ARCHAEOLOGY AND ITS DISCONTENTS

Archaeology and its Discontents examines the state of archaeology today and its development throughout the twentieth century, making a powerful case for new approaches.

Surveying the themes of twentieth-century archaeological theory, Barrett looks at their successes, limitations, and failures. Seeing more failures and limitations than successes, he argues that archaeology has over-focused on explaining the human construction of material variability and should instead be more concerned with understanding how human diversity has been constructed. Archaeology matters, he argues, precisely because of the insights it can offer into the development of human diversity. The analysis and argument are illustrated throughout by reference to the development of the European Neolithic.

Arguing both for new approaches and for the importance of archaeology as a discipline, *Archaeology and its Discontents* is for archaeologists at all levels, from student to professor and trainee to experienced practitioner.

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Why Archaeology Matters

John C. Barrett

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For the ground keeps on giving the illusory image of a greater depth, and when we seek to reach this, we keep on finding ourselves on the old level.

Our disease is one of wanting to explain.

Wittgenstein – *Remarks on the Foundations of Mathematics*, VI §31

'How am I able to obey a rule?' – if this is not a question about causes, then it is about the justification for my following the rule in the way I do.

If I have exhausted the justifications I have reached bedrock, and my spade is turned. Then I am inclined to say: 'This is simply what I do.'

Wittgenstein – *Philosophical Investigations*, § 217

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INTRODUCTION

The central argument of this book is that archaeology must enable us to understand how different forms of human life have emerged historically through their desire to understand, and to engage with, the worlds that they have encountered. I have termed these forms of human life different kinds of 'humanness' (Barrett 2014a) in an effort to emphasise their diversity, and I have identified the mechanisms that brought them into existence as 'biocultural' processes.

If understanding the historical conditions under which human diversity has been created is indeed the main purpose of archaeology, then we obviously need to specify how that purpose might be achieved. This will require us to be clear as to the kinds of evidence that are available to archaeology, and the means by which such an investigation can be facilitated. It has often been assumed that the kinds of evidence with which archaeology deals is evidence that represents a particular kind of process, providing us with a record resulting from the actions of that earlier humanity. This assumption is put to one side here; indeed, I will argue that it is an assumption that has contributed to the failure of archaeology to realise its wider potential. I will argue that the fundamental issue that archaeology confronts concerns the relationship between the various material conditions that once existed and the ways that the various forms of humanness emerged by their learning how to live within those material conditions.

If we characterise archaeology as an investigation of how forms of humanness created themselves by bringing the material conditions of their world into view, then the way that the concept of *culture* has been used by archaeology needs to be reviewed. As Benjamin Roberts and Marc Vander Linden have emphasised, the term has been widely used as the means to group similar levels of variation amongst the material assemblages: an 'empirically based framework within which to place new data from excavations and surveys' (Roberts & Vander Linden 2011b, 5). However, by treating archaeological evidence as if it represented the actions of an

extinct human presence in this way, the question is raised as to what these cultural assemblages might represent in terms of human behaviour? This has traditionally been answered by asserting that patterns of cultural materials simply represent the ways people once did things according to certain cultural norms and traditions. Of course, this then introduces the further question of how these human motivations might have originated, and it has been in attempting to deal with this further question that archaeology's failures in reasoning have been exposed.

Most practising archaeologists (who today are widely involved in various aspects of Cultural Resource Management) are concerned with the recovery and analysis of ancient materials. These materials gain their significance for archaeology because they are believed to have been structured by processes that once operated in the human past. Indeed, their importance is that it was to a now extinct human existence that these materials are assumed to have once made reference. It is as if that earlier human presence had somehow caused, and had thus been recorded by, the form of the material residues. The American archaeologist Michael Schiffer (1976) once distinguished between the human or culturally motivated 'c-transformations' of the material, and the record of 'natural' processes of erosion and transformation (so-called 'n-transforms'). The discovery of artefacts has therefore resulted in describing them as the representations of the processes of their creation, use, discard, and their subsequent erosion. In addition, some aspects of soil and vegetational history and of soil erosion have been taken to represent a history of human cultivation and land-use. The motivations of human behaviour have then been divided between cultural motivations, which are the learnt procedures of how to do things, and the consequences of those actions in terms of their function, or the requirements that they appear to have satisfied.

Recording the stratigraphic context of sequences of material residues such as these is a basic requirement of field procedures. This was emphasised by Wheeler (1956), and the excavation, recording, and analytical procedures concerning soil stratigraphy have been variously refined in the UK by, for example, Philip Barker (1982), Edward Harris (1989), Steve Roskams (2001), and Martin Carver (2009). It has been by the means of stratigraphic analysis that the patterns across broadly contemporary residues have been identified, and these have been treated as indicating the ways human behaviour was once organised and executed. Sequences in this material have thus been treated as indicating periods of stability or change in the organisation of that behaviour, with the ultimate aim of establishing the forces that might have structured, and might thus explain, the history of that behaviour. This has placed the forces motivating human behaviour at the heart of any archaeological attempt to explain the patterns of material. The challenge 'to explain' is considerable, and as Colin Renfrew and Paul Bahn (2004, 469) have commented, '[t]o answer the question "why" is the most difficult task in archaeology'.

In trying to address the task of explanation, archaeology has moved away from earlier attempts that explained human behaviour by reference to its supposed cultural motivations, and has moved instead towards explanations in terms of what that behaviour had achieved, and these achievements are believed to have been

structured by the demands of environmental or social adaptation, or by the playing out of conceptual schemes of moral and political order. As a result, archaeology has seemed to have been more concerned with the humanity behind the artefacts, and with the forces that had structured that humanity's behaviour, than it has with the material context of that humanity's existence. This apparent bias has prompted the view that 'things . . . are too often treated as secondary expressions of society, social structures and cultural values' (Olsen et al. 2012, vii), and as a reaction against this archaeology of structural explanations (that are often expressed in highly theoretical terms), archaeology has recently been characterised, by some at least, as 'the discipline of things' (cf. Olsen 2010).

This move towards archaeology as the discipline of things, prompted by the desire to turn away from viewing the world 'from a perspective presupposing humans in a privileged position with respect to nature' (Webmoor 2007, 568), has also recognised that all things display an agency (Olsen 2012, 20) because they changed historical conditions by their very existence. While this accepts that the historical conditions that are glimpsed by archaeology arose from an assemblage of all existing things, human and non-human, living and non-living (Latour 1993 & 2005; Witmore 2007; Olsen et al. 2012; DeLanda 2016; Jervis 2019), precisely how that mixing had occurred, that is, how it was structured, does not seem to have been discussed. As a result, the attempt to centre archaeological analysis upon the existence of things alone (Olsen et al. 2012, 136–156; Pétursdóttir 2017), rather than upon the making of the phenomena of humanness that had arisen amongst those things (cf. Marshall & Alberti 2014; Barad 2007; Braidotti 2019a), appears to have been little more than the removal of life's otherwise messy existence.

All forms of archaeological recording and analysis have depended upon three things: the perspective of the investigator (including their various expectations and prejudices as to the nature of existence); the methodology that should be employed in analysis; and a belief as to the historical reality that is being observed. When taken together these things contribute towards an agreed scheme of working, or what Thomas Kuhn (1970) once referred to as a *paradigm*. The archaeological community has tended to work within a single paradigm, enabling that community to share a perspective upon the status of archaeological data, and to agree upon the kinds of things that need investigating (past processes), and how they should be investigated (through a theoretically informed analysis of archaeological materials). This has also enabled archaeology to work 'cross-culturally' on the assumption that the cultural differences witnessed between the peoples, represented by different assemblages of material, were no more than the merely apparent differences in the execution of behaviours that were determined by the structure of a limited number of underlying processes. The paradigm that dominated twentieth-century archaeology can therefore be characterised as a *representational paradigm* simply because archaeological residues have been taken to represent the target condition of human behaviour, and, behind that, the processes that had structured that behaviour.

The failure of this representational paradigm has been expressed in the complaint that claims that the material evidence is never enough to provide for an

understanding of the historical process. Instead that material merely indicates the existence of the forces of history that are the real object of archaeological concern because it was these forces that supposedly directed or compelled certain historical conditions to come into being (Webmoor & Witmore 2008, 53). If we accept this complaint then it means that we can no longer explain the changing patterns of archaeological materials by theorising the existence of this or that determinate force that supposedly operated behind the backs of the contemporary human populations. By way of an alternative, I will argue that the task of archaeology is to gain some understanding of how human diversity brought itself into existence by means of the growing and developing familiarity of people with the material conditions amongst which they had lived and developed, and to which archaeological research can now attest.

The diverse forms of life that have brought themselves into existence, did so without being formed by some pre-existing process: they were not created, instead they created themselves within certain given material conditions. Forms of life therefore act intentionally, in the technical meaning of that term; namely that a form of life emerges by means of its own development, orientating itself towards the things that are of relevance for it.

This argument is developed in this book in the following way. Chapter 1 distinguishes between the processes of explanation and those involved in understanding. Given that claims were once made that archaeology should *explain* the changes that it had described in sequences of material residues, and the desire to express those explanations in terms of the generally applicable causes for cultural change, we must allow that the formulation of all such explanations will be informed by our own perceptions of how the world seems to work. The alternative that I seek is an archaeology that attempts to *understand* how others were able to bring themselves into being by their occupation of the different kinds of material conditions that are attested for by archaeological residues. The long-recognised historical and geographical diversity of material culture might therefore be understood as contributing to the material conditions within which different kinds of humanness could emerge.

Chapter 2 reviews the way that archaeological materials became accepted as the testimonies for the existence of a now absent, but nonetheless singular humanity. When these materials were recognised as being recovered from various geological contexts, they were used to argue for the antiquity of that humanity. The principle that a human presence is attested for by the recovery of material residues in an earth-bound or geological context, and that these deposits can be interpreted in light of the principle of uniformitarianism, continues to inform current archaeological practice. During the latter part of the twentieth century an increased emphasis was placed upon attempts to explain the ways that human lives have been ordered by various indigenous forces, and these explanations replaced earlier models of diffusion and cultural influences.

Chapters 3, 4, and 5 consider the various ways that archaeology has, since the 1950s, been used to explain the order observed amongst archaeological residues,

not as sequences comprising individual cultural traits but in terms of the systematic organisation of the past, firstly with reference to the system's adaptation to available ecological resources, secondly with reference to the logic of its social organisation, and thirdly with reference to the way that human systems were likely to have been structured by the cognitive perceptions of their members. Because these chapters concern the changes that occurred in the ways that the past was thought about during the latter half of the twentieth century, many readers might regard a review of these changes as redundant, given the various critiques that have been directed towards them more recently. Consequently, those readers might conclude that there is no point in dealing with these earlier ways of thinking. The need to revisit these traditions is however warranted by the problems that we have inherited in contemporary archaeology. These problems lie not with archaeology's commitment to the study of human behaviour, but with the ways in which that behaviour, which had resulted in a particular form of material residue, was treated as if it was determined by forces of an uncertain origin. The same working assumption, that archaeological data represent the consequences of one or other of these relatively abstract processes, is shared by all three traditions of analysis. All three have also expressed their failure to recognise what is unique concerning the archaeological understanding of human diversity. Consequently, all three have demonstrated a reliance in their interpretations upon analogies drawn from the neighbouring disciplines of History, Anthropology, and more widely across the Social Sciences. These analogies are assumed to illustrate, or to model, the processes that are believed to have resulted in cultural change. The problem with all such models is that if these analogies do represent the ultimate achievement of archaeological interpretation, then it is unclear why we bother to collect archaeological data, if we are to assume that other disciplines are better able to supply the explanations for human diversity.

Chapter 6 establishes that the basis for understanding human diversity lies in the biology of life, not in terms of biological determinism, as might be implied by the recent emphasis upon genetic analysis, but by treating the histories of human diversity as if they were the products of biological growth, development, and adaptation. Each of these processes of development has resulted from the phenomenological interpretations that have been played out within the biological and cultural context of an evolving ecology. It is the material traces of these ecologies that are partially preserved as archaeological data.

The histories of populations are constructed by the biocultural developments of the individuals who were members of those populations. Such an understanding requires that we accept that humanity, as a form of life, has grown and developed biologically. This process of coming into being is one shared with all other living things, and the growth of a form of life is achieved by means of its interpretation of the material ecologies within which its life is able to develop. Forms of humanness can only ever have brought themselves into existence, therefore, by means of their recognition of those things that had a significance for them. Archaeology studies the various conditions of human possibility which survive today, at least in part, as a material residue. The point of this kind of archaeology is not to explain the reasons

for the changing patterns of these residues, as if such changes represented changes in behaviour, but to understand how the diversity of humanness has been created by living amongst these changing material conditions. Whilst neither cultural nor biological resources have been determinant in this process, biological and cultural materials were nonetheless resources necessary for the processes of interpretation that brought a population into existence. This is the theme explored in Chapter 7.

By rejecting the dominant archaeological model in which material residues are explained as if they were the products of past human behaviour, we need to re-evaluate the critique of Cultural Archaeology that had been formulated in the latter half of the twentieth century. This critique had claimed that the explanations offered for the large-scale patterns of apparent cultural uniformity were inadequate. The extensive regions of common cultural patterns in the material have subsequently been ignored by archaeological schemes of explanation, although they have continued in use as the conventions of archaeological description (cf. Roberts & Vander Linden 2011). While we might continue to reject claims that these patterns represent patterns of normative behaviour, it remains entirely possible that they map environments that sustained patterns of common human development. Chapter 8 explores this argument from the perspective of the early Neolithic in Europe.

The traditional sequence of analytical procedures in archaeology that runs from the methods of recovery to the theoretical modelling of the past as a process, has enforced a distinction in the practice of archaeology, between the description of things on the one hand, often undertaken by field technicians, and their academic interpretation and explanation on the other. This has resulted in the eclectic adoption of various theoretical fashions in the hope that they will not only facilitate the processes of interpretation, but also enhance the reputation of the interpreter (Bintliff 2011). Recent attempts to reject the claim that the collection, and the study, of things is only 'important insofar as they provide access to the human beings assumed to lie behind them' (Olsen et al. 2012, 7) have resulted in asserting the centrality of things to archaeological experience. Given that archaeologists 'labor hard to collect their data, their information' (Olsen et al. 2012, 58), we might hope that the reasons for that labouring would extend beyond a desire simply to care for antiquities. What is it that archaeology might hope to achieve as the results of these labours? The craft of excavation (Shanks & McGuire 1996) has its rewards in the confidence that is gained from participating in that process, in team working, and in the romanticism of discovering things that have been long forgotten. But what is it that makes this work the scene of 'active individual engagements with *the past*' (Olsen et al. 2012, 62 emphasis added) rather than merely being an engagement with things? When Colin Renfrew wrote so evocatively of 'the sense of mystery and solitude when I was the first to enter, perhaps for thousands of years, one of the side chambers at Quanterness' (Renfrew 2003, 40), what did he think that he was encountering?

This is not a book about archaeological theory, instead it is a book that enquires into the purpose of archaeology. The purpose that is suggested here is

that archaeology should establish a relationship between our contemporary lives and the historical lives of others in such a way that it enables us to understand some of the ways that those other lives were constructed. This should support our realisation that humanity has been determined neither as the creation of God nor as the creation of genetics. Throughout history, different kinds of humanness have brought themselves into existence with reference to the material conditions amongst which they lived, and whose fragmented residues survive today (Kronfeldner 2018, 8). They have done this out of the desire to understand the nature and the origins of the worlds amongst which they lived. An archaeology of what remains of those material conditions matters because it can, and indeed it should, confront some of the political and ethical challenges that we face today in terms of our current diversities. Fundamental to these modern challenges is our ability to understand, and indeed to tolerate, those others whose lives are different from our own. This will require us to recognise that what is unfamiliar to us in those other lives, along with the familiar normality of our own lives, are not given but are constructed out of the resources that each of us has to hand. This is what, in my view, archaeology should teach us, and it is towards an understanding of this point that this book is dedicated.

BIBLIOGRAPHY

Abramiuk, M.A. 2012, *The Foundations of a Cognitive Archaeology*, Cambridge MA: The MIT Press.

Adami, C. & A. Hintze 2018, Thermodynamics of evolutionary games, *Physical Review E*, 97(062136), 1–8, DOI: 10.1103/PhysRevE.97.062136.

Adkins-Regan, E., T.J. DeVoogd & J.M. Moore 2010, Social behaviour and bird song from a neural and endocrine perspective, in T. Székely, A.J. Moore, & J. Komdeur (eds.) *Social Behaviour: Genes, Ecology and Evolution*, Cambridge: Cambridge University Press, 59–84.

Alberti, B. 2016, Archaeologies of ontology, *Annual Review of Anthropology*, 45, 163–179, DOI: 10.1146/annurev-anthro-102215-095858.

Alberti, B., S. Fowles, M. Holbraad, Y. Marshall, & C. Witmore 2011, 'Worlds otherwise': archaeology, anthropology, and ontological difference, *Current Anthropology*, 52(6), 896–912, DOI: 10.1086/662027.

Alberti, B., A.M. Jones, & J. Pollard (eds.) 2013, *Archaeology After Interpretation: Returning Materials to Archaeological Interpretation*, Walnut Creek: Left Coast Press.

Ammerman, A.J. & L.L. Cavalli-Sforza 1979, The wave advance model for the spread of agriculture in Europe, in C. Renfrew & K.L. Cooke (eds.) *Transformations: Mathematical Approaches to Culture Change*, London: Elsevier, 275–293.

Anderson, J.R., P. Pettitt, & D. Biro (eds.) 2018, Evolutionary thanatology: impacts of the dead on the living in humans and other animals, *Philosophical Transactions of the Royal Society B*, 373(1754).

Ardrey, R. 1976, *The Hunting Hypothesis: A Personal Conclusion Concerning the Evolutionary Nature of Man*, Glasgow: William Collins.

Arias, P. 2007, Neighbours but diverse: social change in north-west Iberia during the transition from the Mesolithic to the Neolithic (5500–4000 cal BC), in A. Whittle & V. Cummings (eds.) *Going Over: The Mesolithic-Neolithic Transition in North-west Europe* (Proceedings of the British Academy 144), Oxford: Oxford University Press, 53–71.

Arnason, J.P. 1988, Social theory and the concept of civilisation, *Thesis Eleven*, 20, 87–105.

Arranz-Otaegui, A., L.G. Carretero, M.N. Ramsey, D.Q. Fuller, & T. Richter 2018, Archaeobotanical evidence reveals the origins of bread 14,400 years ago in northeastern

Jordan, *Proceedings of the National Academy of Sciences of the United States of America*, 115(31), 7925–7930.

Arrington, R.L. 2001, Following a rule, in H-J. Glock (ed.) *Wittgenstein: A Critical Reader*, Oxford: Blackwell, 119–137.

Asouti, E. & D.Q. Fuller 2012, From foraging to farming in the southern Levant: the development of Epipalaeolithic and Pre-pottery Neolithic plant management strategies, *Vegetation History and Archaeobotany*, 21(2), 149–162.

Aunger, R. 2002, *The Electric Meme: A New Theory of How We Think*, New York: The Free Press.

Bak, P. 1996, *How Nature Works: The Science of Self-organized Criticality*, New York: Springer-Verlag.

Barad, K. 2007, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Durham NC: Duke University Press.

Barker, G. 1995, *A Mediterranean Valley: Landscape Archaeology and the* Annales *History of the Biferno Valley*, Leicester: Leicester University Press.

Barker, G. 2006, *The Agricultural Revolution in Prehistory: Why Did Foragers Become Farmers?* Oxford: Oxford University Press.

Barker, P. 1982, *Techniques of Archaeological Excavation* (3rd edition), London: Batsford.

Barlow, G.W. & J. Silverberg (eds.) 1980, *Sociobiology: Beyond Nature/Nurture? Reports, Definitions and Debate* (AAAS Selected Symposium 35), Boulder: Westview Press.

Barrett, J.C. 1994, *Fragments from Antiquity: An Archaeology of Social Life in Britain, 2900–1200 BC*, Oxford: Blackwell.

Barrett, J.C. 2011, The Neolithic Revolution: an ecological perspective, in A. Hadjikoumis, E. Robinson, & S. Viner (eds.) *Dynamics of Neolithisation in Europe: Studies in Honour of Andrew Sherratt*, Oxford: Oxbow Books, 66–89.

Barrett, J.C. 2012, Are models of prestige goods economies and conspicuous consumption applicable to the archaeology of the Bronze to Iron transition in Britain? In A.M. Jones, J. Pollard, M.J. Allen, & J. Gardiner (eds.) *Image, Memory and Monumentality: Archaeological Engagements with the Material World* (Prehistoric Society Research Paper 5), Oxford: Oxbow Books, 6–17.

Barrett, J.C. 2013, The archaeology of mind: it's not what you think, *Cambridge Archaeological Journal*, 23(1), 1–17.

Barrett, J.C. 2014a, The material constitution of humanness, *Archaeological Dialogues*, 21(1), 65–74.

Barrett, J.C. 2014b, Some possible conditions necessary for the colonisation of Europe by domesticates, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 39–51.

Barrett, J.C. 2016, The new antiquarianism? *Antiquity*, 90, 1681–1686.

Barrett, J.C. & M.J. Boyd 2019, *From Stonehenge to Mycenae*, London: Bloomsbury.

Barrett, J.C. & I. Ko 2009, A phenomenology of landscape: a crisis in British landscape archaeology? *Journal of Social Archaeology*, 9(3), 275–294.

Bar-Yosef, O. & R.H. Meadow 1995, The origins of agriculture in the Near East, in T. Douglas Price & A. Birgitte-Gebauer (eds.) *Last Hunters, First Farmers: New Perspectives on the Prehistoric Transition to Agriculture*, Santa Fe: School of American Research Press, 39–94.

Bender, B. 1978, Gatherer-hunter to farmer: a social perspective, *World Archaeology*, 10(2), 204–222.

Bennett, J. 2010, *Vibrant Matter: A Political Ecology of Things*, Durham NC: Duke University Press.

Benson, D. & A. Whittle (eds.) 2007, *Building Memories: The Neolithic Cotswold Long Barrow at Ascott-Under-Wychwood, Oxfordshire*, Oxford: Oxbow Books.

Bentley, A.R., P. Bickle, L. Fibiger, G.M. Nowell, C.W. Dale, R.E.M. Hedges, J. Hamilton, J. Wahl, M. Francken, G. Grupe, E. Lenneis, M. Teschler-Nicola, R-M. Arbogast, D. Hofmann, & A. Whittle 2012, Community differentiation and kinship among Europe's first farmers, *Proceedings of the National Academy of Sciences*, 109, 9326–9330.

Bhaskar, R. 1997, *A Realist Theory of Science* (2nd edition), London: Verso.

Bickle, P. 2020, Thinking gender differently: new approaches to identity difference in the central European Neolithic, *Cambridge Archaeological Journal*, 39(2), 201–218.

Bickle, P. & A. Whittle (eds.) 2013a, *The First Farmers of Central Europe: Diversity in LBK Lifeways*, Oxford: Oxbow Books.

Bickle, P. & A. Whittle (eds.) 2013b, LBK lifeways: a search for difference, in P. Bickle & A. Whittle (eds.) *The First Farmers of Central Europe: Diversity in LBK Lifeways*, Oxford: Oxbow Books, 1–27.

Bickle, P. & A. Whittle 2014, Introduction: integrated and multi-scalar approaches to early farmers in Europe, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 1–19.

Binford, L.R. 1962, Archaeology as anthropology, *American Antiquity*, 28(2), 217–225.

Binford, L.R. 1967, Smudge pits and hide smoking: the use of analogy in archaeological reasoning, *American Antiquity*, 32(1), 1–12.

Binford, L.R. 1968, Post-Pleistocene adaptations, in S.R. Binford & L.R. Binford (eds.) *New Perspectives in Archaeology*, Chicago: Aldine Press, 313–341.

Binford, L.R. 1971, Mortuary practices: their study and potential, in J.A. Brown (ed.) *Approaches to the Social Dimensions of Mortuary Practices*, Washington DC: Memoirs of the Society for American Archaeology No. 25, 6–29.

Binford, L.R. 1972, *An Archaeological Perspective*, New York: Seminar Press.

Binford, L.R. 1973, Interassemblage variability – the Mousterian and the 'functional' argument, in C. Renfrew (ed.) *The Explanation of Culture Change: Models in Prehistory*, London: Duckworth, 227–254.

Binford, L.R. 1981a, *Bones: Ancient Men and Modern Myths*, London: Academic Press.

Binford, L.R. 1981b, Behavioral archaeology and the 'Pompeii Premise', *Journal of Anthropological Research*, 37(3), 195–208.

Binford, L.R. 1982, Objectivity-explanation-archaeology 1981, in C. Renfrew, M.J. Rowlands, & B.A. Segraves (eds.) *Theory and Explanation in Archaeology: The Southampton Conference*, London: Academic Press, 125–138.

Binford, L.R. 1983, *In Pursuit of the Past: Decoding the Archaeological Record*, London: Thames and Hudson.

Binford, L.R. 1985, 'Brand X' versus the recommended product, *American Antiquity*, 50, 580–590.

Binford, L.R. 1987, Data, relativism and archaeological science, *Man*, 22, 391–404.

Binford, L.R. 2001, *Constructing Frames of Reference: An Analytical Method for Archaeological Theory Building Using Ethnographic and Environmental Data*, Berkeley: University of California Press.

Binford, S.R. & L.R. Binford (eds.) 1968, *New Perspectives in Archaeology*, Chicago: Aldine Publishing Company.

Bintliff, J. 2011, The death of archaeological theory? In J. Bintliff & M. Pearce (eds.) *The Death of Archaeological Theory?* Oxford: Oxbow Books, 7–22.

Birch, S.E.P. 2018, Introduction, in S.E.P. Birch (ed.) *Multispecies Archaeology*, Abingdon: Routledge, 1–17.

Bird-David, N. 1990, The giving environment: another perspective on the economic systems of hunter-gatherers, *Current Anthropology*, 31, 189–206.

Blackmore, S. 1999, *The Meme Machine*, Oxford: Oxford University Press.

Bloch, M. 1971, *Placing the Dead*, London: Seminar Press.

Bloor, D. 1991, *Knowledge and Social Imagery* (2nd Edition), Chicago: University of Chicago Press.

Bloor, D. 2002 [1997], *Wittgenstein, Rules and Institutions*, London: Routledge.

Boast, R. 1997, A small company of actors: a critique of style, *Journal of Material Culture*, 2(2), 173–198.

Bocquet-Appel, J-P. 2002, Paleoanthroplogical traces of a Neolithic demographic transition, *Current Anthropology*, 43(4), 637–650.

Bocquet-Appel, J-P. 2011, When the world's population took off: the springboard of the Neolithic demographic transition, *Science*, 333(6042), 560–561.

Bocquet-Appel, J-P., J. Dubouloz, R. Moussa, J-F. Berger, A. Tresset, E. Ortu, J-D. Vigne, R. Bendrey, S. Bréhard, D. Schwartz, A. Salavert, M.F. Sanchez-Goñi, D. Ertlen, Y. Gauvry, G. Davtian, M. Vander Linden, E. Lenneis, L. Noiret, A. Guillaumont, & M. O'Connor 2014, Multi-agent modelling of the trajectory of the LBK Neolithic, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 53–69.

Bogaard, A. 2004a, *Neolithic Farming in Central Europe: An Archaeological Study of Crop Husbandry Practices*, London: Routledge.

Bogaard, A. 2004b, The nature of early farming in central and south-east Europe, *Documenta Praehistorica*, 31, 49–58.

Bogaard, A. 2012, *Plant Use and Crop Husbandry in an Early Neolithic Village: Vaihingen an der Enz, Baden-Wurttemberg*, Bonn: GmbH.

Bogaard, A. 2014, Framing farming: a multi-stranded approach to early agricultural practice in Europe, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 181–196.

Bogaard, A. & G. Jones 2007, Neolithic farming in Britain and central Europe: contrast or continuity, in A. Whittle & V. Cummings (eds.) *Going Over: The Mesolithic–Neolithic Transition in North-west Europe* (Proceedings of the British Academy 144), Oxford: Oxford University Press, 357–375.

Bogaard, A., R. Krause, & H-C. Strien 2011, Towards a social geography of plant use in an early farming community: Vaihingen an der Enz, south-west Germany, *Antiquity*, 89, 395–416.

Bogaard, A., R-M. Arbogast, R. Ebersbach, R.A. Fraser, C. Knipper, C. Krahn, M. Schafer, M. Styring, & R. Krause 2016, The Bandkeramik settlement of Vaihingen an der Enz, Kreis Ludwigsburg (Baden-Württemberg): an integrated perspective on land use, economy and diet, *Germania*, 94, 1–60.

Bogucki, P. 2000, How agriculture came to north-central Europe, in T.D. Price (ed.) *Europe's First Farmers*, Cambridge: Cambridge University Press, 197–218.

Bogucki, P. 2003, Neolithic dispersals in riverine interior central Europe, in A.J. Ammerman & P. Biagi (eds.) *The Widening Harvest: The Neolithic Transition in Europe – Looking Back, Looking Forward*, Boston MA: Archaeological Institute of America, 249–272.

Borić, D. 2008, First households and 'house societies' in European prehistory, in A. Jones (ed.) *Prehistoric Europe: Theory and Practice*, Oxford: Wiley-Blackwell, 109–142.

Botterill, G. 2010, Two kinds of causal explanation, *Theoria*, 76, 287–313, DOI:10.1111/j.1755-2567.2010.01079.x.

Bourdieu, P. 1977, *Outline of a Theory of Practice* (translated by R. Nice), Cambridge: Cambridge University Press.

Bourdieu, P. 1990, *The Logic of Practice* (translated by R. Nice), Cambridge: Polity Press.

Boyd, B. 2018, An archaeological telling of multispecies co-inhabitation: comments on the origins of agriculture and domestication narrative in Southwest Asia, in S.P. Birch (ed.) Multispecies Archaeology, London: Routledge, 251–270.

Boyd, R. & P.J. Richerson 1985, *Culture and the Evolutionary Process*, Chicago: University of Chicago Press.

Brace, S., Y. Diekmann, T.J. Booth, Z. Faltyskova, N. Rohland, S. Mallick, M. Ferry, M. Michel, J. Oppenheimer, N. Broomandkhoshbacht, K. Stewardson, S. Walsh, M. Kayser, R. Schulting, O.E. Craig, A. Sheridan, M. Parker Pearson, C. Stringer, D. Reich, M.G. Thomas, & I. Barnes 2018, Population replacement in Early Neolithic Britain, bioRxiv reprint Feb. 18, 2018, DOI.org/10.1101/267443.

Bradley, R. 1978, *The Prehistoric Settlement of Britain*, London: Routledge and Kegan Paul.

Bradley, R. 1991, The pattern of change in British prehistory, in T. Earle (ed.) *Chiefdoms: Power, Economy and Ideology*, Cambridge: Cambridge University Press, 44–70.

Bradley, R. 1997, 'To see is to have seen': craft traditions in British field archaeology, in B.L. Molyneaux (ed.) *The Cultural Life of Images*, London: Routledge, 62–72.

Bradley, R. 1998, *The Significance of Monuments: On the Shaping of Human Experience in Neolithic and Bronze Age Europe*, London: Routledge.

Braidotti, R. 2019a, *Posthuman Knowledge*, Cambridge: Polity Press.

Braidotti, R. 2019b, A theoretical framework for the critical posthumanities, *Theory, Culture and Society*, 36(6), 31–61.

Braidwood, R.J. 1958, Vere Gordon Childe, 1892–1957, *American Anthropologist*, 60(4), 733–736.

Braidwood, R.J., J.D. Sauer, H. Helbaek, P.D. Mangelsdorf, H.C. Cutler, C.S. Coon, R. Linton, J. Steward, & A.L. Oppenheim 1953, Symposium: did man once live by beer alone? *American Anthropologist*, 55(4), 515–526, DOI: 10.1525/aa.1953.55.4.02a00050.

Brain, C.K. 1981, *The Hunters or the Hunted: An Introduction to African Cave Taphonomy*, Chicago: University of Chicago Press.

Braithwaite, R.B. 1964, *Scientific Explanation: A Study of the Function of Theory, Probability and Law in Science*, Cambridge: Cambridge University Press.

Bramanti, B., M.G. Thomas, W. Haak, M. Unterlaender, P. Jores, K. Tambets, I. Antanaitis-Jacobs, M.N. Haidle, R. Jankauskas, C-J. Kind, F. Lueth, T. Terberger, J. Hiller, S. Matsumura, P. Forster, J. Burger 2009, Genetic discontinuity between local hunter-gatherers and central Europe's first farmers, *Science*, 327(5949), 127–140, DOI: 10.1126/science.1176869.

Brandt, G., C. Knipper, N. Nicklisch, R. Ganslmeier, M. Klamm, & K.W. Alt 2014, Settlement burials at the Karsdorf LBK site, Saxony-Anhalt, Germany: biological ties and residential mobility, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 95–114.

Buchli, V.A. 1995, Interpreting material culture: the trouble with text, in I. Hodder, M. Shanks, A. Alexandri, V. Buchli, J. Carman, J. Last, & G. Lucas (eds.) *Interpreting Archaeology: Finding Meaning in the Past*, London: Routledge, 181–193.

Capra, F. & P.L. Luisi 2014, *The Systems View of Life: A Unifying Vision*, Cambridge: Cambridge University Press.

Carver, M. 2009, *Archaeological Investigation*, London: Routledge.

Case, H.J. 1969, Neolithic explanations, *Antiquity*, 43(171), 176–186.
Catapoti, D. & M. Relaki 2020, Why the Neolithic is (r)evolutionary, *Journal of Material Culture*, 25, 1–20.
Cauvin, J. 2000, *The Birth of the Gods and the Origins of Agriculture* (translated by T. Watkins), Cambridge: Cambridge University Press.
Chan, C.X. & D. Bhattacharya 2013, Analysis of horizontal genetic transfer in red algae in the post-genomics age, *Mobile Genetic Elements*, 3(6), e27669, DOI:10.4161/mge.27669.
Chapman, R. 1981, The emergence of formal disposal areas and the 'problem' of megalithic tombs in prehistoric Europe, in R. Chapman, I. Kinnes, & K. Randsborg (eds.) *The Archaeology of Death*, Cambridge: Cambridge University Press, 71–81.
Chapman, R. 2003, *Archaeologies of Complexity*, London: Routledge.
Chapman, R. & K. Randsborg 1981, Approaches to the archaeology of death, in R. Chapman, I. Kinnes, & K. Randsborg (eds.) *The Archaeology of Death*, Cambridge: Cambridge University Press, 1–24.
Chapman, R. & A. Wylie 2016, *Evidential Reasoning in Archaeology*, London: Bloomsbury.
Charney, E. 2012, Behavior genetics and postgenomics, *Behavioral and Brain Sciences*, 35, 331–410, DOI:10.1017/S0140525X11002226.
Childe, V.G. 1929, *The Danube in Prehistory*, Oxford: Clarendon Press.
Childe, V.G. 1939, The Orient and Europe, *American Journal of Archaeology*, 43(1), 10–26.
Childe, V.G. 1940, *Prehistoric Communities of the British Isles*, London: Chambers.
Childe, V.G. 1950, The urban revolution, *The Town Planning Review*, 21, 3–17.
Childe, V.G. 1956, *Piecing Together the Past*, London: Routledge & Kegan Paul.
Childe, V.G. 1957, *The Dawn of European Civilization* (6th edition), London: Routledge & Kegan Paul.
Childe, V.G. 1958, *The Prehistory of European Society*, London: Penguin Books.
Childe, V.G. 1965, *Man Makes Himself* (4th edition), London: Fontana.
Cipolla, C.N. 2018, Earth flows and lively stone: what differences does 'vibrant' matter make? *Archaeological Dialogues*, 25(1), 49–70.
Clark, A. 2003, *Natural Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*, Oxford: Oxford University Press.
Clark, A. 2008, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*, Oxford: Oxford University Press.
Clark, J.G.D. 1952, *Prehistoric Europe: The Economic Basis*, London: Methuen.
Clark, J.G.D. 1954, *Excavations at Star Carr: An Early Mesolithic Site at Seamer near Scarborough, Yorkshire*, Cambridge: Cambridge University Press.
Clark, J.G.D. 1957, *Archaeology and Society: Reconstructing the Prehistoric Past* (3rd edition), London: Methuen.
Clark, K. 1969, *Civilisation: A Personal View*, London: John Murray.
Clarke, D.L. 1968, *Analytical Archaeology*, London: Methuen.
Clarke, D.L. 1972a, Models and paradigms in contemporary archaeology, in D.L. Clarke (ed.) *Models in Archaeology*, London: Methuen, 1–60.
Clarke, D.L. 1972b, A provisional model of an Iron Age society and its settlement system, in D.L. Clarke (ed.) *Models in Archaeology*, London: Methuen, 801–869.
Claßen, E. 2009, Settlement history, land use and social networks of early Neolithic communities in western Germany, in D. Hofmann & P. Bickle (eds.) *Creating Communities: New Advances in Central European Neolithic Research*, Oxford: Oxbow Books, 95–110.
Cohen, N. 1977, *The Food Crisis in Prehistory: Overpopulation and the Origins of Agriculture*, New Haven: Yale University Press.
Collingwood, R.G. 1994, *The Idea of History* (Revised edition), Oxford: Oxford University Press.

Crellin, R.J. & O.T. Harris 2020, Beyond binaries: interrogating ancient DNA, *Archaeological Dialogues*, 27, 37–56, DOI:10.1017/S1380203820000082.

Cronk, L. & B.L. Leech 2013, *Meeting at Grand Central: Understanding the Social and Evolutionary Roots of Co-operation*, Princeton: Princeton University Press.

Crossland, Z. 2014, *Ancestral Encounters in Highland Madagascar: Material Signs and Traces of the Dead*, Cambridge: Cambridge University Press.

Currie, A. 2018, *Rock, Bone and Ruin: An Optimist's Guide to the Historical Sciences*, Cambridge MA: The MIT Press.

Daniel, G.E. 1950a, *A Hundred Years of Archaeology*, London: Duckworth.

Daniel, G.E. 1950b, *The Prehistoric Chamber Tombs of England and Wales*, Cambridge: Cambridge University Press.

Daniel, G.E. 1960, *The Prehistoric Chamber Tombs of France: A Geographical, Morphological and Chronological Survey*, London: Thames and Hudson.

Daniel, G.E. 1963, *The Megalith Builders of Western Europe* (2nd edition), London: Penguin Books.

Daniel, G. 1964, *The Idea of Prehistory*, London: Penguin Books.

Dart, R.A. 1949, The predatory implemental techniques of Australopithecus, *American Journal of Physical Anthropology*, 7(1), 1–38.

Darwin, C. 2009 [1859], *On the Origin of Species by Means of Natural Selection or The Preservation of Favoured Races in the Struggle for Life* (ed. W. Bynum), London: Penguin Books.

Dawkins, R. 1978 [1976], *The Selfish Gene*, London: Granada Publishing.

Dawkins, R. 1999, *The Extended Phenotype: The Long Reach of the Gene* (Revised edition), Oxford: Oxford University Press.

Deacon, T. 1997, *The Symbolic Species: The Co-evolution of Language and the Human Brain*, London: Allen Lane The Penguin Press.

DeLanda, M. 2016, *Assemblage Theory*, Edinburgh: Edinburgh University Press.

Denaire, A., L. Philippe, J. Wahl, C.B. Ramsey, E. Dunbar, T. Goslar, A. Bayliss, N. Beavan, P. Bickle, & A. Whittle 2017, The cultural project: formal chronological modelling of the Early and Middle Neolithic sequence in Lower Alsace, *Journal of Archaeological Method Theory*, 24, 1072–1149.

Dennell, R. 1985, The hunter-gatherer/agricultural frontier in prehistoric Europe, in S.W. Green & S.M Perlman (eds.) *The Archaeology of Frontiers and Boundaries*, London: Academic Press, 113–139.

Dennett, D.C. 1971, Intentional systems, *The Journal of Philosophy*, 68(4), 87–106.

Dennett, D.C. 1996, *Darwin's Dangerous Idea: Evolution and the Meaning of Life*, London: Penguin Books.

Descombes, V. 1986, *Objects of All Sorts: A Philosophical Grammar*, Oxford: Oxford University Press.

Descombes, V. 2001, *The Mind's Provisions: A Critique of Cognitivism*, Oxford: Oxford University Press.

De Vareilles, A., L. Bouby, A. Jesus, L. Martin, M. Rottoli, M. Vander Linden, & F. Antolín 2020, One sea but many routes to sail: the early maritime dispersal of Neolithic crops from the Aegean to the western Mediterranean, *Journal of Archaeological Science: Reports*, 29, 102140, DOI.org/10.1016/j.jasrep.2019.102140.

De Waal, F. 2016, *Are We Smart Enough to Know How Smart Animals Are?* London: Granta Books.

Dietrich, O., M. Heun, J. Notroff, K. Schmidt, & M. Zarnkow 2012, The role of cult and feasting in the emergence of Neolithic communities: new evidence from Göbekli Tepe, south-eastern Turkey, *Antiquity*, 86, 674–695.

Dray, W. 1957, *Laws and Explanation in History*, Oxford: Oxford University Press.

Dray, W. 1959, 'Explaining what' in history, in P. Gardiner (ed.) *Theories of History*, Glencoe IL: The Free Press, 403–408.

Drennan, R.D., T. Earle, G.M. Fienman, R. Fletcher, M.J. Kolb, P. Peregrine, C.E. Paterson, C. Sinopoli, M.E. Smith, M.L. Smith, B.L. Stark, & M.T. Stark 2012, Comparative Archaeology: a commitment to understanding variation, in M.E. Smith (ed.) *The Comparative Archaeology of Complex Societies*, Cambridge: Cambridge University Press, 1–3.

Dunnell, R.C. 1978, Style and function: a fundamental dichotomy, *American Antiquity*, 43(2), 192–202.

Dunning L.T., J. K. Olofsson, C. Parisod, R.R. Choudhury, J.J. Moreno-Villena, Y. Yang, J. Dionora, W.P. Quick, M. Park, J.L. Bennetzen, G. Besnard, P. Nosil, C.P. Osborn, & P-A. Christin 2019, Lateral transfers of large DNA fragments spread functional genes among grasses, *Proceedings of the National Academy of Sciences of the United States of America*, 116(10), 4416–4425.

Dupré, J. 2010, It is not possible to reduce biological explanations to explanations in chemistry and/or physics, in F.J. Ayala & R. Arp (eds.) *Contemporary Debates in Philosophy of Biology*, Chichester: Willey-Blackwell, 32–47.

Dupré, J. 2012, *Processes of Life: Essays in the Philosophy of Biology*, Oxford: Oxford University Press.

Dupré, J. 2018, Human nature: a process perspective, in E. Hannon & T. Lewins (eds.) *Why We Disagree About Human Nature*, Oxford: Oxford University Press, 92–107.

Earle, T.K. 1977, A reappraisal of redistribution: complex Hawaiian chiefdoms, in T.K. Earle and J.E. Ericson (eds.) *Exchange Systems in Prehistory*, New York: Academic Press, 213–229.

Earle, T. 1991, *Chiefdoms: Power, Economy, and Ideology*, Cambridge: Cambridge University Press.

Earle, T.K. & R.W. Preucel 1987, Processual archaeology and the radical critique (with comments), *Current Anthropology*, 28(4), 501–538.

Edgeworth, M. 2016, Grounded objects: archaeology and speculative realism, *Archaeological Dialogues*, 23(1), 93–113, DOI:10.1017/S138020381600012X.

Ekholm, K. 1977, External exchange and the transformation of central African social systems, in J. Friedman & M.J. Rowlands (eds.) *The Evolution of Social Systems*, London: Duckworth, 115–136.

Ekholm, K. 1980, On the limitations of civilization: the structure and dynamics of global systems, *Dialectical Anthropology*, 5(2), 155–166.

Eldredge, N. 1995, *Reinventing Darwin: The Great Evolutionary Debate*, London: Weidenfeld & Nicolson.

El-Hani, C.N., J. Queiroz, & C. Emmeche 2009, *Genes, Information, and Semiosis*, Tartu: Tartu University Press.

Emmeche, C. & K. Kull 2011, *Towards a Semiotic Biology: Life Is the Action of Signs*, London: Imperial College Press.

Evans, J. 1956, *A History of The Society of Antiquaries*, London: Society of Antiquaries.

Fagan, B. 2001, *Graham Clark: An Intellectual Biography of an Archaeologist*, Boulder: Westview Press.

Fahlander, F. 2004, Archaeology and anthropology: brothers in arms? On analogies in 21st century archaeology, in F. Fahlander & T. Oestigaard (eds.) *Material Culture and other Things – Post-disciplinary Studies in the 21st Century*, Gothenburg: University of Gothenburg, 157–180.

Falk, R. 1986, What is a gene? *Studies in the History and Philosophy of Science*, 17, 133–173.

Feuchtwang, S. & M. Rowlands 2019, *Civilisation Recast: Theoretical and Historical Perspectives*, Cambridge: Cambridge University Press.

Flannery, K.V. 1967, Review article. Culture history versus cultural process: a debate in American archaeology, *Scientific American*, 217(2), 119–122.

Flannery, K.V. 1968, Archaeological systems theory and Early Mesoamerica, in B.J. Meggers (ed.) *Anthropological Archaeology in the Americas*, Washington DC: The Anthropological Society of Washington, 67–87.

Flannery, K.V. 1972, The cultural evolution of civilisations, *Annual Review of Ecology and Systematics*, 3, 399–426.

Flannery, K.V. 1973, The origins of agriculture, *Annual Review of Anthropology*, 2, 271–310.

Flannery, K.V. (ed.) 1976, *The Early Mesoamerican Village*, New York: Academic Press.

Flannery, K.V. & M.C. Winter 1976, Analyzing household activities, in K.V. Flannery (ed.) *The Early Mesoamerican Village*, New York: Academic Press, 34–47.

Flannery, K. & J. Marcus, 2012, *The Creation of Inequality: How Our Prehistoric Ancestors Set the Stage for Monarchy, Slavery and Empire*, Cambridge MA: Harvard University Press.

Fogle, T. 1990, Are genes units of inheritance? *Biology and Philosophy*, 5, 349–371.

Foucault, M. 1972, *The Archaeology of Knowledge* (translated by A.M. Sheridan Smith), London: Tavistock.

Frankenstein, S. & M.J. Rowlands 1978, The internal structure and regional context of early Iron Age society in southwest Germany, *Bulletin of the Institute of Archaeology of London*, 15, 73–112.

Frere, J. 1800, Account of flint weapons discovered at *Hoxne* in *Suffolk*, *Archaeologia*, 13, 204–205.

Fried, M.H. 1967, *The Evolution of Political Society: An Essay in Political Society*, New York: Random House.

Friedman, J. 1994, *Cultural Identity and Global Process*, London: Sage.

Friedman, J. & M.J. Rowlands (eds.) 1977, *The Evolution of Social Systems*, London: Duckworth.

Frieman, C.J. & D. Hofmann 2019, Present pasts in the archaeology of genetics, identity, and migration in Europe: a critical essay, *World Archaeology*, DOI:10.1080/00438243.2019.1627907.

Fritz, J.M. 1973, Relevance, archaeology and subsistence theory, in C.L. Redman (ed.) *Research and Theory in Current Archaeology*, New York: John Wiley & Sons, 59–82.

Fritz, J.M. & F.T. Plog 1970, The nature of archaeological explanation, *American Antiquity*, 35, 405–412.

Fuller, D.Q., G. Willcox, & R.G. Allaby 2012, Early agricultural pathways: moving outside the 'core area' hypothesis in Southwest Asia, *Journal of Experimental Botany*, 63(2), 617–633 DOI:10.1093/jxb/err307.

Furholt, M. 2019, Re-integrating archaeology: a contribution to aDNA studies and the migration discourse on the 3rd millennium BC in Europe, *Proceedings of the Prehistoric Society*, 85, 115–129.

Furholt, M. & J. Müller 2011, The earliest monuments in Europe – architecture and social structure (5000–3000 cal BC), in M. Furholt, F. Luth, & J. Muller (eds.) *Megaliths and Identities: Early Monuments in Neolithic Societies from the Atlantic to the Baltic*, Bonn: GmbH, 15–32.

Gamble, C. 1993, *Timewalkers: The Prehistory of Global Colonisation*, Stroud: Alan Sutton.

Gamble, C. 2007, *Origins and Revolutions: Human Identity in Earliest Prehistory*, Cambridge: Cambridge University Press.

Gamble, C. 2014, The anthropology of deep history, *Journal of the Royal Anthropological Institute* (new series), 21, 147–164.

Gaydarska, B., M. Nebbia, & J. Chapman 2019, Trypillia megasites in context: independent urban development in chalcolithic Eastern Europe, *Cambridge Archaeological Journal*, 30(1), 97–121.

Gellner, E. 1982, What is structuralisme? in C. Renfrew, M.J. Rowlands, & B.A. Segraves (eds.) *Theory and Explanation in Archaeology: The Southampton Conference*, London: Academic Press, 97–123.

Giddens, A. 1979, *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*, London: The Macmillan Press.

Giddens, A. 1981, *A Contemporary Critique of Historical Materialism: Vol. 1, Power, Property and the State*, London: The Macmillan Press.

Giddens, A. 1984, The *Constitution of Society: Outline of the Theory of Structuration*, Cambridge: Polity Press.

Gilman, A. 1991, Trajectories towards social complexity in the later prehistory of the Mediterranean, in T. Earle (ed.) *Chiefdoms: Power, Economy, and Ideology*, Cambridge: Cambridge University Press, 146–168.

Giot, P.R. 1963, *Les Civilisations Atlantiques du Néolithique à l'Âge du Fer*, Rennes: Laboratoire d'Anthropologie.

Godelier, M. 1977a, Economy and religion: an evolutionary optical illusion, in J. Friedman & M.J. Rowlands (eds.) *The Evolution of Social Systems*, London: Duckworth, 3–11.

Godelier, M. 1977b, Politics as 'infrastructure': an anthropologist's thoughts on the example of classical Greece and the notions of relations of production and economic determinism, in J. Friedman & M.J. Rowlands (eds.) *The Evolution of Social Systems*, London: Duckworth, 13–28.

Godfrey-Smith, P. 2009, *Darwinian Populations and Natural Selection*, Oxford: Oxford University Press.

Godfrey-Smith, P. 2017, *Other Minds: The Octopus and the Evolution of Intelligent Life*, London: William Collins.

González-Fortes, G., E.R. Jones, E. Lightfoot, C. Bonsall, C. Lazar, A. Grandal-d'Anglade, M.D. Garralda, L. Drak, V. Siska, A. Simalcsik, A. Boroneant, J.R.V. Romaní, M.V. Rodríguez, P. Arias, R. Pinhasi, A. Manica, & M. Hofreiter 2017, Paleogenomic Evidence for multi-generational mixing between Neolithic farmers and Mesolithic hunter-gatherers in the Lower Danube Basin, *Cell Biology*, 27(12), 1801–1810.

Gonzáles-Ruibal, A. 2018, Ethics of archaeology, *Annual Review of Anthropology*, 47, 345–60, DOI.org/10.1146/annurev-anthro-102317-045825.

Goody, J. 1976, *Production and Reproduction: A Comparative Study of the Domestic Domain*, Cambridge: Cambridge University Press.

Goody, J. 1982, *Cooking, Cuisine and Class: A Study in Comparative Sociology*, Cambridge: Cambridge University Press.

Gould, S.J. 1980, Sociobiology and the Theory of Natural Selection, in G.W. Barlow & J. Silverberg (eds.) *Sociobiology Beyond Nature/Nurture? Reports, Definitions and Debate*, Boulder: Westview Press, 257–269.

Gould, S.J. 2002, *The Structure of Evolutionary Theory*, Cambridge MA: The Belknap Press, University of Harvard.

Gould, S.J. & N. Eldredge 1977, Punctuated equilibria: the tempo and mode of evolution reconsidered, *Paleobiology*, 3, 115–151.

Govier, E. 2019, Do you follow? Rethinking causality in archaeology, *Archaeological Dialogues*, 26, 51–55.

Graeber, D. 2015, Radical alterity is just another way of saying 'reality': a reply to Eduardo Viveiros de Castro, *Hau: Journal of Ethnographic Theory*, 5(2), 1–41.

Griffiths, P.E. & R.D. Gray 1994, Developmental systems and evolutionary explanation, *The Journal of Philosophy*, 91(6), 277–304.

Gronenborne, D., H-C. Strien, S. Dietrich, & F. Sirocko 2014, 'Adaptive cycles' and climate fluctuations: a case study from Linear Pottery Culture in western Central Europe, *Journal of Archaeological Science*, 51, 73–83.

Gunnell, J.G. 2014, *Social Enquiry After Wittgenstein and Kuhn: Leaving Everything as It Is*, New York: Columbia University Press.

Hachem, L. & C. Hamon 2014, Linear pottery culture household organisation: an economic model, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 159–180.

Halstead, P. 1989, Like rising damp? An ecological approach to the spread of farming in south-east and central Europe, in A. Milles, D. Williams, & N. Gardner (eds.) *The Beginnings of Agriculture*, Oxford: British Archaeological Reports, 23–53.

Halstead, P. 2004, Life after Mediterranean polyculture: the subsistence subsystem and the Emergence of Civilisation revisited, in J.C. Barrett & P. Halstead (eds.) *The Emergence of Civilisation Revisited*, Oxford: Oxbow Books, 189–206.

Hamilton, W.D. 1964a, The genetical evolution of social behaviour I, *Journal of Theoretical Biology*, 7, 1–16.

Hamilton, W.D. 1964b. The genetical evolution of social behaviour II, *Journal of Theoretical Biology*, 7, 17–32.

Hannon, E. & T. Lewens (eds.) 2018, *Why We Disagree about Human Nature*, Oxford: Oxford University Press.

Harding, A. 2013, World systems, cores and peripheries in prehistoric Europe, *European Journal of Archaeology*, 16(3), 378–400.

Harman, G. 2018, *Object-Orientated Ontology: A New Theory of Everything*, London: Penguin Random House.

Harris, E.C. 1989, *Principles of Archaeological Stratigraphy* (2nd edition), London: Academic Press.

Harris, O.J.T. & C.N. Cipolla 2017, *Archaeological Theory in the New Millennium: Introducing Current Perspectives*, London: Routledge.

Harvey, D. 1996, *Justice, Nature and the Geography of Difference*, Oxford: Blackwell.

Hawkes, C.F.C. 1954, Archaeology theory and method: some suggestions from the Old World, *American Anthropologist*, 56(2), 155–168.

Hawkes, J. 1968, The proper study of mankind, *Antiquity*, 42(168), 255–262.

Hempel, C.G. 1942, The function of general laws in history, *The Journal of Philosophy*, 39(2), 35–48.

Hempel, C.G. & P. Oppenheim 1948, Studies in the logic of explanation, *Philosophy of Science*, 15(2), 135–175.

Henare, A., M. Holbaard, & S. Wastell 2007, Introduction: thinking through things, in A. Henare, M. Holbraad, & S. Wastell (eds.) *Thinking Through Things: Theorizing Artefacts Ethnographically*, London: Routledge, 1–31.

Henry. M. 2019, *Marx: An Introduction* (translated by K. Justaert), London: Bloomsbury.

Higgs, E.S. & M.R. Jarman 1975, Palaeoeconomy, in E.S. Higgs (ed.) *Palaeoeconomy: Being the Second Volume of Papers in Economic Prehistory by Members and Associates of the British Academy Major Research Project in the Early History of Agriculture*, Cambridge: Cambridge University Press, 1–7.

Hill, J.N. (ed.) 1977, *The Explanation of Prehistoric Change*, Albuquerque: University of New Mexico Press.

Hobbes, T. 2017 [1651], *Leviathan*, London: Penguin Books.

Hodder, I. 1982a, *Symbols in Action: Ethnoarchaeological Studies in Material Culture*, Cambridge: Cambridge University Press.

Hodder, I. (ed.) 1982b, *Symbolic and Structural Archaeology*, Cambridge: Cambridge University Press.

Hodder, I. 1982c, Theoretical archaeology: a reactionary view, in I. Hodder (ed.) *Symbolic and Structural Archaeology*, Cambridge: Cambridge University Press, 1–16.

Hodder, I. 1990, *The Domestication of Europe: Structure and Contingency in Neolithic Societies*, Oxford: Blackwell.

Hodder, I. 2012, *Entangled: An Archaeology of Relationships between Humans and Things*, Oxford: Wiley-Blackwell.

Hodder, I. 2018, Things and the slow Neolithic: the Middle Eastern transformation, *Journal of Archaeological Method and Theory*, 25, 155–177.

Hodder, I., M. Shanks, A. Alexandri, V. Buchli, J. Carman, J. Last, & G. Lucas (eds.) 1995, *Interpreting Archaeology: Finding Meaning in the Past*, London: Routledge.

Hoffmeyer, J. 2008, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs*, Scranton: University of Scranton Press.

Hofmann, D. 2013, Intimate connections: bodies and substances in flux in the early Neolithic of central Europe, in C. Watts (ed.) *Relational Archaeologies: Humans, Animals, Things*, London: Routledge, 154–172.

Hofmann, D. 2015, What have genetics ever done for us? The implications of aDNA data for interpreting identity in early Neolithic central Europe, *European Journal of Archaeology*, 18(3), 454–476, DOI: 10.1179/1461957114Y.0000000083.

Hofmann, D. & P. Bickle (eds.) 2009, *Creating Communities: New Advances in Central European Neolithic Research*, Oxford: Oxbow Books.

Hofmann, D. & P. Bickle 2011, Culture, tradition and settlement burials of the *Linearbandkeramik* (LBK) culture, in B.W. Roberts & M. Vander Linden (eds.) *Investigating Archaeological Cultures: Material Culture, Variability and Transmission*, New York: Springer, 183–200.

Hofmann, D., J. Pechtl, R.A. Bentley, P. Bickle, L. Fibiger, G. Grupe, J. Hamilton, R. Hedges, M. Schultz, & A. Whittle 2013, Southern Bavaria, in P. Bickle & A. Whittle (eds.) *The First Farmers of Central Europe: Diversity in LBK Lifeways*, Oxford: Oxbow Books, 205–248.

Hofmann D. & J. Smyth (eds.) 2013, *Tracking the Neolithic House in Europe: Sedentism, Architecture, and Practice*, New York: Springer.

Holbraad, M. & M.A. Pedersen 2017, *The Ontological Turn: An Anthropological Exposition*, Cambridge: Cambridge University Press.

Hoopes, J. 1991, *Peirce on Signs: Writings on Semiotic by Charles Sanders Peirce*, Chapel Hill: University of North Carolina Press.

Hopkinson, T. 2013, 'Man the symboller': a contemporary origins myth, *Archaeological Dialogues*, 20(2), 215–241, DOI: 10.1017/S138020381300024X.

Hull, D.L. 1986, On human nature, *Proceedings of the Biennial Meeting of the Philosophy of Science Association*, 2, 3–13.

Huneman, P. & D.M. Walsh (eds.) 2017a, *Challenging the Modern Synthesis: Adaptation, Development and Inheritance*, Oxford: Oxford University Press.

Huneman, P. & D.M. Walsh 2017b, Introduction: challenging the modern synthesis, in P. Huneman & D.M. Walsh (eds.) *Challenging the Modern Synthesis: Adaptation, Development and Inheritance*, Oxford: Oxford University Press, 1–33.

Ingold, T. 1994, Introduction to culture, in T. Ingold (ed.) *Companion Encyclopedia of Anthropology*, London: Routledge, 329–349.

Ingold, T. 2000, *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*, London: Routledge.

Ingold, T. 2013, Prospect, in T. Ingold & G. Palsson (eds.) *Biosocial Becomings: Integrating Social and Biological Anthropology*, Cambridge: Cambridge University Press, 1–21.

Ingold, T. 2016, A naturalist abroad in the museum of ontology: Philippe Descola's *Beyond Nature and Culture*, *Anthropological Forum*, 26(3), 301–320.

Ingold, T. & G. Palsson (eds.) 2013, *Biosocial Becomings: Integrating Social and Biological Anthropology*, Cambridge: Cambridge University Press.

Ion, A. 2020, Why keep the old dead around? Bringing together theory and method in the study of human remains from Balkan (E)Neolithic settlement, *Documenta Praehistorica*, 47, 348–366.

Jablonka, E. 2002, Information: its interpretation, its inheritance, and its sharing, *Philosophy of Science*, 69(4), 578–605.

Jablonka, E. & M.J. Lamb, 2005, *Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral, and Symbolic Variation in the History of Life*, Cambridge MA: The MIT Press.

Jarman, M.R. & D. Webley 1975, Settlement and land use in Capitanata, Italy, in E.S. Higgs (ed.) *Palaeoeconomy: Being the Second Volume of Papers in Economic Prehistory by Members and Associates of the British Academy Major Research Project in the Early History of Agriculture*, Cambridge: Cambridge University Press, 177–224.

Jervis, B. 2019, *Assemblage Thought and Archaeology*, London: Routledge.

Johnson, A.L. 2014, Exploring adaptive variation among hunter-gatherers with Binford's frames of reference, *Journal of Archaeological Research*, 22, 1–42, DOI 10.1007/s10814-013-9068-y.

Johnson, M. 2010, *Archaeological Theory: An Introduction* (2nd edition), Chichester: Wiley-Blackwell.

Jones, A. & E. Sibbesson 2013, Archaeological complexity: materials, multiplicity, and the transition to agriculture in Britain, in B. Alberti, A.M. Jones, & J. Pollard (eds.) *Archaeology After Interpretation: Returning Materials to Archaeological Theory*, Walnut Creek: Left Coast Press, 151–172.

Kant, I. 2007 [1781], *The Critique of Pure Reason* (translated by M.W. Weigelt), London: Penguin Books.

Kauffman, S.A. 1993, *The Origins of Order: Self-organisation and Selection in Evolution*, Oxford: Oxford University Press.

Kauffman, S.A. 1995, *At Home in the Universe: The Search for the Laws of Self-organization and Complexity*, Oxford: Oxford University Press.

Kauffman, S.A. 2019, *A World Beyond Physics: The Emergence and Evolution of Life*, Oxford: Oxford University Press.

Kintigh, K.W. 2006, The promise and challenge of archaeological data integration, *American Antiquity* 71, 567–578.

Kintigh, K.W., J.H. Altschul, M.C. Beaudry, R.D. Drennan, A.P. Kinzig, T.A. Kohler, W.F. Limp, H.D.G. Maschner, T.R. Pauketat, P. Peregrine, J.A. Sabloff, T.J. Wilkinson, H.T. Wright, & M.A. Zedar 2014, Grand challenges for archaeology, *American Antiquity*, 79(1), 5–24.

Kirby, V. 1997, *Telling Flesh: The Substance of the Corporeal*, London: Routledge.

Kohn, E. 2013, *How Forests Think: Toward an Anthropology Beyond the Human*, Berkeley: University of California Press.

Komter, A.E. 2005, *Social Solidarity and the Gift*, Cambridge: Cambridge University Press.

Kristiansen, K. 1978, The consumption of wealth in Bronze Age Denmark, in K. Kristiansen & C. Paludan-Miller (eds.) *New Directions in Scandinavian Archaeology*, Copenhagen: National Museum Press, 158–190.

Kristiansen, K. 1998, *Europe Before History*, Cambridge: Cambridge University Press.

Kristiansen, K. 2014, Towards a new paradigm? The third scientific revolution and its possible consequences in archaeology, *Current Swedish Archaeology*, 22, 11–34.

Kronfeldner, M. 2018, *What's Left of Human Nature? A Post Essentialist, Pluralist, and Interactive Account of a Contested Concept*, Cambridge MA: The MIT Press.

Kropotkin, P. 1902, *Mutual Aid: A Factor of Evolution*, http://dwardmac.pitzer.edu/Anarchist_Archives/kropotkin/mutaidcontents.html Accessed July 2019.

Kropotkin, P. 1971, *Memoirs of a Revolutionist*, London: Dover Publications.

Kuhn, T.S. 1970 [1962], *The Structure of Scientific Revolutions: Second Edition, Enlarged*, Chicago: University of Chicago Press.

Kull, K. 1999, Outlines for a post-Darwinian biology, https://www.researchgate.net/publication/237431708 Accessed March 2020.

Kull, K., T. Deacon, C. Emmeche, J. Hoffemeyer, & F. Stjernfelt, 2009, Theses on biosemiotics: prolegomena to a theoretical biology, *Biological Theory*, 4(2), 167–173.

Kuper, A. 1988, *The Invention of Primitive Society: Transformations of an Illusion*, London: Routledge.

Kuper, R., J. Lüning, P. Stehli, & A. Zimmerman, 1977, *Der bandkeramische siedlungsplatz Langweiler 9*, Bonn: Rheinishe Ausgrabungen 18.

Laland, K.N. & M.J. O'Brien 2011, Cultural niche construction: an introduction, *Biological Theory*, 6, 191–202, DOI 10.1007/s13752-012-0026-6.

Laporte, L. & C. Scarre (eds.) 2016, *The Megalithic Architectures of Europe*, Oxford: Oxbow Books.

Laszlo, E. 2002, The new holism: the grand prospect for science and society, *World Futures*, 58(2–3), 137–147. DOI.org/10.1080/02604020210689.

Latour, B. 1993, *We Have Never Been Modern* (translated by C. Porter), New York: Prentice-Hall.

Latour, B. 2005, *Reassembling the Social: An Introduction to Actor-Network Theory*, Oxford: Oxford University Press.

Lazcano, A. 2008, What is life? A brief overview, *Chemistry and Biodiversity*, 5, 1–15.

Leach, E. 1973, Concluding address, in C. Renfrew (ed.) *The Explanation of Culture Change: Models in Prehistory*, London: Duckworth, 761–771.

Lee, R.B & I. DeVore (eds.) 1968, *Man the Hunter*, Chicago: Aldine Publishing Company.

Leroi-Gourhan, A. 1964, *Les religions de la préhistoire*, Paris: Presses Universitaires de France.

Leroi-Gourhan A. 1993, *Gesture and Speech*, Cambridge MA: MIT Press.

Levin, M.E. 1973, On explanation in archaeology: a rebuttal to Fritz and Plog, *American Antiquity*, 38(4), 387–395.

Lévi-Strauss, C. 1982, *The Way of the Masks* (translated by S. Modelski), Washington: University of Washington Press.

Lewis-Williams, D. 2002, *The Mind in the Cave: Consciousness and the Origins of Art*, London: Thames and Hudson.

Lipson, M., A. Szécsényi-Nagy, M. Swapan, A. Pósa, B. Stégmár, V. Keer, N. Rohland, K. Stewardson, M. Ferry, M. Michel, J. Oppenheimer, N. Broomandkhoshbacht, E. Harney, S. Nordenfelt, B. Llamas, B.G. Mende, K. Köhler, K. Oross, M. Bondár, T. Marton, A. Osztás, J. Jakucs, T. Paluch, F. Horváth, P. Csengeri, J. Koós, K. Sebők, A. Anders, P. Raczky, J. Regenye, J.P. Barna, S. Fábián, G. Serlegi, Z. Toldi, E.G. Nagy, J. Dani, E. Molnár, G. Pálfi, L. Márk, B. Melegh, Z. Bánfai, L. Domboróczki, J. Fernández-Eraso, J.A. Mujika-Alustiza, C.A. Fernández, J.J. Echevarría, R. Bollongino, J. Orschiedt, K. Schierhold, H. Meller, A. Cooper, J. Burger, E. Bánffy, K.W. Alt, C. Lalueza-Fox, W. Haak, & D. Reich 2017, Parallel palaeogenomic transects reveal complex genetic history of early European farmers, *Nature*, 551, 368–372.

Lucas, G. 2012, *Understanding the Archaeological Record*, Cambridge: Cambridge University Press.

Lyman, R.L., M.J. O'Brien, & R.C. Dunnell 1997, *The Rise and Fall of Culture History*, New York: Plenum Press.

Malafouris, L. 2013, *How Things Shape the Mind: A Theory of Material Engagement*, Cambridge MA: MIT Press.

Margulis, L. 1998, *The Symbiotic Planet: A New Look at Evolution*, London: Weidenfeld & Nicolson.

Margulis, L. & D. Sagan 1995, *What Is Life?* London: Weidenfeld & Nicolson.

Margulis, L. & D. Sagan 2002, *Acquiring Genomes: A Theory of the Origin of Species*, New York: Basic Books.

Marshall, Y. & B. Alberti 2014, A matter of difference: Karen Barad, ontology and archaeological bodies, *Cambridge Archaeological Journal*, 24(1), 19–36, DOI: 10.1017/S0959774314000067.

Marx, K. 1845/6, *The German Ideology: Critique of Modern German Philosophy According to Its Representatives Feuerbach, B. Bauer and Stirner, and of German Socialism According to Its Various Prophets,* https://www.marxists.org/archive/marx/works/1845/german-ideology/ch01a.htm Accessed March 2020.

Marx, K. 1867, *Capital: A Critique of Political Economy. Volume 1: The Process of Production of Capital*. Moscow: Progress Publishers, https://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-I.pdf Accessed July 2019.

Mathieson, I., S. Alpaslan-Roodenberg, C. Posth, A. Szécsényi-Nagy, N. Rohland, S. Mallick, I. Olalde, N. Broomandkhoshbacht, F. Candilio, O. Cheronet, D. Fernandes, M. Ferry, B. Gamarra, G.G. Fortes, W. Haak, E. Harney, E. Jones, D. Keating, B. Krause-Kyora, I. Kucukkalipci, M. Michel, A. Mittnik, K. Nägele, M. Novak, J. Oppenheimer, N. Patterson, S. Pfrengle, K. Sirak, K. Stewardson, S. Vai, S. Alexandrov, K.W. Alt, R. Andreescu, D. Antonovic′, A. Ash, N. Atanassova, K. Bacvarov, M.B. Gusztáv, H. Bocherens, M. Bolus, A. Boroneant, Y. Boyadzhiev, A. Budnik, J. Burmaz, S. Chohadzhiev, N.J. Conard, R. Cottiaux, M. Čuka, C. Cupillard, D.G. Drucker, N. Elenski, M. Francken, B. Galabova, G. Ganetsovski, B. Gély, T. Hajdu, V. Handzhyiska, K. Harvati, T. Higham, S. Iliev, I, Jankovic′, I. Karavanic′, D.J. Kennett, D. Komšo, A. Kozak, D. Labuda, M. Lari, C. Lazar, M. Leppek, K. Leshtakov, D. Lo Vetro, D. Los, I. Lozanov, M. Malina, F. Martini, K. McSweeney, H. Meller, M. Menđušic′, P. Mirea, V. Moiseyev, V. Petrova, T.D. Price, A. Simalcsik, L. Sineo, M. Šlaus, V. Slavchev, P. Stanev, A. Starovic′, T. Szeniczey, S. Talamo, M. Teschler-Nicola, C. Thevenet, I. Valchev, F. Valentin, S. Vasilyev, F. Veljanovska, S. Venelinova, E. Veselovskaya, B. Viola, C. Virag, J. Zaninovic′, S. Zäuner, P.W. Stockhammer, G. Catalano, R. Krauß, D. Caramelli, G. Zariŋa, B. Gaydarska, M. Lillie, A.G. Nikitin, I. Potekhina, A. Papathanasiou, D. Boric′, C. Bonsall, J. Krause, R. Pinhasi, & D. Reich 2018, The genomic history of southeastern Europe, *Nature*, 555, 197–210, DOI:10.1038/nature25778.

Maturana, H.R. & F.J. Varela 1980, *Autopoiesis and Cognition: The Realization of the Living*, Dordrecht: D. Reidel Publishing Company.

Maynard Smith, J. 2000, The concept of information in biology, *Philosophy of Science*, 67(2), 177–194.

Mayr, E. 1976, *Evolution and the Diversity of Life: Selected Essays*, Cambridge MA: The Belknap Press.

McFadyen, L. 2006, Building technologies, quick and slow architectures and early Neolithic long barrow sites in southern Britain, *Archaeological Review from Cambridge*, 21(1), 117–134.

McFadyen, L. 2007, Neolithic architecture and participation – practices of making in early Neolithic Britain, in J. Last (ed.) *Beyond the Grave: New Perspectives on Barrows*, Oxford: Oxbow Books, 22–29.

McGuire, R.H. 1993, Archaeology and Marxism, *Archaeological Method and Theory*, 5, 101–157.

Meillassoux, C. 1972, From reproduction to production, *Economy and Society*, 1(1), 93–105.

Meillassoux, Q. 2008, *After Finitude: An Essay on the Necessity of Contingency* (translated by R. Brassier), London: Continuum.

Mellars, P., K. Boyle, O. Bar-Yosef, & C. Stringer (eds.) 2007, *Rethinking the Human Revolution: New Behavioural and Biological Perspectives on the Origin and Dispersal of Modern Humans*, Cambridge: McDonald Institute for Archaeological Research.

Mellor, D.H. 1982, Chance and degrees of belief, in R. McLaughlin (ed.) *What? Where? When? Why?* Dordrecht: D. Reidel, 49–68.

Meskell, L. & R.W. Preucel 2004, Knowledges, in L. Meskell & R.W. Preucel (eds.) *A Companion to Social Archaeology*, Oxford: Blackwell, 3–22.

Meyer C., C. Lohr, O. Kürbis, V. Dresely, W. Haak, C.J. Adler, D. Gronenborn, & K.W. Alt 2014, Mass graves of the LBK: patterns and peculiarities, in A. Whittle and P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 307–325.

Midgley, M.S. 2005, *The Monumental Cemeteries of Prehistoric Europe*, Stroud: Tempus.

Miller, D. 1982, Artefacts as products of human categorisation processes, in I. Hodder (ed.) *Symbolic and Structural Archaeology*, Cambridge: Cambridge University Press, 17–25.

Miller, D. & C. Tilley (eds.) 1984, *Ideology, Power and Prehistory*, Cambridge: Cambridge University Press.

Modderman, P.J.R 1970, Linearbandkeramik aus Elsoo und Stein, *Analecta Praehistorica Leidensia*, 3, passim.

Modderman, P.J.R. 1988, The linear pottery culture: diversity in uniformity, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek*, 38, 63–139.

Montévil, M. & M. Massio 2015, Biological organisation as closure of constraints, *Journal of Theoretical Biology*, 372, 179–191.

Moore, H.L. 1982, The interpretation of spatial patterning in settlement residues, in I. Hodder (ed.) *Symbolic and Structural Archaeology*, Cambridge: Cambridge University Press, 74–79.

Morange, M. 2006, Post-genomics, between reduction and emergence, *Synthese*, 151, 355–360.

Morgan, C.G. 1973, Archaeology and explanation, *World Archaeology*, 4(3), 259–276.

Moro Abadía, O. 2017, Bridging the gap in archaeological theory: an alternative account of scientific 'progress' in archaeology, *World Archaeology*, 49(2), 271–280.

Moss, L. 2003, *What Genes Can't Do*, Cambridge MA: The MIT Press.

Murphy, M.P. & L.A.J. O'Neill 1995, *What is Life? The Next Fifty Years: Speculations on the Future of Biology*, Cambridge: Cambridge University Press.

Nealon, J.T. 2016, *Plant Theory: Biopower & Vegetable Life*. Stanford: Stanford University Press.

Newton, R.G. & C. Renfrew 1970, British faience beads reconsidered, *Antiquity*, 44(175), 199–206.

Oakley, K.P. 1967, *Man the Toolmaker*, London: British Museum.

O'Brien, M.J. (ed.) 1996, *Evolutionary Archaeology: Theory and Application*, Salt Lake City: University of Utah Press.

O'Brien, M.J. & R.L. Lyman (eds.) 2003, *Style, Function, Transmission*, Salt Lake City: The University of Utah Press.

Odling-Smee, F.J., K.N. Laland, & M.W. Feldman 2003, *Niche Construction: The Neglected Process in Evolution*, Princeton: Princeton University Press.

Olalde, I., S. Brace, M.E. Allentoft, I. Armit, K. Kristiansen, N. Rohland, S. Mallick, T. Booth, A. Szécsényi-Nagy, A. Mittnik, E. Altena, M. Lipson, I. Lazaridis, N. Patterson, N. Broomandkhoshbacht, Y. Diekmann, Z. Faltyskova, D. Fernandes, M. Ferry, E.

Harney, P. de Knijff, M. Michel, J. Oppenheimer, K. Stewardson, A. Barclay, K.W. Alt, A.A. Fernández, E. Bánffy, M. Bernabò-Brea, D. Billoin, C. Blasco, C. Bonsall, L. Bonsall, T. Allen, L. Büster, S. Carver, L.C. Navarro, O.E. Craig, G.T. Cook, B. Cunliffe, A. Denaire, K.E. Dinwiddy, N. Dodwell, M. Ernée, C. Evans, M. Kuchařík, J.F. Farré, H. Fokkens, C. Fowler, M. Gazenbeek, R.G. Pena, M. Haber-Uriarte, E. Haduch, G. Hey, N. Jowett, T. Knowles, K. Massy, S. Pfrengle, P. Lefranc, O. Lemercier, A. Lefebvre, J.L. Maurandi, T. Majó, J.I. McKinley, K. McSweeney, M.B.G.A. Modi, G. Kulcsár, V. Kiss, A. Czene, R. Patay, A. Endrődi, K. Köhler, T. Hajdu, J.L. Cardoso, C. Liesau, M.P. Pearson, P. Włodarczak, T.D. Price, P. Prieto, P-J. Rey, P. Ríos, R. Risch, M.A.R. Guerra, A. Schmitt, J. Serralongue, A.M. Silva, V. Smrčka, L. Vergnaud, J. Zilhão, D. Caramelli, T. Higham, V. Heyd, A. Sheridan, K-G. Sjögren, M.G. Thomas, P.W. Stockhammer, R. Pinhasi, J. Krause, W. Haak, I. Barnes, C. Lalueza-Fox, & D. Reich 2018, The Beaker phenomenon and the genomic transformation of northwest Europe, *Nature*, 555, 190–196.

Olsen, B. 2003, Material culture after text: re-membering things, *Norwegian Archaeological Review*, 36(2), 87–104, DOI: 10.1080/00293650310000650.

Olsen, B. 2010, *In Defense of Things: Archaeology and the Ontology of Objects*, Lanham: Altamira Press.

Olsen, B. 2012, After interpretation: remembering archaeology, *Current Swedish Archaeology*, 20, 11–34.

Olsen, B. 2013, Reclaiming things: an archaeology of matter, in P.L. Carlile, D. Nicolini, A. Langley, & H. Tsoukas (eds.) *How Matter Matters: Objects, Artifacts and Materiality in Organization Studies*, Oxford: Oxford University Press, 171–196.

Olsen, B., M. Shanks, T. Webmoor, & C. Witmore 2012, *Archaeology: The Discipline of Things*, Berkeley: University of California Press.

Olsen, B. & C. Witmore 2015, Archaeology, symmetry and the ontology of things: a response to Critics, *Archaeological Dialogues*, 22(2), 187–197, DOI:10.1017/S1380203815000240.

Outram A.K. & A. Bogaard 2019, *Subsistence and Society in Prehistory: New Directions in Economic Archaeology*, Cambridge: Cambridge University Press.

Oyama, S. 2000, *The Ontogeny of Information: Development Systems and Evolution*, Durham NC: Duke University Press.

Oyama, S., P.E. Griffiths, & R.D. Gray (eds.) 2001, *Cycles of Contingency: Developmental Systems and Evolution*, Cambridge MA: The MIT Press.

Parker Pearson, M. & Ramilisonina 1998, Stonehenge for the ancestors: the stones pass on the message, *Antiquity*, 72(278), 308–326.

Pascoe, B. 2014, *Dark Emu: Aboriginal Australia and the Birth of Agriculture*, Broome Western Australia: Magabala Books.

Pauketat, T.R. 2007, *Chiefdoms and Other Archaeological Delusions*, Lanham: Altimera Press.

Patrik, L. 1985, Is there an archaeological record? *Advances in Archaeological Method and Theory*, 8, 27–62.

Pettitt, P. 2011, *The Palaeolithic Origins of Human Burial*, London: Routledge.

Pettitt, P. & J.R. Anderson 2020, Primate thanatology and hominoid mortuary archeology, *Primates* 61(1), 9–19.

Pétursdóttir, Þ. 2017, Climate change? Archaeology and Anthropocene, *Archaeological Dialogues* 24(2), 175–205.

Piel, A.K. & F.A. Stewart 2016, Non-human animal responses towards the dead and death: a comparative approach to understanding the evolution of human mortuary practices, in C. Renfrew, M.J. Boyd, & I. Morley (eds.) *Death Rituals, Social Order and the Archaeology of Immortality in the Ancient World: 'Death Shall Have No Dominion'*, Cambridge: Cambridge University Press, 15–26.

Pigliucci, M. 2010, Genotype-phenotype mapping and the end of the 'genes as blueprint' metaphor, *Philosophical Transactions of the Royal Society: Biological Sciences*, 365(1540), 557–566.

Plog, F.T. 1974, *The Study of Prehistoric Change*, New York: Academic Press.

Plog, F.T. 1977, Explaining change, in J.N. Hill (ed.) *The Explanation of Prehistoric Change*, Albuquerque: University of New Mexico Press, 17–57.

Powell, T.G.E., J.X.W.P. Corcoran, F. Lynch, & J.G. Scott 1969, *Megalithic Enquiries in the West of Britain: A Liverpool Symposium*, Liverpool: Liverpool University Press.

Pross, A. 2012, *What is Life? How Chemistry Becomes Biology*, Oxford: Oxford University Press.

Rascovan, N., K-G. Sjögren, K. Kristiansen, R. Nielsen, E. Willerslev, C. Desnues, & S. Rasmussen 2019, Emergence and spread of basal lineages of *Yersinia pestis* during the Neolithic Decline, *Cell*, 176, 1–11. https://doi.org/10.1016/j.cell.2018.11.005 Accessed April 2020.

Ratnagar, S. 2001, The Bronze Age: unique instance of a pre-industrial world system? *Current Anthropology*, 42(3), 351–379.

Redman, C.L., E. Curtin, N. Versaggi, & J. Wasner 1978, Social Archaeology: the future of the past, in C.L. Redman, M.J. Berman, E.V. Curtin, W.T. Langhorne Jr., N.M. Versaggi, & J.C. Wanser (eds.) *Social Archaeology: Beyond Subsistence and Dating*, New York: Academic Press, 1–17.

Reich, D. 2018, *Who We Are and How We Got Here: Ancient DNA and the New Science of the Human Past*, Oxford: Oxford University Press.

Renfrew, C. 1969a, The autonomy of the south-east European Copper Age, *Proceedings of the Prehistoric Society*, 35, 12–47.

Renfrew, C. 1969b, Trade and culture process in European prehistory, *Current Anthropology*, 10, 151–169.

Renfrew, C. 1972, *The Emergence of Civilisation: The Cyclades and the Aegean in the Third Millennium BC*, London: Methuen.

Renfrew, C. 1973a, Review of *Explanation in Archaeology: An Explicitly Scientific Approach* by P.J. Watson et al., *American Anthropologist*, 75(6), 1928–1930.

Renfrew, C. (ed.) 1973b, *The Explanation of Culture Change: Models in Prehistory*, London: Duckworth.

Renfrew, C. 1973c, *Before Civilisation: The Radiocarbon Revolution and Prehistoric Europe*, London: Jonathan Cape.

Renfrew, C. 1973d, *Social Archaeology: An Inaugural Lecture*, Southampton: University of Southampton.

Renfrew, C. 1975, Trade as action at a distance: questions of integration and communication, in J.A. Sabloff & C.C.L. Karlofsky (eds.) *Ancient Civilisations and Trade*, Albuquerque: University of New Mexico Press, 3–59.

Renfrew, C. 1976, Megaliths, territories and populations, in S.J. De Laet (ed.) *Acculturation and Continuity in Atlantic Europe Mainly During the Neolithic Period and the Bronze Age*, Bruges: De Temple, 198–220.

Renfrew, C. 1977, Space, time and polity, in J. Friedman & M.J. Rowlands (eds.) *The Evolution of Social Systems*, London: Duckworth, 89–112.

Renfrew, C. 1979, Systems collapse as social transformation: catastrophe and anastrophe in early state societies, in C. Renfrew & K.L. Cooke (eds.) *Transformations: Mathematical Approaches to Culture Change*, London: Academic Press, 481–506.

Renfrew, C. 1980, The Great Tradition versus the Great Divide: archaeology as anthropology? *American Journal of Archaeology*, 84(3), 287–298.

Renfrew, C. 1982, Explanation revisited, in C. Renfrew, M.J. Rowlands, & B.A. Segraves (eds.) *Theory and Explanation in Archaeology: The Southampton Conference*, London: Academic Press, 5–23.

Renfrew, C. 1983, Introduction: the megalith builders of western Europe, in C. Renfrew (ed.) *The Megalithic Monuments of Western Europe: The Latest Evidence Presented by Nine Leading Authorities*, London: Thames and Hudson, 8–17.

Renfrew, C. 1984, *Approaches to Social Archaeology*, Edinburgh: Edinburgh University Press.

Renfrew, C. 1996, The sapient behaviour paradox: how to test for potential? In P.A. Mellars & K. Gibson (eds.) *Modelling the Early Human Mind*, Cambridge: the McDonald Institute for Archaeological Research, 11–14.

Renfrew, C. 2001, Symbol before concept: material engagement and the early development of society, in I. Hodder (ed.) *Archaeological Theory Today* (1st edition), Cambridge: Polity Press, 122–140.

Renfrew, C. 2003, *Figuring It Out: What Are We? Where Do We Come From? The Parallel Visions of Artists and Archaeologists*, London: Thames and Hudson.

Renfrew, C. 2004, Rethinking The Emergence, in J.C. Barrett & P. Halstead (eds.) *The Emergence of Civilisation Revisited*, Oxford: Oxbow Books, 257–274.

Renfrew, C. 2005, Systems thinking, in C. Renfrew & P. Bahn (eds.) *Archaeology: The Key Concepts*, London: Routledge, 259–264.

Renfrew, C. & P. Bahn 2004, *Archaeology: Theories, Methods and Practice* (4th edition), London: Thames and Hudson.

Renfrew, C., M.J. Boyd, & I. Morley (eds.) 2016, *Death Rituals, Social Oder and the Archaeology of Immortality in the Ancient World: 'Death Shall Have No Dominion'*, Cambridge: Cambridge University Press.

Renfrew, C. & J. Cherry (eds.) 1986, *Peer Polity Interaction and Socio-Political Change*, Cambridge: Cambridge University Press.

Renfrew, C. & E. Zubrow (eds.) 1994, *The Ancient Mind: Elements of Cognitive Archaeology*, Cambridge: Cambridge University Press.

Ribeiro, A. 2018a, Ontologies, in C. Smith (ed.) *Encyclopaedia of Global Archaeology*, Cham: Springer. DOI: https://doi.org/10.1007/978-3-319-51726-1_2706-1 Accessed December 2019.

Ribeiro, A. 2018b, *Archaeology and the Historical Understanding*, Bonn: Habelt.

Richerson P.J. & R. Boyd 2005, *Not By Genes Alone: How Culture Transformed Human Evolution*, Chicago: University of Chicago Press.

Rindos, D. 1980, Symbiosis, instability, and the origins and spread of agriculture: a new model (with comments and reply), *Current Anthropology*, 21(6), 751–772.

Rindos, D. 1984, *The Origins of Agriculture: An Evolutionary Perspective*, London: Academic Press.

Robb, J. 2013, Material culture, landscapes of action, and emergent causation: a new model for the origins of the European Neolithic (with comments and reply), *Current Anthropology*, 54(6), 657–683.

Roberts, B.W. & M. Vander Linden (eds.) 2011a, *Investigating Archaeological Cultures: Material Culture, Variability and Transmission*, New York: Springer.

Roberts, B.W. & M. Vander Linden 2011b, Investigating archaeological cultures: material culture, variability and transmission, in B.W. Roberts & M. Vander Linden (eds.) *Investigating Archaeological Cultures: Material Culture, Variability and Transmission*, New York: Springer, 1–21.

Roll-Hansen, N. 2009, Sources of Wilhelm Johannsen's genotype theory, *Journal of the History of Biology*, 42, 457–493.

Rosen, R. 1991, *Life Itself: A Comprehensive Inquiry into the Nature, Origin, and Fabrication of Life*, New York: Columbia University Press.

Roskams, S. 2001, *Excavation*, Cambridge: Cambridge University Press.

Rowlands, M. 2010, Concluding thoughts, in P. van Dommelem & A.B. Knapp (eds.) *Material Connections in the Ancient Mediterranean: Mobility, Materiality and Mediterranean Identities*, London: Routledge, 233–247.

Rowlands, M. & J. Ling 2013, Boundaries, flows and connectivities: mobility and stasis in the Bronze Age, in S. Bergerbrant & S. Sabatini (eds.) *Counterpoint: Essays in Archaeology and Heritage Studies in Honour of Professor Kristian Kristiansen*, Oxford: Archaeopress, 517–529.

Rowley-Conwy, P. 1984, The laziness of the long-distance hunter: the origins of agriculture in western Denmark, *Journal of Anthropological Archaeology*, 13(4), 300–324.

Rowley-Conwy, P. 2004, How the west was lost, *Current Anthropology*, 45(4) (Supplement), 83–113.

Rowley-Conwy, P. 2007, *From Genesis to Prehistory: The Archaeological Three Age System and Its Contested Reception in Denmark, Britain and Ireland*, Oxford: Oxford University Press.

Rowley-Conwy, P. 2011, Westward Ho!: the spread of agriculture from central Europe to the Atlantic, *Current Anthropology*, 52(4) (Supplement), 431–451.

Rück, O. 2009, New aspects and models for Bandkeramik settlement research, in D. Hofmann & P. Bickle (eds.) *Creating Communities: New Advances in Central European Neolithic Research*, Oxford: Oxbow Books, 159–185.

Ruiz-Mirazo, K. & A. Moreno 2004, Basic autonomy as a fundamental step in the synthesis of life, *Artificial Life*, 10(3), 235–259.

Sackett, J.R. 1977, The meaning of style in archaeology: a general model, *American Antiquity*, 42(3), 369–380.

Sackett, J.R. 1982, Approaches to style in lithic archaeology, *Journal of Anthropological Archaeology*, 1, 59–112.

Sahlins, M. 1977, *The Use and Abuse of Biology: An Anthropological Critique of Sociobiology*, London: Tavistock.

Sahlins, M.D. & E.R. Service (eds.) 1960, *Evolution and Culture*, Ann Arbor: University of Michigan Press.

Salmon, M. 1978, What can systems theory do for archaeology? *American Antiquity*, 43(2), 174–183.

Salmon, W. 1982, Causality in archaeology, in C. Renfrew, M.J. Rowlands, & B.A. Segraves (eds.) *Theory and Explanation in Archaeology: The Southampton Conference*, London: Academic Press, 45–55.

Salmon, W. 1993, Probabilistic causality, in E. Sosa & M. Tooley (eds.) *Causation*, Oxford: Oxford University Press, 137–153.

Saussure, F. de 1974, *Course in General Linguistics* (translated by W. Baskin), London: Fontana.

Saxe, A.A., 1970, *Social Dimensions of Mortuary Practices*, Ph.D. thesis, University of Michigan, (Published by University Microfilms, Ann Arbor, 1973).

Scarre, C. 2002, Contexts of monumentalism: regional diversity at the Neolithic transition in north-west France, *Oxford Journal of Archaeology*, 21(1), 21–63.

Schiffer, M.B. 1976, *Behavioral Archaeology*, London: Academic Press.

Schiffer, M.B. 1985, Is there a 'Pompeii premise' in archaeology? *Journal of Anthropological Research*, 41(1), 18–41.

Schloss, J. & M.J. Murray (eds.) 2009, *The Believing Primate: Scientific, Philosophical and Theological Reflections on the Origins of Religion*, Oxford: Oxford University Press.

Schneider, E.D. & D. Sagan 2005, *Into the Cool: Energy Flow, Thermodynamics, and Life*, Chicago: University of Chicago Press.

Schneider, J. 1977, Was there a pre-capitalist world-system? *Peasant Studies*, 6(1), 20–29.

Schrödinger, E. 1944, *What Is Life? The Physical Aspects of the Living Cell*, Cambridge: Cambridge University Press.

Schulting, R.J. & L. Fibiger 2014, Violence in Neolithic north-west Europe: a population perspective, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science*, Oxford: Oxford University Press, 281–306.

Schulz Paulsson, B. 2017, *Time and Stone: The Emergence and Development of Megaliths and Megalithic Societies in Europe*, Oxford: Archaeopress.

Schulz Paulsson, B. 2019, Radiocarbon dates and Bayesian modeling [*sic*] support maritime diffusion model for megaliths in Europe, *Proceedings of the National Academy of Sciences of the United States of America*, 116(9), 3460–3465.

Searle, J.R. 1983, *Intentionality: An Essay in the Philosophy of Mind*, Cambridge: Cambridge University Press.

Service, E.R. 1962, *Primitive Social Organization: An Evolutionary Perspective*, New York: Random House.

Shanks, M. & R. McGuire 1996, The craft of archaeology, *American Antiquity*, 61(1), 75–88.

Shanks, M. & C. Tilley 1982, Ideology, symbolic power and ritual communication: a reinterpretation of Neolithic mortuary practices, in I. Hodder (ed.) *Symbolic and Structural Archaeology*, Cambridge: Cambridge University Press, 129–154.

Shanks, M. & C. Tilley 1987a, *Re-Constructing Archaeology: Theory and Practice*, Cambridge: Cambridge University Press.

Shanks, M. & C. Tilley 1987b, *Social Theory and Archaeology*, Cambridge: Polity Press.

Shennan, S. 2000, Population, culture history, and the dynamics of culture change, *Current Anthropology*, 41(5), 811–835.

Shennan, S. 2002, *Genes, Memes and Human History*, London: Thames and Hudson.

Shennan, S. 2018, *The First Farmers of Europe: An Evolutionary Perspective*, Cambridge: Cambridge University Press.

Sherratt, A. 1976, Resources, technology and trade: an essay in early European metallurgy, in G. de G. Sieveking, I.H. Longworth, & K.E. Wilson (eds.) *Problems in Economic and Social Archaeology*, London: Duckworth, 557–581.

Sherratt, A. 1990, The genesis of megaliths: monumentality, ethnicity and social complexity in Neolithic north-west Europe, *World Archaeology*, 22(2), 147–167.

Short, T.L. 2004, The development of Peirce's theory of signs, in C. Misak (ed.) *The Cambridge Companion to Peirce*, Cambridge: Cambridge University Press, 214–240.

Shreeve, J. 2015, Mystery man, *National Geographic*, 288(4), 30–57.

Skippington, E. & M.A. Ragan 2011, Lateral genetic transfer and the construction of genetic exchange communities, *Micro Biological Review*, 35, 707–735.

Smith, B.D. 2007, Niche construction and the behavioral context of plant and animal domestication, *Evolutionary Anthropology*, 16, 188–199.

Smith, E.A., K. Hill, F.W. Marlowe, D. Nolin, P. Wiessner, M. Gurven, S. Bowles, M.B. Mulder, T. Hertz, & A. Bell 2010, Wealth transmission and inequality among hunter-gatherers, *Current Anthropology*, 51(1), 19–34.

Smith, J. 2005, Civilizational sociology and perspectives on the Atlantic, *Atlantic Studies*, 2(2), 199–217.

Smith, M.A. 1955, The limitations of inference in archaeology, *The Archaeological Newsletter*, 6, 3–7.

Smith, M.E. (ed.) 2012, *The Comparative Archaeology of Complex Societies*, Cambridge: Cambridge University Press.

Smyth, J. 2014, *Settlement in the Irish Neolithic: New Discoveries on the Edge of Europe* (Prehistoric Society Research Paper 6), Oxford: Oxbow Books.

Steward, J.H. 1949, Cultural causality and law: a trial of the development of early civilisations, *American Anthropologist*, 51, 1–25.

Strein, H-C. 2011, Chronological and social interpretation of the artefactual assemblage, in A. Bogaard, *Plant Use and Crop Husbandry in an Early Neolithic Village: Vaihingen an der Enz, Baden-Württemberg*, Bonn: Habelt, 19–23.

Szécsényi-Nagi, A., V. Keerl, J. Jakus, G. Brandt, E. Banffy, & K.W. Alt. 2014, Ancient DNA evidence for a homogeneous maternal gene pool in sixth millennium cal BC Hungary and the central European LBK, in A. Whittle & P. Bickle (eds.) *Early Farmers: The View from Archaeology and Science* (Proceedings of the British Academy 198), Oxford: Oxford University Press, 71–93.

Tallis, R. 2011, *Aping Mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity*, Durham: Acumen.

Tallis, R. 2020, *Seeing Ourselves: Reclaiming Humanity from God and Science*, Newcastle-upon-Tyne: Agenda.

Taylor, T. 2010, *The Artificial Ape: How Technology Changed the Course of Human Evolution*, New York: Palgrave Macmillan.

Thomas, J. 2013, *The Birth of Neolithic Britain: An Interpretive Account*, Oxford: Oxford University Press.

Thompson, E. 2007, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*, Cambridge MA: The Belknap Press.

Tilley, C. 1989, Interpreting material culture, in I. Hodder (ed.) *The Meanings of Things*, London: Harper Collins, 185–194.

Tilley, C. 1991, *Material Culture and Text: The Art of Ambiguity*, London: Routledge.

Tilley, C. 1993, *Interpretive Archaeology*, Oxford: Berg.

Tilley, C. 1996, *An Ethnography of the Neolithic: Early Prehistoric Societies in Southern Scandinavia*, Cambridge: Cambridge University Press.

Tilley, C. 1999, *Metaphor and Material Culture*, Oxford: Blackwell.

Tirard, S., M. Morange, & A. Lazcano 2010, The definition of life: a brief history of an elusive scientific endeavour, *Astrobiology*, 10(10), 1003–1009.

Tomasello, M. 2016, *A Natural History of Human Morality*, Cambridge MA: Harvard University Press.

Tringham, R.E. 1991, Households with faces: the challenge of gender in prehistoric architectural remains, in J.M. Gero & M.W. Conkey (eds.) *Engendering Archaeology: Women and Prehistory*, Oxford, Blackwell, 93–131.

Trivers, R.L. 1971, The evolution of reciprocal altruism, *The Quarterly Review of Biology*, 46(1), 35–57.

Tuggle, H.D., A.H. Townsend, & T.J. Riley 1972, Laws, systems, and research designs: a discussion of explanation in archaeology, *American Antiquity*, 37(1), 3–12.

Vander Linden, M. 2011, To tame a land: archaeological cultures and the spread of the Neolithic in western Europe, in B.W. Roberts & M. Vander Linden (eds.) *Investigating Archaeological Cultures: Material Culture, Variability and Transmission*, New York: Springer, 289–319.

Varela, F.G., H.R. Maturana, & R. Uribe, 1974, Autopoiesis: the organization of living systems, its characterization and a model, *BioSystems*, 5, 187–196.

Venkatesan, S. (ed.) 2010, Ontology is just another word for culture: motion tabled at the 2008 meeting of the Group for Debates in Anthropological Theory, University of Manchester, *Critique of Anthropology*, 30(2), 152–200. DOI:10.1177/0308275X09364070.

Viveiros de Castro, E. 1998, Cosmological deixis and Amerindian perspectivism, *Journal of the Royal Anthropological Institute*, 4(3), 469–488.

Viveiros de Castro, E. 2004, Exchanging perspectives: the transformation of objects into subjects in Amerindian ontologies, *Common Knowledge*, 10(3), 463–484.

Viveiros de Castro, E. 2017 [2009], *Cannibal Metaphysics* (translated by P. Skafish), Minneapolis: University of Minnesota Press.

von Wright, G.H. 1971, *Explanation and Understanding*, Ithaca NY: Cornell University Press.

Wallerstein, I. 1974, *The Modern World System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*, London: Academic Press.

Ward, P. 2018, *Lamarck's Revenge: How Epigenetics Is Revolutionizing Our Understanding of Evolution's Past and Present*, New York: Bloomsbury Publishing.

Waterbolk, H.T. & P.J.R. Modderman 1958/59, Die Großbauten der Bandkeramik. *Palaeohistoria*, 6/7, 163–171.

Watkins, T. 2010, New light on Neolithic revolution in south-west Asia, *Antiquity*, 84(325), 621–634.

Watson, P.J., S.A. LeBlanc, & C.L. Redman 1971, *Explanation in Archaeology: An Explicitly Scientific Approach*, New York: Columbia University Press.

Webmoor, T. 2007, What about 'one more turn after the social' in archaeological reasoning? Taking things seriously, *World Archaeology*, 39(4), 563–578.

Webmoor, T. & C.L. Witmore 2008, Things are us! A commentary on human/things relations under the banner of a 'social' archaeology, *Norwegian Archaeological Review*, 41(1), 53–70, DOI:10.1080/00293650701698423.

Wheeler, M. 1956 [1954], *Archaeology from the Earth*, London: Penguin Books.

White, L.A. 2007 [1959], *The Evolution of Culture: The Development of Civilisation to the Fall of Rome*, Walnut Creek CA: Left Coast Press.

Whitley, J. 2002, Too many ancestors, *Antiquity*, 76(291), 119–126.

Whittle, A. 2003, *The Archaeology of People: Dimensions of Neolithic Life*, London: Routledge.

Whittle, A & V. Cummings (eds.) 2007, *Going Over: The Mesolithic–Neolithic Transition in North-west Europe* (Proceedings of the British Academy 144), Oxford: Oxford University Press.

Whittle, A., F. Healy, & A. Baylis 2011, *Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland* (2 volumes), Oxford: Oxbow Books.

Willey, G.R. & P. Phillips 1958, *Method and Theory in American Archaeology*, Chicago: University of Chicago Press.

Wilson, E.O. 1975, *Sociobiology: The New Synthesis*, Cambridge MA: The Belknap Press.

Wilson E.O. 1999, *Consilience: The Unity of Knowledge*, New York: Vintage Books.

Wilson, E.O. 2012, *The Social Conquest of Earth*, New York: Liveright Publishing.

Wilson, P. 1988, *The Domestication of the Human Species*, New Haven: Yale University Press.

Winch, P. 2008 [1958], *The Idea of a Social Science and Its Relation to Philosophy*, London: Routledge.

Witmore, C.L. 2007, Symmetrical archaeology: excerpts of a manifesto, *World Archaeology*, 39(4), 546–562, DOI: 10.1080/00438240701679411.

Wittgenstein, L. 1968 [1953], *Philosophical Investigations* (translated by G.E.M. Anscombe), Oxford: Blackwell.

Woolley, L. 1960 [1930], *Digging up the Past*, London: Penguin Books.

Wylie, A. 1989, Archaeological cables and tacking: the implications of practice for Bernstein's 'Options Beyond Objectivism and Relativism', *Philosophy of the Social Sciences*, 19, 1–18.

Wylie, A. 2002, *Thinking from Things: Essays in the Philosophy of Archaeology*, Berkeley: The University of California Press.

Yoffee, N. 1993, Too many chiefs? (or, Safe texts for the '90s), in N. Yoffee & A. Sherratt (eds.) *Archaeological Theory: Who Sets the Agenda?* Cambridge: Cambridge University Press, 60–78.

Zeder, M.A. 2008, Domestication and early agriculture in the Mediterranean Basin: origins, diffusion, and impact, *Proceedings of the National Academy of Sciences of the United States of America*, 105(33), 11597–11604.

Zeder, M.A. 2011, The origins of agriculture in the Near East, *Current Anthropology*, 52(S4), S221–S235.

Zeder, M.A. 2015, Domestication as a model system for niche construction theory, *Evolutionary Ecology*, 30, 325–348.

Žižek. S. 1994, Introduction: the spectre of ideology, in S. Žižek (ed.) *Mapping Ideology*, London: Verso, 1–33.

Zvelebil, M. 1986, Mesolithic prelude and Neolithic revolution, in M. Zvelebil (ed.) *Hunters in Transition: Mesolithic Societies of Temperate Eurasia and Their Transition to Farming*, Cambridge: Cambridge University Press, 5–15.

Zvelebil, M. & P. Dulokhanov 1991, The transition to farming in eastern and northern Europe, *Journal of World Prehistory*, 5(3), 233–278.

Zvelebil, M., & M. Lillie 2000, Transition to agriculture in eastern Europe, in T.D. Price (ed.) *Europe's First Farmers*, Cambridge: Cambridge University Press, 57–92.

Zvelebil, M. & P. Rowley-Conwy 1984, The transition to farming in northern Europe: a hunter-gatherer perspective, *Norwegian Archaeological Review*, 17(2), 104–127.