higher value of a variable than a randomly selected observation from another

70 See Knitter et al. 2019, fig. 3.

71 All statistical analyses were performed in R (R Core Team 2022). Comparison of kernel density estimates requires the R package “sm” (Bowman and Azzalini 2021). For the statistics, see Heiberger and Holland 2015, 158–161 (K-S test); Bowman and Azzalini 1997, 109–112 (kernel density comparison).

72 Conolly and Lake 2006, 130–133.

73 Vargha and Delaney 2000, performed using the R package “effsize” (Torchiano 2020).

group. Values above 0.5 mean that agricultural sites tend to have higher values than comparison data.

Many of the variables identified as significant were correlated, and including correlated variables in multivariate models makes the resulting models difficult to interpret and less reliable. Therefore, I identified all pairs of variables with a correlation coefficient greater than 0.6 and removed the variables with less extreme V-D A statistics. This was straightforward for the WHS survey area, but the ASKP/LA survey area had more significant variables and more complex correlations between variables. Therefore, I selected from among the correlated variables the one with the V-D A statistic farthest away from 0.5 (i.e., the variable with the largest effect size), kept it, and removed the variables with which it was correlated. I then repeated the process using the remaining correlated variables until all correlated variables had been removed.

Mapping the distribution of agricultural sites overlain on these variables revealed some discontinuities between the survey areas on the Kerak Plateau (ASKP/LA) and the survey area in the Wadi al-Hasa and its tributaries (WHS). The relationships identified by the statistical analysis did not seem, visually, to hold in the WHS. Therefore, I reran all analyses on the two areas separately. This reduced the sample size (242 agricultural sites in the ASKP/LA area and 92 in the WHS as opposed to 334 in total), but the resulting relationships between environmental variables and agricultural sites more accurately reflect the strategies of agriculturalists operating in each area.

II.5 Building a Predictive Model of Agricultural Site Location based on Environmental Variables and Creating a Comparative Set of Agricultural Site Locations

Having identified the environmental variables that influenced agricultural site location, it was possible to create a multivariate model that predicts, on the basis of those environmental variables, the likelihood of encountering an agricultural site at a particular location. To do this, I relied on the Maximum Entropy machine learning approach (MaxEnt).[74] MaxEnt was developed by ecologists for species distribution modeling, which is similar to archaeological modeling in that we have data about where a species or site has been observed (presence) but cannot be certain that species or sites are absent in places where they have not been observed. MaxEnt is so called because it relies on the maximum entropy approach, which attempts to create a model that estimates a distribution of probabilities (in our case, of finding agricultural sites at a set of different locations) that is as close as possible to a uniform distribution (the same likelihood at every location) while also making sure that the

74 Implemented using the program MaxEnt (Phillips, Dudík, and Schapire 2020). For the algorithm, see Phillips, Anderson, and Schapire 2006; Phillips et al. 2017.

values of variables at predicted locations resemble the values at locations where sites are present. It does so through an iterative process, changing the weights of different variables and how they interact until a model emerges that maximizes predicted probability at the set of locations where sites have been observed. A recent comparison of predictive modeling techniques commonly used in archaeology identified MaxEnt as the most powerful.[75] Its power derives from the fact that it requires only presence data rather than presence/absence data, considers only the values of environmental variables in a study area and at the locations where sites are observed without making any further assumptions, and allows for a variety of linear and nonlinear relationships between predictor variables and predicted probability. Furthermore, the MaxEnt software allows one to specify a bias surface reflecting research intensity, so the bias of road visibility on the distribution of archaeological sites can be incorporated (see II.2.1, above).

One of MaxEnt's outputs is a raster in which the value of every cell is the predicted probability of observing a site at that location, given the values of the environmental variables used as inputs.[76] Just as before, when creating comparison points that were biased in the same way as the archaeological record as a whole, I used the Create Spatially Balanced Points tool with this MaxEnt raster to create a set of 10,000 points for each of the two survey areas that represent a null hypothesis: that agricultural sites are distributed across the landscape solely in response to environmental factors.

II.6 Measuring the Attractiveness of Central Places

These comparison datasets allowed me to test the hypothesis that the locations of central places also affected the distribution of agricultural sites. For every central place, I measured the distance in terms of pedestrian travel to every agricultural site and every comparison point (see below for the calculation of this distance). I then counted the number of agricultural sites that fell within three different threshold distances. These distances correspond to the cost of traveling by foot over 5, 10, and 15 km of flat terrain.

The next step was to determine how many sites one would expect to find within each threshold if proximity to central places played no role. To do this, I drew a random sample from the comparison dataset with the same size as the set of agricultural sites (242 for ASKP/LA, 92 for WHS) and counted how many fell within each threshold. I did this 1,000 times for each survey area to create a distribution of counts that could arise without the influence of the central place. I then compared, for each central place, the count of agricultural sites within each threshold to the distribution

75 Yaworsky et al. 2020.

76 The output parameter in MaxEnt was set to "logistic."

of counts of comparison points. When the observed count fell within the top 10 percent of the comparison distribution, I considered the central place to be attractive to sites at that threshold distance.

II.7 Models of Camel and Donkey/Pedestrian Movement

The distance between two places as experienced by a traveler depends on the amount of space between them (Euclidean distance), the means available to traverse that space, and the conditions encountered along the way.[77] GIS-based methods for measuring this type of distance and for modeling optimal paths between places on the basis of this distance have long been used in archaeology.[78] In this analysis, I used such methods for two purposes. The first was to measure the distance between agricultural sites and central places in order to assess the attractiveness of the latter. The second was to construct two networks of optimal paths between central places to assess the importance of each central place in those networks. I focus here on the latter application because the distances used to model donkey paths between central places are also used to measure the distances between central places and agricultural sites.

As already mentioned, long-distance trade in this space was usually carried out by camel, whereas local- and regional-scale travel was carried out more commonly on foot or by donkey. As a consequence, we can reconstruct, for analytical purposes, two different networks: one based on camel travel and the other based on pedestrian or donkey travel. The mechanics and energetics of human pedestrian travel are fairly well studied.[79] It has been argued that donkey-based travel should approximate pedestrian travel because donkeys are usually led by a person on foot.[80] Most human pedestrian models focus on the impact of slope on walking speed or energy expenditure, and there is evidence that donkeys respond less strongly to steep slopes than humans,[81] so in a combined human–donkey journey, the human was probably the limiting factor. Therefore, for this study, human and donkey movement will be modeled using the equation proposed by Irmela Herzog for estimating the energy expenditure of human pedestrian travel over different slopes.[82]

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77 The nature of any cargo being transported also affects distance, but this variable is not considered here.

78 For recent overviews, with discussion of open questions and issues, see Verhagen, Nuninger, and Groenhuijzen 2019; Herzog 2020. For two recent examples with particular relevance to the current project, see Zohar and Erickson-Gini 2020 on the route between Petra and Gaza and Manière, Crépy, and Redon 2021 on camel routes through Egypt's Eastern Desert.

79 Verhagen, Nuninger, and Groenhuijzen 2019, 226–227 with further literature.

80 Verhagen, Nuninger, and Groenhuijzen 2019, 220.

81 Yousef, Dill, and Freeland 1972.

82 Herzog 2013.

Heavily laden camels face different movement constraints than humans. In general terms, a loaded camel's high center of gravity makes steep slopes very difficult, and its soft feet make sandy terrain preferable to stony ground.[83] No research exists, however, to precisely quantify the impact of slope or surface conditions on camel speed or energy expenditure. In a recent article on routes through Egypt's Eastern Desert, Louis Manière, Maël Crépy, and Bérangère Redon have proposed an ingenious work-around.[84] They used historical accounts of camel journeys undertaken in the nineteenth and early twentieth century to map the routes that people actually used, then fine-tuned a set of cost factors through trial and error until they could reproduce the routes actually taken. Ideally, one would perform similar analyses in other parts of the world to test the robustness of their parameters and coefficients. In the absence of such research, however, theirs is the best available model for camel movement in arid conditions. Their model includes cost factors for traversing slopes between −25° and 25°, sandy versus rough terrain, and navigation inside and outside of wadis. The last factor is not relevant for this project because our study area was more densely inhabited than the Eastern Desert, making navigation easier, and because the north–south trade routes would have crossed the Kerak Plateau. Because all the cost factors were tuned together, to leave out one while retaining the other two is dubious practice. But the actual cost of traveling outside of a wadi is only 2, compared to 1 for traveling inside a wadi. This difference is similar to that between moving over flat land (cost of 1.0) and moving over a slope of 1° (cost of 1.8). Much higher costs are associated with steeper slopes, and the cost of traversing rough terrain is 3, so wadi navigation is the least influential factor in the model.

In implementing these models, I relied on the SRTM DEM to calculate slope and actual surface distance. To identify rocky areas that might impede camel movement, I used data from the recent landcover atlas of Jordan published by the FAO.[85] Specifically I considered all areas classified as "undifferentiated bare rock," "bare rock: granite," "chert plain," or "basaltic plain" as equivalent to Manière, Crépy, and Redon's "rough terrain." These areas were given a cost of 3. The other land classes were given a cost of 1, the equivalent of Manière, Crépy, and Redon's "Sandy-gravel deposit."

The availability of water sources has not been included in the least-cost path models. Given the semiarid nature of the environment, especially in the eastern part of the study area, this choice requires some comment. A recent comparison of the capabilities of various pack animals commonly used in caravans has shown that donkeys can travel 25–30 km per day and camels can travel 30–44 km per day.[86] On very long journeys, camels travel more slowly, approximately 20 km per day. Camels are famous for being able to travel without drinking for several days, but donkeys too

83 Borstad 2008, 63; Manière, Crépy, and Redon 2021, 27–28.

84 Manière, Crépy, and Redon 2021.

85 Franceschini, De Leo, and Muchoney 2019.

86 Riemer and Förster 2022.

can go without water for multiple days. Even in hot summer conditions, donkeys can go without water for one or two days.

How do these figures compare with the water resources available in our study area? Reconstructing the water sources that were available in antiquity is not simple. Archaeological data are always incomplete, and water infrastructure such as cisterns is both very difficult to date and could potentially remain in use for very long periods of time. A commonly used alternative is to rely on modern water resources as a proxy for the resources that could, potentially, have been available in the past.[87] We mapped all point sources of water (springs, wells, etc.) depicted on 1:100,000 scale Soviet topographic maps in our area of interest and then calculated a 20 km buffer around each point to find areas that were beyond one day's journey (conservatively estimated) from a water source.[88] All but one of the central places under analysis fall within a single large, uninterrupted area that is within 20 km of at least one water source. The exception is a major city, Philadelphia, which is served by a perennially flowing stream.[89] If we could comprehensively map Nabataean cisterns and reservoirs as well, the zone of water accessibility would surely expand. Travelers moving between central places in this region, then, were probably never more than a day's journey from water. Even if it was not abundant, water was available in enough places that it probably did not constrain the routes that people traveled to a significant degree.

II.8 Constructing Traffic Networks of Optimal Paths

Using these two models of movement, I calculated for each central place two rasters in which the value of each cell represents the distance to that central place when traveling via donkey and camel.[90] I used these rasters to calculate, for each central place, the shortest paths to every other central place.[91] These were then combined into two networks consisting of the shortest donkey and camel paths between every central place and every other place. A traffic network in which every point is directly connected to every other point without regard for distance or intervening points is obviously unrealistic, so it was necessary to prune the networks. This required two steps. First, paths that were improbably long needed to be removed. I removed those

87 E.g. Meyer and Seland 2016; Zohar and Erickson-Gini 2020.

88 My thanks, once again, to Julian Michgehl for digitizing this data.

89 In addition, an Early Roman reservoir called Tall al ʻUmayri has been found halfway between Philadelphia and Hesban, approximately 11 km from each.

90 This was done using Esri's Distance Accumulation tool. This tool is a significant improvement over their old Path Distance tool in that it uses a completely different algorithm, obviating the old D8 problem of measuring distance only between the center of a cell and the centers of its eight nearest neighbors. The result is a much more realistic representation of distance.

91 Using Esri's Optimal Path As Line tool.

that exceeded the maximum daily journey distances noted above.[92] That means donkey/pedestrian paths with a length greater than 30 km and camel paths with a length greater than 44 km were removed. Second, paths between two points that passed close to an intermediate point had to be removed. This ensured that that intermediate point was considered to be in between the two end points, which is crucial for the calculation of betweenness centrality. I decided to remove paths that passed within one kilometer of an intermediate node.[93]

In the process of pruning the network, it became clear that the initial set of central places was unsuitable for network analysis. The major cities that were distant from the study area ended up being isolated, because the nearest node was beyond a day's journey. As a result, I removed Petra, Bostra, Oboda, and Gerasa from the analysis. Second, some points were too close together. During the second stage of the pruning operation, too many paths into and out of these points were eliminated because they passed within one kilometer of another point. Ruweihi, Umm Hraga, and Mugharaia al Erham suffer from excessive proximity, so I eliminated the latter two, keeping only Ruweihi in the analysis. The result was two spatial traffic networks connecting 70 central places by routes optimized for travel by camel and donkey. In network analysis terms, the networks consist of 70 nodes and 839 and 901 directed edges weighted according to the costs of donkey and camel travel respectively.

II.9 Measuring the Centrality of Central Places

With these networks built, it was possible to calculate measures of centrality for every central place that reflect its position within each network.[94] Several different measures exist, each one a quantitative distillation of a different aspect of the network.[95] The appropriate measure depends on the type of interaction across the network that is of interest. In regional-scale exchange, goods are potentially produced (or collected from the surroundings) and consumed at all nodes within the network. A central place that could maximize its access to other nodes while minimizing the cost of transportation to those places would have an advantageous position within that network. This corresponds to 'closeness centrality,' a measure of how close a node is to every other node in the network. In long-distance exchange, goods are primarily traveling across the network to be consumed elsewhere, though some consumption

92 Riemer and Förster 2022, table 10.1.

93 I did this by calculating a 1-km buffer around each central place. I then used Model Builder in ArcGIS Pro to iterate through every path and select all the buffers that intersected that path. If only two buffers were selected (those around the origin and destination), the path was appended to a "keep" feature class. If more buffers were selected, the path was appended to a "prune" feature class and not used in further analysis.

94 I used the network analysis program Visone (Visone project team 2016).

95 Koschützki et al. 2005.

will also occur at nodes within the network. The critical factor here is the likelihood that a node will be passed through by people moving on to somewhere else. This corresponds to 'betweenness centrality.' To calculate this metric, all of the shortest paths between all pairs of nodes in the network are calculated. The number of such paths that pass through a given node determines its betweenness centrality. In our case, however, it was necessary to differentiate between paths because the network was, in reality, part of a much larger network of trade routes. The path across our network that would have been traveled by camel caravans moving between Petra and Bostra, for example, is much more important for long-distance trade than other shortest paths. Therefore, I identified three 'gateway nodes,' the central places in the region that are closest to Petra (Bir), Oboda (En Hosb), and Bostra (Philadelphia). The shortest paths between these three gateway nodes represent paths that are most likely to have been traversed by camel caravans moving between Petra and Bostra, Petra and Gaza, and Bostra and Gaza. To give the paths that passed through these nodes extra weight, I duplicated each gateway node and the links to and from them 10 times. The resulting camel betweenness values of central places, therefore, emphasize the nodes that lie on these major trade routes while leaving open the possibility that camels traveled other routes across the network.

II.10 Comparing Attractiveness to Centrality

I compared the attractiveness of central places to their closeness centrality within the donkey network and betweenness centrality within the camel network in two ways. The first considered each threshold distance individually, comparing the centrality score to the number of samples from the comparison points that produced fewer sites within that threshold than were actually observed (fig. 3, below). The second was a statistical test of equality (Student's t test), in which I grouped all central places that were attractive at any threshold together as 'attractive' while all the others were considered 'unattractive.' However, these comparisons were complicated by the fact that some of the central places were located outside of the survey area. In particular, central places near the gateway nodes discussed above tended to have high betweenness centrality in the camel network, but because they were far away from the survey zone, they had neither agricultural sites nor comparison points within the threshold distances. Including these central places would skew the results of comparison because they would be classified as 'unattractive,' when in reality, their attractiveness is unknown. Therefore, for every threshold, I extracted the central places that were close enough to the survey area to have comparison points within the threshold distance and used these for the first comparison. For the second comparison, I included all central places that had comparison points within the largest threshold distance.

III Results

III.1 Agricultural Sites and the Environment

We begin with the relationship between agricultural site locations and environmental variables. The K-S test and comparison of kernel-smoothed densities identified the variables in tables 2 and 3 as having significantly different values in the territories around agricultural sites than what would be expected from a random distribution. It is likely that agriculturalists, when deciding where to farm, took these variables into account, though they might also have considered other variables that are corre-

Tab. 2: Environmental variables that significantly influence the locations of agricultural sites in the ASKP/LA survey area. 0.5 has been subtracted from the V-D A statistic so that favored variables have positive values and avoided variables have negative values.

Variable	V-D A	MaxEnt permutation importance
Precipitation soaking in (500 m)	0.1340	23.9
TPI Valley (500 m)	0.0480	15.2
TPI Ridge (5 km)	0.0353	11.9
Runoff (5 km)	−0.0644	10.4
Aspect Northeast (5 km)	0.0545	7.3
DEV Upper slope or low rise (500 m)	0.0846	6.2
Springs (5 km)	0.1117	6.1
DEV Ridge (5 km)	−0.0555	4.8
Aspect South (5 km)	−0.0794	4.7
Aspect Southwest (5 km)	−0.0300	3.5
Aspect Northwest (5 km)	−0.0131	2.3
TPI Upper slope or low rise (500 m)	0.0922	1.8
DEV Lower slope or shallow valley (500 m)	−0.0807	1.5
Aspect North (5 km)	0.0625	0.4

Tab. 3: Environmental variables that significantly influence the locations of agricultural sites in the WHS survey area. 0.5 has been subtracted from the V-D A statistic so that favored variables have positive values and avoided variables have negative values.

Variable	V-D A	MaxEnt permutation importance
Runoff (500 m)	0.1664	31.3
DEV Ridge (5 km)	−0.0866	30.7
Runoff (5 km)	0.1023	16.1
DEV Upper slope or low rise (500 m)	−0.0777	10.2
Aspect Southwest (5 km)	−0.0273	10.2
DEV Valley (500 m)	0.1115	1.6

lated with these. Whether they preferred territories with more or less of each variable is reflected in the V-D A statistic, and the relative weight given to that preference is represented by the variable's permutation importance in the MaxEnt model.

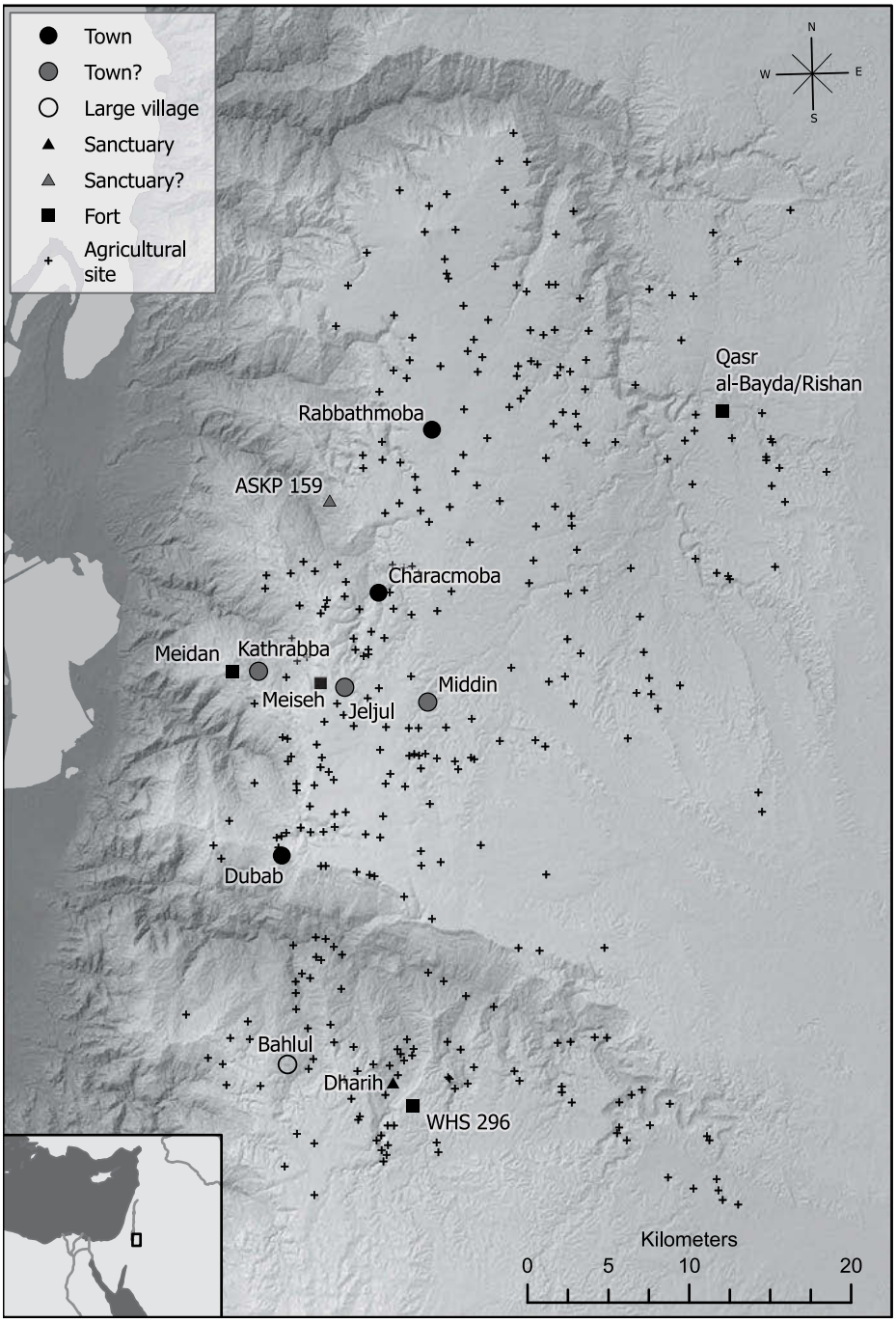
As expected, in both survey areas, the availability of water was the most important factor. However, on the Kerak Plateau, that water came in the form of precipitation, while in the Wadi al-Hasa, the amount of runoff in the immediate vicinity was more important. For the latter, minimizing ridges (defined locally using DEV) within the wider territory was almost as important. This landform is more common in the southern part of the WHS survey zone, and might reflect both a preference for locations closer to the major wadi[96] and a preference for areas in which sheltered locations were easier to find.

III.2 The Attractiveness of Central Places to Agricultural Sites

Thirteen of the central places identified on the basis of archaeological remains were found to have more agricultural sites within one of the threshold distances than would be expected if the locations of these sites were purely a response to environmental variables. These are shown in map 2 and table 4. Some of these places are in close proximity to one another. Most notably, the forts of Meiseh and Meidan are approximately 1.5 km from the possible towns of Jeljul and Kathrabba, respectively, and the fort known as WHS site 296 is less than two kilometers from the sanctuary at Dharih. At a larger scale, most of the attractive central places are found in the southwest corner of the Kerak Plateau. It is unclear, therefore, if agriculturalists intended to minimize the distance to some places and incidentally minimized distance to the others in the process, or if the close proximity of multiple central places made the whole area more attractive.

Towns (both certain and uncertain) are well represented among attractive central places. If one adds the large village of Bahlul, they make up more than half of the attractive places (7/13). Of the 50 central places whose attractiveness could be assessed, only 20 are towns or large villages, so these civilian population centers are significantly overrepresented in the set of attractive central places. Of the remaining six, four are forts and two are sanctuaries, proportions similar to their representation among all assessed central places. Three of these forts, as noted above, are within close proximity to another central place. Qasr al Bayda/Rishan, on the other hand, is isolated. Dharih is a well-known, major sanctuary, but ASKP site 159 is a small site with architecture that I, not the surveyors, interpret as possibly indicative of a cult

96 Proximity to the major wadi is captured well by the total runoff within 5 km variable, which is somewhat negatively correlated with the prevalence of DEV ridges (Spearman's $\rho = -0.56$).



Map 2: Central places attractive to agricultural sites at any threshold. © Eli J. S. Weaverdyck.

Tab. 4: Central places attractive to agricultural sites. Threshold distances are enclosed in single quotes to represent the fact that these are not Euclidean distances, but the pedestrian cost equivalent of traveling this distance over flat terrain.

Name	Type	Attractiveness thresholds
ASKP 159	Sanctuary?	'5 km' '10 km' '15 km'
Bahlul	Large village	'10 km' '15 km'
Characmoba	Town	'15 km'
Dharih	Sanctuary + village	'10 km'
Dubab	Town	'5 km' '10 km' '15 km'
Jeljul	Town?	'10 km' '15 km'
Kathrabba	Town?	'15 km'
Meidan	Fort	'15 km'
Meiseh	Fort	'5 km' '10 km' '15 km'
Middin	Town?	'10 km' '15 km'
Qasr al-Bayda/Rishan	Fort	'5 km'
Rabbathmoba	Town	'10 km'
WHS 296	Fort	'5 km'

place.[97] It seems, therefore, that agriculturalists were mostly attracted to the major population centers in the region, but that some forts and sanctuaries (Qasr al-Bayda/Rishan and the Dharih–WHS 296 dyad) could also be attractive.

III.3 Centrality in Donkey and Camel Networks

The importance of each central place in regional and long-distance exchange networks is represented by donkey-closeness and camel-betweenness centrality values respectively. The size of each central place symbol in the maps in fig. 2 reflects these values. Comparing the two, it is obvious that many more central places have high donkey-closeness scores and only a few have high camel-betweenness scores. This reflects the extra weight given to gateway nodes in recognition of the idea that long-distance trade passed more often through the nodes that connect this network to wider trade networks. High donkey-closeness values tend to be found in the middle of the network, whereas high camel-betweenness scores are found closer to the edges.

97 A large stone standing erect within a rectangular enclosure, 18 × 12 m, outside of which is a group of large stones including a rounded pillar segment.

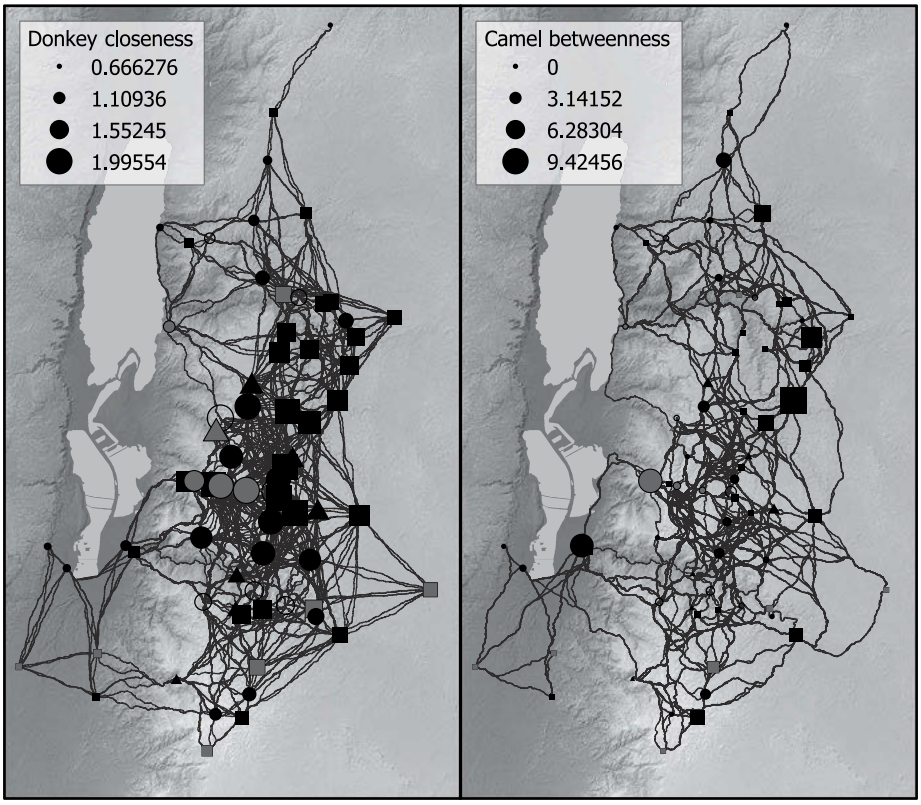


Fig. 2: Traffic networks and centrality scores of central places. Left: Optimal paths for donkey / pedestrian travel and closeness centrality within this donkey network. Right: Optimal paths for camel travel and betweenness centrality within this camel network. © Eli J. S. Weaverdyck.

III.4 Comparison of Centrality Measures and Attractiveness

The scatter plots below (fig. 3) show, for each survey area, a comparison between the likelihood that central places were attractive at a given threshold distance (the x-axis) and the two different measures of centrality (the y-axis). Trend lines show the general direction of correlation between the two variables. Closeness centrality in the donkey network is shown on the left and betweenness centrality in the camel network is shown on the right. While the trends are clearest in the ASKP/LA survey area (no doubt due to a higher number of agricultural sites and central places), they are consistent across both study areas. There is a positive correlation between donkey closeness and likelihood of attractiveness that does not exist for camel betweenness. In general, the central places that attract agricultural sites tend to have high closeness centrality in the donkey network, but they do not have high betweenness centrality in the camel network.

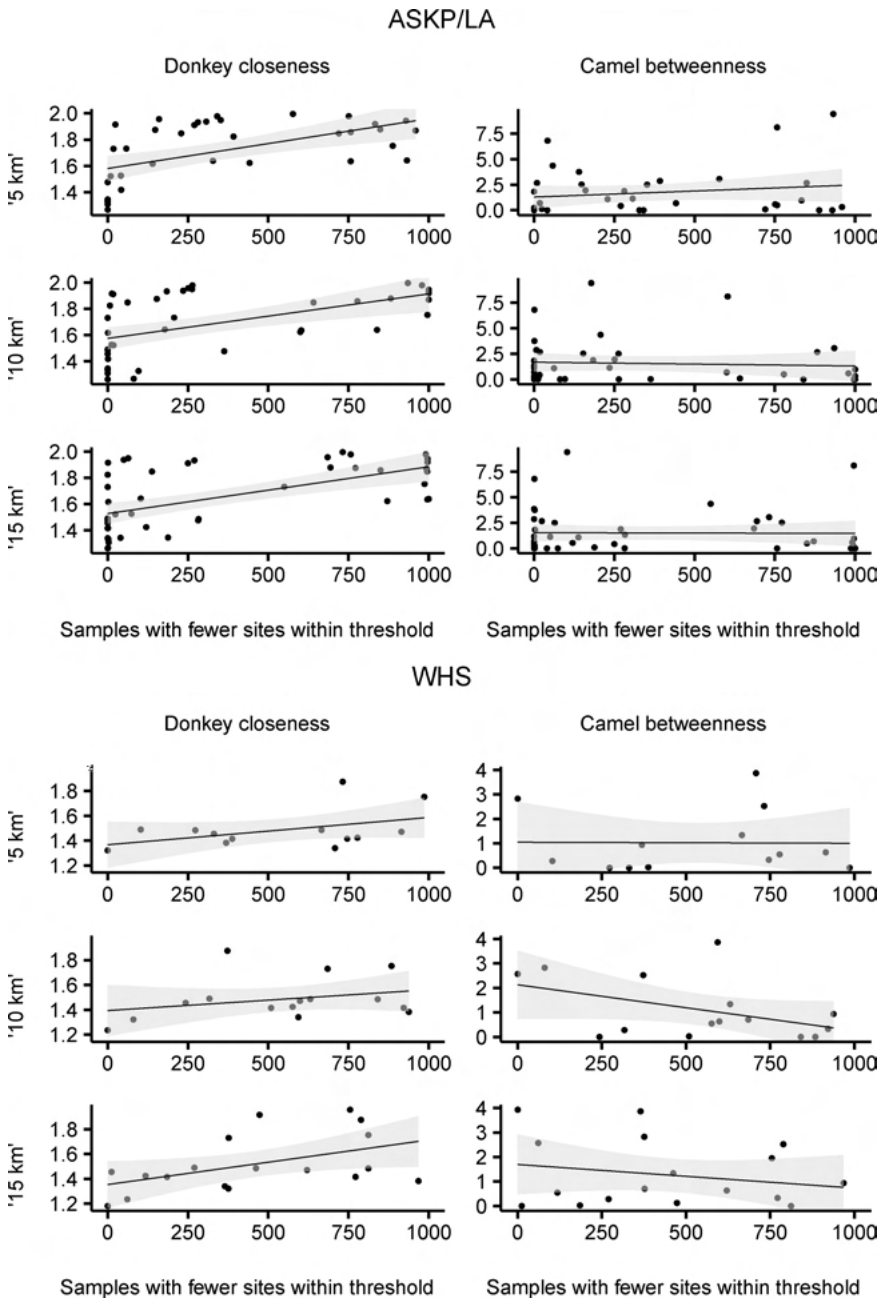


Fig. 3: Scatter plots showing the relationship between the attractiveness of central places and measures of centrality. Each point is a central place. The x-axes represent the number of samples, drawn at random from the comparison dataset of sites responding only to environmental variables, that produced fewer sites within a given threshold distance of each central place than were actually observed. Y-axes represent centrality measures.

There are some exceptions. At the '5 km' threshold in the ASKP/LA survey area, there is one site (Qasr al-Bayda/Rishan) that is both attractive and has high camel betweenness. What is more, this site has only moderate donkey closeness (1.6). Therefore, it is plausible to argue that the agriculturalists attracted to Qasr al-Bayda/Rishan were taking advantage of economic benefits brought about by long-distance trade passing through. We must put this in perspective, though. There are only 11 sites within '5 km' of this site out of 292 total in the study area. The other attractive site with high camel betweenness, also in the ASKP/LA survey area, is Kathrabba, which is attractive at the '15 km' threshold. Kathrabba also has moderate donkey closeness (1.6), and there are 52 agricultural sites within its attractive threshold. On the other hand, it is on the edge of the group of attractive central places in the southwest corner of the Kerak Plateau, making the influence of its position in long-distance trade networks less certain. In any case, we should not let these exceptions distract from the overall trend, which is clear: most attractive central places have moderate to high closeness centrality in the donkey network but do not have high betweenness centrality in the camel network.

This impression is confirmed by Student's t test. Taking into account all central places that are close enough to the study area for their attractiveness to be measured at any threshold, the average donkey-closeness score of attractive central places is significantly higher than that of unattractive places.[98] The average camel-betweenness score of attractive central places is not significantly higher.[99]

Based on this analysis, it seems clear that regional traffic patterns were more important to Nabataean farmers than long-distance traffic patterns. But it is still possible that farmers could have benefited from long-distance trade routes, even if they generally did not orient themselves toward them. We can map the hypothetical routes that long-distance trade would have taken across this region using the optimal path network created on the basis of camel movement.[100] Map 3 shows the shortest routes between the three gateway nodes. Recall that paths passing through these gateway nodes are duplicated 10 times in the calculation of camel betweenness. Paths that pass through two nodes, then are duplicated 20 times, accounting for much of the variation in that centrality score.[101]

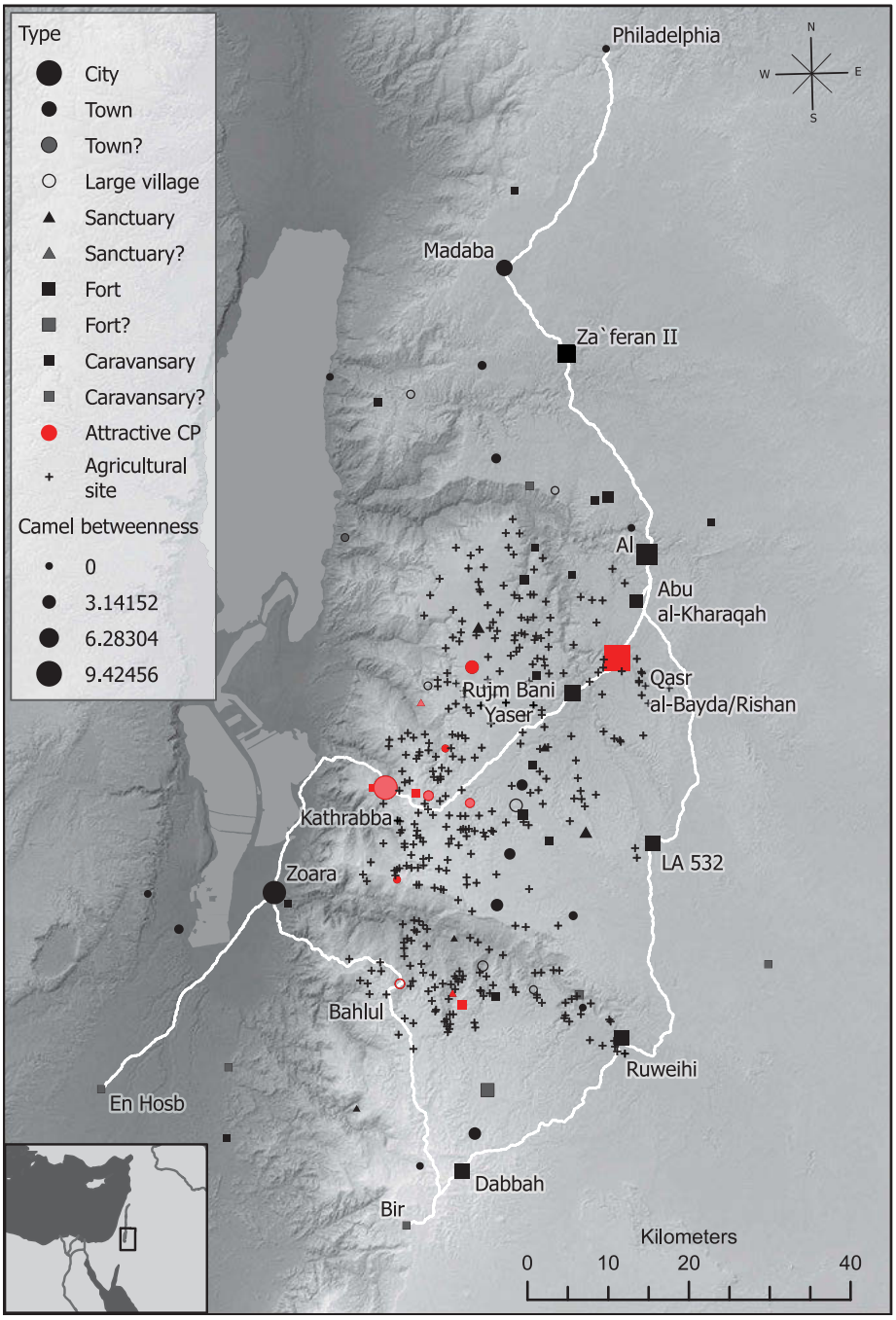
If camel caravans traveling from Petra to Bostra followed the shortest path across the network reconstructed here, they would have entered the network at Bir, passed through Dabbah, Ruweihi, *Limes Arabicus* site 532, Abu al-Kharaqa, Al, Za`feran II, and Madaba before arriving at Philadelphia. Note that the route actually bypasses the

98 Implemented in R, alternative = "greater," p = 0.027.

99 p = 0.342.

100 These routes were identified using the igraph package in R (Csardi and Nepusz 2006).

101 Note, however, that the path between the southern and southwestern gateway nodes is probably overemphasized. Caravans traveling west from Petra to Gaza would have bypassed this area altogether. Zoara, on the Dead Sea, lies on both this path and the path from north to southwest, so its centrality is probably overestimated.



Map 3: Optimal camel paths for traffic crossing the study area through the three 'gateway nodes.' The sizes of the central place symbols reflect betweenness centrality in the camel network. Central places that are attractive to agricultural sites at any threshold are shown in red. © Eli J. S. Weaverdyck.

attractive central place of Qasr al-Bayda/Rishan, though it is close enough that we cannot rule the latter out as a caravan stop. More importantly for our purposes, the route skirts the deepest sections of the wadis al-Hasa and Mujib, and therefore passes to the east of most agricultural sites.[102] A few agriculturalists might have been close enough to take advantage, but most were too far away. The route that connects Philadelphia to En Hosb and thence to the Negev and Judaea passes near many more agricultural sites. Moving from south to north (the route is the same in both directions), the route passes through Zoara in the southern Ghor of the Dead Sea and skirts the sea before climbing up to the plateau via the 'Kathrabba ascent' (one of three places where remains of Roman roads connecting the plateau to the Rift Valley have been found),[103] passing through Kathrabba, Rujm Bani Yaser, and Qasr al-Bayda/Rishan before joining the south–north route at Al. The exceptional central places discussed above, both attractive and with a high camel-betweenness score, lie on this route, not the south–north route. If Nabataean farmers were directly engaged with camel caravans, it would have been the caravans connecting the urbanized Levant with Judaea via the southern coast of the Dead Sea, not the caravans bearing aromatics from southern Arabia.

IV Discussion

The analysis described above lends support to the idea that agriculture in the Kerak Plateau and Wadi al-Hasa had little to do with the long-distance trade in aromatics from southern Arabia. This is not to say that elsewhere in the kingdom farmers did not orient themselves toward this trade, but here, in the agricultural heartland of the Nabataeans, long-distance trade does not seem to have been particularly important. The agricultural economy was oriented toward local centers of population, which were bound together in a regional network of movement and exchange. In this, the Nabataean agricultural economy was typical of what we would expect in the ancient Mediterranean more broadly. This also reinforces the impression given by Nabataean coinage, that the 'domestic,' intra-Nabataean economy was strong. The long-distance trade in aromatics may have made a few Nabataeans quite wealthy, but its effect on the larger economy, to the extent that it did affect the larger economy, was indirect.

The causes of agricultural extensification, then, are probably to be found among those put forth by the proponents of the scenario that downplays increasing trade. Population increase, as proposed by Twaissi, could have played a part.[104] Changing

102 This is not an edge effect. The *Limes Arabicus* project surveyed a large area to the east of this route, which I excluded from analysis due to the extreme paucity of agricultural sites (see II.2.2, above).

103 Davidovich, Ben-David, and Porat 2022.

104 Twaissi 2007.

climate regimes facilitated agricultural extensification as well. Reconstructed lake levels of the Dead Sea suggest increased precipitation starting already in the third or second centuries BCE, peaking in the first century BCE.[105] Recent reanalysis of this data, simulating annual precipitation values to find those that might produce the observed changes in lake level, suggest that the period 130–40 BCE was among the wettest periods of the last 4,500 years.[106] On the other hand, oxygen isotope levels measured in a speleothem in the Soreq Cave, Israel indicate that precipitation levels remained high until the end of the first century CE. In broad terms, then, the extensification of Nabataean agriculture seems to have coincided with fairly wet conditions. We cannot say whether these environmental conditions caused agricultural extensification or simply made it easier, however, because it is impossible to date the beginnings of that extensification precisely enough. Increased humidity in the late second to early first century BCE does coincide with the appearance of the first distinctively Nabataean ceramic types,[107] but the agricultural sites used in this study cannot be dated so precisely. On the basis of optical stimulated luminescence and radiocarbon dating, the agricultural terraces in the hinterland of Petra have been dated to the first century CE.[108] It is possible, therefore, that improved climate conditions preceded agricultural extensification by many decades.

This brings us to the question of security. As discussed in the previous chapter, the early and mid-first century BCE was a period when warfare was frequent. While the surveyed zones analyzed here were consistently under Nabataean control, as was the region immediately north of the Wadi Mujib, the areas north of that – around 20 km from the ASKP/LA surveys – were zones of contention between Judaean and Nabataean kings.[109] It is possible that the Kerak Plateau was seen as threatened by Judaean armies. It is even more likely that Nabataean armies would have demanded supplies from farmers in the region, discouraging investments in agricultural infrastructure. The *Pax Augusta* did not entirely eliminate such interstate violence, but it did make warfare much rarer, allowing agriculturalists to feel more secure that a passing army was unlikely seize their harvest or devastate their fields.

We can also speculate about the role of smaller-scale violence. Map 1, above, shows forts scattered throughout the survey zones and beyond, not only on the desert fringe, but in the western areas as well. These forts might have provided security against raids and bandits.[110] The fact that small agricultural sites are found scattered throughout the survey zones lends support to this idea. In previous episodes of agricultural extensification, such as the early Iron Age, settlements in the region tended

105 Bookman et al. 2004, 566.

106 Morin et al. 2019.

107 Schmid (2008) links this change in material culture to sedentarization.

108 Beckers and Schütt 2013.

109 Ji 2009.

110 Soldiers in forts also needed to be fed, but in contrast to an army on campaign, their demands would have been more spread out and predictable.

to be nucleated and clustered around the edges of major wadis, suggesting the inhabitants felt the need to defend themselves from attack.[111] In the Nabataean period, agriculturalists apparently felt safe enough to live in smaller groups across broader areas. Porter et al. see this as part of a larger pattern. Early Bronze and Early Iron Age extensification episodes feature nucleated settlement, while Late Iron Age, Nabataean, Late Roman, and Middle Islamic episodes feature dispersed settlement combined with forts.[112] The latter episodes, they note, also take place in the context of supraregional imperialism. This means that we could see Nabataean sedentarization as an example of a 'typical' frontier process, in which a frontier zone transforms to resemble more closely the core, as discussed in the previous chapter. However, as in that previous discussion, we must be careful about attributing too much agency to imperial influence. In this case, it was the Nabataean state that built the forts and Nabataean soldiers that manned them. Thus, it was the development of Nabataean state capacity – which was entangled with but never a simple consequence of the influence of neighboring empires – that shaped agricultural extensification, not the Roman Empire.

The picture that emerges from this analysis, then, is one in which improved climate and security conditions paved the way for the growth of sedentary agriculture. What is more, this agriculture was tied into a system of central places, and the regional exchange network that bound these central places together had a dynamic of its own that shaped the lives and decisions of agriculturalists. There is little room in this picture for long-distance trade. And yet Young's arguments identifying long-distance trade as the source of Nabataean fortunes, cited at the beginning of this chapter, remain compelling. Some Nabataeans really did become fabulously wealthy from trade. And, as I argued in chapter 12.A, the social networks defined by Nabataean identity and the actions of the Nabataean state – investing in infrastructure and diplomatic activity – likely played a part in their success. What this analysis reveals is that the profits from long-distance trade were concentrated in a few hands. Already by the fourth century BCE, as Diodorus tells us, some Nabataeans were becoming wealthy by facilitating connectivity between southern Arabia and consumers in the Mediterranean. The opportunities for profit expanded during and after the Augustan period, but only a few people were in a position to take the greatest advantage of those opportunities.

Why they were in such a position is not clear. Using the better-documented Palmyrene case as an analogy, we can suggest that individuals who, by dint of their social status, could marshal the resources necessary for a caravan (finances for acquiring cargos, camels, camel drivers, traders, and fighters for protection, etc.) and negotiate with the groups living along the caravan routes for security and supplies would have

111 Porter et al. 2014.

112 Porter et al. 2014, 144–146.

profited the most.[113] Without epigraphic material of the type we have from Palmyra, we cannot know how caravans were organized, and it is likely that several different individuals acted in concert, each providing a different service and possibly profiting to a different degree. We should also leave open the possibility that increased trade opened up new opportunities for social mobility. The growth of an industry processing raw aromatics into perfumes and the foundation of new Red Sea ports are good candidates for such opportunities. Nevertheless, if we consider that most Nabataeans were engaged in primary production and that a large portion (probably the majority) were sedentary agriculturalists by the first century CE, this analysis shows that long-distance trade did not provide any meaningful opportunities for profit to most Nabataeans.

This has important implications for how we imagine the role of long-distance trade in ancient frontier zones more generally. The journey from the incense-bearing lands in the south to the marketplaces and consumers in the north was arduous and required significant social, financial, and physical resources to complete. Those who had those resources could make a profit, which would further enhance the resources that could be invested in the next caravan. The combination of high cost and high profit meant that those who started with a small advantage over other Nabataeans could steadily increase that advantage over time. Most frontier zones, be they defined by ecological marginality or the meeting of different sociopolitical systems, entail a certain level of friction in the movement of goods across space and between people. When demand for goods from across the frontier is high and sustained, pre-existing differences in the ability to overcome that friction can lead to increased inequality in wealth and power within frontier-zone communities.

V Conclusion

This chapter employed an inductive, quantitative, spatial, model-based approach to find new evidence that would shed light on the vexed problem of the importance of long-distance trade to the Nabataean economy. The evidence that has emerged suggests that the trade in South Arabian aromatics, for which the Nabataeans were famous in antiquity, played little to no role in the regional economy of the Nabataean kingdom's agricultural heartland. Rather, as in other frontier zones examined in this volume, the dense meshwork of regional-scale connections formed the critical framework within which most people oriented their economic activity. This has important implications for how we see the economic development of this frontier zone in particular – emphasizing regional climatic and geopolitical forces – but also for how we

113 Seland 2016.

understand the role of long-distance trade in frontier zones more generally – highlighting structural dynamics that will often lead to increased inequality.

This type of method has several advantages to recommend it. First, model-building, and especially quantitative model-building, forces one to be very clear about the terms one uses. Previous attempts to address this question have conflated 'the Nabataean economy' with the extraordinary wealth held by (some) Nabataeans. A quantitative model-based approach forces one to be explicit and specific. In this case, I focused on the influence of regional versus long-distance exchange networks on the strategies of agriculturalists. Furthermore, I specified the meanings of geographical scales: 'long-distance trade' meant camel-based movement across the study area, 'regional' meant donkey-based movement between central places within the study area, and 'local' meant donkey or pedestrian movement between sites of agricultural production and central places. Whether or not one agrees with these definitions, the terms of the analysis are clear, and this clarity has allowed us to make progress by conceptualizing the problem more specifically.

Second, the need for such specificity encourages one to think critically about the categories with which one operates. Conceptualizing 'the Nabataeans' as a monolithic economic actor is heuristically untenable in this type of analysis. One is forced to break them down into differentiated actors: agriculturalists, central places, etc. Of course, these constituent actors remain heuristic devices, but they are heuristic devices that are used explicitly for a particular analytical purpose.

Third, because this type of method requires the researcher to be very explicit about the choices that they have made, others are able to repeat the analysis, making different decisions to see how they reflect the end result. The data used in this analysis have been made available on Zenodo to make such an exercise possible.[114]

Fourth, the use of quantitative spatial analysis, which identifies features characteristic of most sites in a study area, allows one to find evidence for structural factors that shape the behavior of the majority of a population. This forms a valuable counterpoint to most of the evidence we have for antiquity, which by its nature tends to reflect the experiences and actions of a small group of elites.[115]

Finally, the inductive, quantitative nature of the process allows one to draw clear comparisons between two competing hypotheses, to "choose between competing fictions," in Hopkins's words, on the basis of empirical evidence.[116] Naturally, theoretical predispositions enter into the questions one asks, the selection of variables that one analyzes, and the methods used to analyze them. But the goal of the method is to generate new evidence from preexisting information. Historical interpretation ultimately rests on that evidence, not the relative plausibility of competing theoretical presuppositions.

114 https://zenodo.org/record/7443364; https://zenodo.org/record/7548543.

115 See Weaverdyck, vol. 1, ch. 8.A and 8.B.

116 Hopkins 1978, x.

This is not the type of chapter that one normally finds in a handbook. But we feel it belongs here not only because it sheds important new light on the Nabataeans and the economic development of frontier zones, but because it illustrates a type of methodology whose potential is only increasing. GIS has long been a part of archaeology, but it is becoming more and more common, meaning more scholars are in a position to leverage it for their own purposes. The more impactful recent change is the growth in publicly accessible digital databases. The collection of digital spatial data can be an arduous, time-consuming process, making spatial analysis on reasonably large datasets a very costly endeavor. Now, the proliferation of large, online, publicly accessible databases such as the DAAHL makes this type of analysis infinitely easier.[117] It is our hope that this chapter inspires others to take advantage of these new datasets and quantitative analytical tools in their search for evidence of ancient economic history.

References

Ababsa, M. 2013. "Aridity." In M. Ababsa (ed.), *Atlas of Jordan: History, territories and society*, 64–67. Beirut: Presses de l'Ifpo.

Al-Bilbisi, H. 2013. "Topography and morphology." In M. Ababsa (ed.), *Atlas of Jordan: History, territories and society*, 42–46. Beirut: Presses de l'Ifpo.

Al-Fuqaha, M. M. H. 2018. "The Nabataean settlement in Central and Northern Jordan." PhD diss., Ruhr-Universität Bochum.

Al-Salameen, Z. M. M. 2004. "The Nabataean economy in the light of archaeological evidence." PhD diss., University of Manchester.

Argyriou, A. V., R. M. Teeuw, and A. Sarris. 2017. "GIS-based landform classification of Bronze Age archaeological sites on Crete Island." *PLOS ONE* 12.2 Public Library of Science, e0170727.

Banning, E. B. 1988. "Methodology." In MacDonald (1988), 13–25.

Beaumont, P., G. H. Blake, and J. M. Wagstaff. 1976. *The Middle East: A geographical study*. London: John Wiley & Sons.

Beckers, B. and B. Schütt. 2013. "The chronology of ancient agricultural terraces in the environs of Petra." In M. Mouton and S. G. Schmid (eds.), *Men on the rocks: The formation of Nabataean Petra. Proceedings of a conference held in Berlin 2–4 December 2011*, 313–322. Berlin: Logos.

Bookman, R., Y. Enzel, A. Agnon, and M. Stein. 2004. "Late Holocene lake levels of the Dead Sea." *GSA Bulletin* 116.5/6, 555–571.

Borstad, K. A. 2008. "History from geography: The initial route of the Via Nova Traiana in Jordan." *Levant* 40.1, 55–70.

Bowersock, G. W. 1983. *Roman Arabia*. Cambridge, MA: Harvard University Press.

Bowman, A. W. and A. Azzalini. 1997. *Applied smoothing techniques for data analysis: The kernel approach with S-Plus illustrations*. Oxford: Clarendon Press.

–. 2021. *R package 'sm': Nonparametric smoothing methods* (version 2.2.5.7.1). http://www.stats.gla.ac.uk/~adrian/sm.

117 See Weaverdyck, vol. 1, ch. 8.A for other examples of online databases.

Brilmayer Bakti, B. S. 2020. “Rainwater harvesting in rural Jordan: A GIS and remote sensing-based analysis of ancient and modern adaptations to water scarcity in a changing environment.” PhD diss., Heidelberg University.

Conolly, J. and M. Lake. 2006. *Geographical information systems in archaeology*. Cambridge: Cambridge University Press.

Csardi, G. and T. Nepusz. 2006. *The igraph software package for complex network research* (version 1.3.5). https://igraph.org.

Davidovich, U., C. Ben-David, and R. Porat. 2022. “The Roman-period road network in southern Moab: A geographic and historical enquiry.” *Palestine Exploration Quarterly* 154.2, 141–159.

De Reu, J., J. Bourgeois, M. Bats, A. Zwertvaegher, V. Gelorini, P. De Smedt, W. Chu, M. Antrop, P. De Maeyer, P. Finke, M. Van Meirvenne, J. Verniers, and P. Crombé. 2013. “Application of the topographic position index to heterogeneous landscapes.” *Geomorphology* 186, 39–49.

De Reu, J., J. Bourgeois, P. De Smedt, A. Zwertvaegher, M. Antrop, M. Bats, P. De Maeyer, P. Finke, M. Van Meirvenne, J. Verniers, and P. Crombé. 2011. “Measuring the relative topographic position of archaeological sites in the landscape, a case study on the Bronze Age barrows in northwest Belgium.” *Journal of Archaeological Science* 38.12, 3435–3446.

Esri. 2022. *ArcGIS Pro* (version 3.0). Redland, CA.

Farr, T. G., P. A. Rosen, E. Caro, R. Crippen, R. Duren, S. Hensley, M. Kobrick, M. Paller, E. Rodriguez, L. Roth, D. Seal, S. Shaffer, J. Shimada, J. Umland, M. Werner, M. Oskin, D. Burbank, and D. Alsdorf. 2007. “The Shuttle Radar Topography Mission.” *Reviews of Geophysics* 45.2, RG2004.

Fiema, Z. T. 1996. “Nabataean and Palmyrene commerce: The mechanisms of intensification.” *Les Annales Archéologiques Arabes Syriennes* 42, 189–195.

Fischer, G., F. Nachtergaele, H. van Velthuizen, F. Chiozza, G. Franceschini, M. Henry, D. Muchony, and S. Tramberend. 2021. “Global agro-ecological zones (GAEZ v4): Model documentation.” Rome: FAO.

Franceschini, G., E. De Leo, and D. Muchoney. 2019. *Jordan: Land cover atlas*. Rome: Food and Agriculture Organization of the United Nations. Data deposited at FAO GeoNetwork. https://data.apps.fao.org/map/catalog/srv/eng/catalog.search#/metadata/6dfcc76d-e0aa-439e-a10d-6366be3f23bc.

Gillings, M., P. Hacıgüzeller, and G. Lock, eds. 2020. *Archaeological spatial analysis: A methodological guide*. New York, NY: Routledge.

Hackl, U., H. Jenni, and C. Schneider. 2003. *Quellen zur Geschichte der Nabatäer: Textsammlung mit Übersetzung und Kommentar.* Freiburg: Universitätsverlag Freiburg Schweiz.

Heiberger, R. M. and B. Holland. 2015. *Statistical analysis and data display: An intermediate course with examples in R*. 2nd ed. New York, NY: Springer.

Herzog, I. 2013. “Theory and practice of cost functions.” In F. Contreras and F. J. Melero (eds.), *Fusion of cultures: Proceedings of the 38th annual Conference on Computer Applications and Quantitative Methods in Archaeology, CAA 2010*, 375–382. Oxford: Archaeopress.

–. 2020. “Spatial analysis based on cost functions.” In Gillings, Hacıgüzeller, and Lock (2020), 333–358.

Hill, J. B. 2006. *Human ecology in the Wadi al-Hasa: Land use and abandonment through the Holocene*. Tucson, AZ: University of Arizona Press.

Hopkins, K. 1978. *Conquerors and slaves*. Cambridge: Cambridge University Press.

–. (1995–1996) 2002. “Rome, taxes, rents and trade.” In W. Scheidel and S. von Reden (eds.), *The ancient economy*, 190–230. Edinburgh: Edinburgh University Press.

Ibach Jr., R. D. 1987. *Archaeological survey of the Hesban region: Catalogue of sites and characterization of periods*. Berrien Springs, MI: Andrews University Press.

Ji, C.-H. 2009. “Drawing the borderline: The Nabataean, Hasmonean and Herodian kingdoms in central Jordan.” *Studies in the History and Archaeology of Jordan* 10, 617–632.

Ji, C.-H. and J. K. Lee. 2007. “The Hellenistic period in the Dhībān Plateau: A quantitative analysis.” *Studies in the History and Archaeology of Jordan* 9, 233–239.

Johnson, D. J. 1987. “Nabataean trade: Intensification and culture change.” PhD diss., University of Utah.

Karger, D. N., O. Conrad, J. Böhner, T. Kawohl, H. Kreft, R. W. Soria-Auza, N. E. Zimmerman, H. P. Linder, and M. Kessler. 2017. "Climatologies at high resolution for the earth's land surface areas." *Scientific Data* 4, 170122. Data deposited at Dryad Digital Repository. https://doi.org/10.5061/dryad.kd1d4.

Kempf, M. and E. J. S. Weaverdyck. 2023. "Modelling bias and environmental preferences in archaeological spatial analysis." *Vegueta. Anuario de la Facultad de Geografía e Historia* 23.1, 57–95.

Knitter, D., J. P. Brozio, W. Hamer, R. Duttmann, J. Müller, and O. Nakoinz. 2019. "Transformations and site locations from a landscape archaeological perspective: The case of neolithic Wagrien, Schleswig-Holstein, Germany." *Land* 8.4, 68.

Knodell, A. R., S. E. Alcock, C. A. Tuttle, C. F. Cloke, T. Erickson-Gini, C. Feldman, G. O. Rollefson, M. Sinibaldi, T. M. Urban, and C. Vella. 2017. "The Brown University Petra Archaeological Project: Landscape archaeology in the northern hinterland of Petra, Jordan." *American Journal of Archaeology* 121.4, 621–683.

Koschützki, D., K. A. Lehmann, L. Peeters, S. Richter, D. Tenfelde-Podehl, and O. Zlotowski. 2005. "Centrality indices." In U. Brandes and T. Erlebach (eds.), *Network analysis: Methodological foundations*, 16–61. Berlin: Springer.

LaBianca, Ø. S. 1990. *Sedentarization and nomadization: Food system cycles at Hesban and vicinity in Transjordan*. Berrien Springs, MI: Andrews University Press.

Lehner, B. and G. Grill. 2013. "Global river hydrography and network routing: Baseline data and new approaches to study the world's large river systems." *Hydrological Processes* 27.15, 2171–2186.

Loreto, R. 2016. "The role of Dūmat al-Jandal in ancient North Arabian routes from pre-history to historical periods." In M. Luciani (ed.), *The archaeology of North Arabia: Oases and landscapes. Proceedings of the international congress held at the University of Vienna, 5–8 December, 2013*, 299–316. Vienna: Austrian Academy of Sciences Press.

Lucke, B., A. Sandler, K. A. Vanselow, H. J. Bruins, N. Abu-Jaber, R. Bäumler, N. Porat, and P. Kouki. 2019. "Composition of modern dust and Holocene aeolian sediments in archaeological structures of the southern Levant." *Atmosphere* 10.12, 762.

Lucke, B., F. Ziadat, and A. Taimeh. 2013. "The soils of Jordan." In M. Ababsa (ed.), *Atlas of Jordan: History, territories and society*, 64–67. Beirut: Presses de l'Ifpo.

MacDonald, B. 1988. *The Wadi el Ḥasa archaeological survey 1979–1983, west-central Jordan*. Waterloo: Wilfrid Laurier University Press.

–. 2015. *The southern Transjordan Edomite Plateau and the Dead Sea Rift Valley: The Bronze Age to the Islamic Period (3800/3700 BC–AD 1917)*. Oxford: Oxbow Books.

Manière, L., M. Crépy, and B. Redon. 2021. "Building a model to reconstruct the Hellenistic and Roman road networks of the Eastern Desert of Egypt, a semi-empirical approach based on modern travelers' itineraries." *Journal of Computer Applications in Archaeology* 4.1, 20–46.

Mattingly, D. J., P. Newson, J. Grattan, R. Tomber, G. Barker, D. Gilbertson, and C. Hunt. 2007. "The making of early states: The Iron Age and Nabataean periods." In G. Barker, D. Gilbertson, and D. J. Mattingly (eds.), *Archaeology and desertification: The Wadi Faynan Landscape Survey, southern Jordan*, 271–303. Oxford: Oxbow Books.

Meyer, J. C. and E. H. Seland. 2016. "Palmyra and the trade route to the Euphrates." *Aram* 28, 497–523.

Millar, F. 1993. *The Roman Near East: 31 BC–AD 37*. Cambridge, MA: Harvard University Press.

Miller, J. M. 1991. *Archaeological survey of the Kerak Plateau*. Boston, MA: American Schools of Oriental Research.

Morin, E., T. Ryb, I. Gavrieli, and Y. Enzel. 2019. "Mean, variance, and trends of Levant precipitation over the past 4500 years from reconstructed Dead Sea levels and stochastic modeling." *Quaternary Research* 91.2, 751–767.

Negev, A. 1977. "The Nabataeans and the Provincia Arabia." In H. Temporini and W. Haase (eds.), *Aufstieg und Niedergang der römischen Welt*, Part 2, vol. 8, 520–686. Berlin: De Gruyter.

–. 1986. *Nabatean archaeology today*. New York, NY: New York University Press.

Oleson, J. P. 2007. “Nabataean water supply, irrigation, and agriculture: An overview.” In K. D. Politis (ed.), *The world of the Nabataeans: Volume 2 of the international conference* The World of the Herods and the Nabataeans *held at the British Museum, 17–19 April 2001*, 217–249. Stuttgart: Franz Steiner.

Parker, S. T. 2006. *The Roman frontier in central Jordan: Final report on the* Limes Arabicus *Project, 1980–1989*. Washington D.C.: Dumbarton Oaks Research Library and Collection.

Parker, S. T. and A. M. Smith II. 2014. *The Roman Aqaba Project final report*. Vol. 1, *The regional environment and the regional survey*. Boston, MA: American Schools of Oriental Research.

Phillips, S. J., M. Dudík, and R. E. Schapire. 2020. *Maxent software for modeling species niches and distributions* (version 3.4.4). http://biodiversityinformatics.amnh.org/open_source/maxent/.

Phillips, S. J., R. P. Anderson, M. Dudík, R. E. Schapire, and M. E. Blair. 2017. “Opening the black box: An open-source release of Maxent.” *Ecography* 40, 887–893.

Phillips, S. J., R. P. Anderson and R. E. Schapire. 2006. “Maximum entropy modeling of species geographic distributions.” *Ecological Modelling* 190, 231–259.

Politis, K. D. 2021. *Ancient landscapes of Zoara.* Vol. 1, *Surveys and excavations at the Ghor as-Safi in Jordan, 1997–2018*. London: Routledge.

Porter, B. W., B. E. Routledge, E. M. Simmons, and J. S. E. Lev-Tov. 2014. “Extensification in a Mediterranean semi-arid marginal zone: An archaeological case study from Early Iron Age Jordan’s eastern Karak Plateau.” *Journal of Arid Environments* 104, 132–148.

Psarëv, A. A. 2005. *Russian military mapping: A guide to using the most comprehensive source of global geospatial intelligence*. Minneapolis, MN: East View Cartographic.

R Core Team. 2022. *R: A language and environment for statistical computing* (version 4.1.3). Vienna: R Foundation for Statistical Computing. http://www.R-project.org/.

Rambeau, C. and S. Black. 2011. “Palaeoenvironments of the southern Levant 5,000 BP to present: Linking the geological and archaeological records.” In S. Mithen and E. Black (eds.), *Water, life and civilization: Climate, environment and society in the Jordan valley*, 94–104. Cambridge: Cambridge University Press.

Riemer, H. and F. Förster. 2022. “Donkeys, camels, and the logistics of ancient caravan transport: Animal performance and archaeological evidence from the Egyptian Sahara.” In P. B. Clarkson and C. G. Santoro (eds.), *Caravans in socio-cultural perspective: Past and present*, 145–173. New York, NY: Routledge.

Safrai, Z. 1994. *The economy of Roman Palestine*. London: Routledge.

Savage, S. H. and T. E. Levy. 2014. “DAAHL — The Digital Archaeological Atlas of the Holy Land: A model for Mediterranean and world archaeology.” *Near Eastern Archaeology* 77.3, 243–247.

Schmid, S. G. 2008. “The Hellenistic period and the Nabataeans.” In R. B. Adams (ed.), *Jordan: An archaeological reader*, 353–411. Oakville, CT: Equinox.

Seland, E. H. 2016. *Ships of the desert and ships of the sea: Palmyra in the world trade of the first three centuries CE*. Wiesbaden: Harrassowitz.

Speidel, M. A. 2019. “Rom und die Fernhandelswege durch Arabien.” In A. Kolb (ed.), *Roman roads: New evidence – new perspectives*, 53–66. Berlin: De Gruyter.

Studer, J. and A. Schneider. 2008. “Camel use in the Petra region, Jordan: 1st century BC to 4th century AD.” In E. Vila, L. Gourichon, A. M. Choyke, and H. Buitenhuis (eds.), *Archaeozoology of the Near East VIII: Actes des huitièmes Rencontres internationales d’Archéozoologie de l’Asie du Sud-Ouest et des régions adjacentes*, 581–586. Lyon: Publications de la Maison de l’Orient et de la Méditerranée.

Tagil, S. and J. Jenness. 2008. “GIS-based automated landform classification and topographic, landcover and geologic attributes of landforms around the Yazoren Polje, Turkey.” *Journal of Applied Sciences* 8, 910–921.

Torchiano, M. 2020. *Effsize: Efficient effect size computation* (version 0.8.1). https://doi.org/10.5281/zenodo.1480624.

Twaissi, S. 2007. “Nabataean Edom: A demographic and archaeological approach to modelling sedentarisation and regional dynamics.” *Levant* 39.1, 143–163.

USA Army Map Service. 1970. “Jordan 1 : 50000: K737 series.” Washington D.C.: Defense Mapping Agency.

Vargha, A. and H. D. Delaney. 2000. “A critique and improvement of the *CL* common language effect size statistics of McGraw and Wong.” *Journal of Educational and Behavioral Statistics* 25.2, 101–132.

Verhagen, P., L. Nuninger, and M. R. Groenhuijzen. 2019. “Modelling of pathways and movement networks in archaeology: An overview of current approaches.” In P. Verhagen, J. Joyce, and M. R. Groenhuijzen (eds.), *Finding the limits of the* limes*: Modelling demography, economy and transport on the edge of the Roman Empire*, 217–249. Cham: Springer.

Visone project team. 2016. *Visone: Analysis and visualization of social networks* (version 2.17). https://visone.ethz.ch.

Weaverdyck, E. J. S. 2022. “Auxiliary forts and rural economic landscapes on the northern frontier.” In M. Horster and N. Hächler (eds.), *The impact of the Roman Empire on landscapes: Proceedings of the fourteenth workshop of the international network Impact of Empire (Mainz, June 12–15, 2019)*, 223–248. Leiden: Brill.

Wenning, R. 1987. *Die Nabatäer – Denkmäler und Geschichte: Eine Bestandsaufnahme des archäologischen Befundes*. Göttingen: Vandenhoeck & Ruprecht.

–. 2007. “The social-cultural impact of trade relations: The case of the Nabataeans.” *Studies in the History and Archaeology of Jordan* 9, 299–305.

Yaworsky, P. M., K. B. Vernon, J. D. Spangler, S. C. Brewer, and B. F. Codding. 2020. “Advancing predictive modeling in archaeology: An evaluation of regression and machine learning methods on the Grand Saircase-Escalante National Monument.” *PLOS ONE* 15.10, e0239424.

Young, G. K. 2001. *Rome’s eastern trade: International commerce and imperial policy, 31 BC–AD 305.* London: Routledge.

Yousef, M. K., D. B. Dill, and D. V. Freeland. 1972. “Energetic cost of grade walking in man and burro, *Equus asinus*: Desert and mountain.” *Journal of Applied Physiology* 33.3, 337–340.

Zohar, M. and T. Erickson-Gini. 2020. “The ‘Incense Road’ from Petra to Gaza: An analysis using GIS and cost functions.” *International Journal of Geographical Information Science* 34.2, 292–310.

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