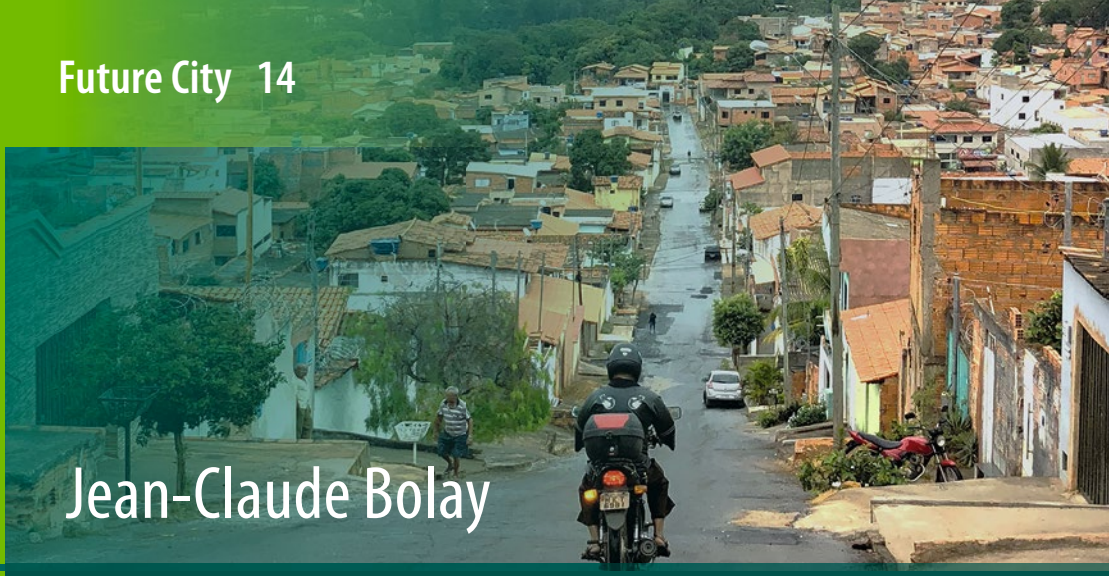
Future City 14



Jean-Claude Bolay

Urban Planning Against Poverty

How to Think and Do Better Cities in the Global South

Springer Open

Future City

Volume 14

Future City Description

As of 2008, for the first time in human history, half of the world's population now live in cities. And with concerns about issues such as climate change, energy supply and environmental health receiving increasing political attention, interest in the sustainable development of our future cities has grown dramatically.

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I also lovingly dedicate this book to my three children – *Matthieu*, *Caroline*, and *Nicolas* – with whom I share my passion for travel, discovery, and solidarity, and to my companion, *Joëlle Grignard*, who sheltered me from the worries of the world, with thanks to her smile, tenderness and attention I shared during this time of writing.

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Contents

Chapter 1
Introduction

How to Design and Build Cities in the Global South?

Abstract Urban planning was implemented in Europe and Northern America during the nineteenth century with the objective of bringing order and coherence to cities that were experiencing a whole revolution: new industries, urban sprawl, migratory flows from rural areas to urban settlements. Without entering into too much detail, it is important to underline that urban planning was essentially conceived as a technical instrument and as a spatial methodology to organize space, without paying much attention to social problems. This approach and accompanying specialization of competences were transferred to developing and emerging countries throughout the twentieth century, oblivious of the problems of another kind and another magnitude faced by cities in the South.

On the basis of these presuppositions, this book intends to examine urban planning as it is practiced today in Southern countries, from a double perspective: (1) how conceptual and methodological precepts can be questioned when applied to different societal contexts than those they were originally intended for, (2) how to re-invent urban planning so that this instrumentation be really useful to the cities of the South in their fight against poverty and segregation while fostering a more sustainable and inclusive urban development. This reflection is very important in any urban context, but it is particularly urgent that it be addressed in small and medium sized cities that lack the human and financial resources to tackle these issues.

Keywords Cities · South · Urban planning · Poverty · Inclusive city

As a human institution, cities are a reflection of the history of humankind whose description, analysis and forecasting have gradually been appropriated and influenced by numerous scientific disciplines, technological advances and humanistic visions, and highlight cities' morphology, land use and the diverse forms of socio-spatial interaction that take place in them.

However, when it comes to cities in emerging or developing countries (especially small and medium-sized cities), our thinking requires an urgent overhaul. In general, these are the areas with the highest population growth rates. And yet, their urban authorities suffer most from the lack of financial and human resources to preempt and address these issues. These societies also face major obstacles in terms

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of human and material precarity, the contamination of natural resources, the informalization of economic activities and dysfunctions in decision-making processes and governance at the local and regional levels. It is this urbanization that, in the coming decades, will put these cities under increasing pressure, particularly given that 95% of urban growth in the future will primarily impact emerging and developing countries.

What does sustainable development – and sustainable urban development more specifically – mean in such contexts? And how does it translate into tools and information that allow professionals to develop and apply innovative, socially inclusive and economically productive planning that is respectful and responsible in terms of natural resources and environmental management?

Hence, the question is whether spatial and social planning that is adapted to these contexts and can solve their issues actually exists. Were this the case, would we not be wise to challenge the models on which classic planning is based and substitute logic measures that promote coherence between theories and concepts, and public and private practices (and the many strategies to which they give rise)?

Based on this premise, this book is a conceptual reflection and personal journey through 35 years of scientific and professional projects and activities on four continents. It is also a debate on urban planning and the arguments for redefining both its methods and content to meet the social demands and needs identified of Latin American, African and Asian cities.

During my sociology and political science studies in the 1970s, a young geography and anthropology professor often spoke of "similarities and differences" to impress upon us the idea that reality is never black or white, negative or positive, all or nothing, but rather is always nuanced, sometimes ambiguous and often conflictual.

As a young professional in the public service sector and later as a PhD student in Mexico, I learned that not only was the world made up of such subtleties, but also of intricacies, contradictions, struggles, conflicts, misunderstandings, and even pleasant surprises for those who know how to listen and open their eyes.

Trying to remain subjective throughout different experiences and events, I wanted to develop an analytical approach based on rigorous methods, which included taking into account the many facets of the social and material complexity of cities. It had to combine quantitative and qualitative dimensions and have its roots in the social sciences – of which I was a part – as well as urban planning, environmental science and engineering.

My first boss at EPFL described the city as a natural and built environment. With him and another colleague, we seized the opportunity to reverse this metaphor by making inhabitants our focus: a natural environment, undoubtedly, a material environment, obviously. But also and above all a human environment. We combined analytical rigour with the poetics of language for the title of our collective book on urban alternatives, *Habitat créatif, éloge des faiseurs de ville* (Creative habitat, in praise of city makers) (Pedrazzini et al. 1996).

Our commitment to urban research has endured over time and will serve as a guide for this work. A threefold observation underlies its message. The first is the need for objective recognition of a contemporary phenomenon of major importance, namely the process of continuous demographic and spatial urban growth. The second is a corollary to this globalized urbanization, with a shift of mass poverty from rural areas to urban ones and a billion poor mostly living in South cities – a serious and largely overlooked issue. Finally, urbanity must be recognized as a driver of territorial fragmentation and social disparities, as well as humanity's historical development in terms of its culture and technologies. Nonetheless, it remains a vibrant place of creativity and innovation.

It was in this spirit, which is both scientific as regards analysis as well as committed to improving the lives of all of its inhabitants (especially the poor), that this book was written.

Its purpose is to help redefine the objectives of urban planning in emerging and developing countries, the methods used, the tools and techniques applied to reify them, and the interventions by public, private and collective stakeholders involved in urban development.

The first chapter focuses on the data that characterizes the urbanization phenomenon that taking place across the world, and South countries in particular. It provides an opportunity to discuss some of the different perceptions and theories that underlie the analysis, citing some specific examples of the urban research my colleagues and I have done over the years.

The second chapter focuses more directly on the specificities of urban planning, both in terms of its disciplinary diversity and its sometimes heterogeneous use, particularly when it reproduces methods and tools that are not adapted to the urban contexts of South countries. The idea here is to rethink planning based on the needs and social demands of inhabitants while taking into account the obstacles frequently encountered in South cities, especially smaller ones – namely a lack of financial means and competent human resources.

Three case studies will be presented: one from West Africa, and two from Latin America. Each highlights certain points related to our overarching question and concretely examines their impact in the field for city dwellers, political authorities and professionals working in the sector.

The case of Koudougou, a medium-sized city in Burkina Faso – one of the poorest countries in the world – with a population of 115,000 inhabitants, for instance, provides an opportunity to understand how these issues translate in the African urban context. The reader discovers a regional capital that is struggling with a great many problems and is unable to solve them in a coherent way due to an insufficient municipal budget and total dependence on the federal government and outside donors. Urban development thus depends less on local consultation than on donor projections and decisions taken at the State level. This proves that reinventing planning in Africa is of the utmost urgency so that local actors can have greater autonomy in deciding how to put it to useful ends.

Conversely, the case of Nueve de Julio, an intermediate city of 50,000 inhabitants in the Argentinian pampas, addresses new forms of spatial fragmentation and social exclusion linked to agro-export and crises in international markets. Created in the nineteenth century along with hundreds of other cities as part of a government strategy of territorial conquest, the city is a perfect example of an intermediate city, with respect to its rural region and in terms of the challenges it faces in a globalized, connected world. With no long-term vision, successive municipal governments have allowed things to deteriorate; though aware of the problems, they are obliged instead deal with various emergencies and ongoing crises. As a result, it now faces poorly-controlled, costly territorial sprawl and has a poor, poorly integrated population on its hands. Here, too, sustainability planning is necessary. But leaders are hesitant: how to sell investments that have no visible or immediate impact when re-election looms on the horizon?

In 2015 and 2016, Montes Claros, an agglomeration of some 400,000 inhabitants in the state of Minas Gerais in Brazil, updated its master plan, which dated from the early 2000s. The operation was carried out by the local authorities with support from universities and professional groups, but without any real participation by the population. Somewhere between a total lack of planning (as in Argentina) and exogenous, top-down planning (as in Burkina Faso), the Brazilian case allows us to follow an ongoing process. Faced with continuing demographic growth and political and economic risks, the authorities are concentrating on the city center, thus abandoning its peripheries. Instead of using the opportunity to promote citizen participation, they reduced it to technocratic instrumentation that was biased in its consideration of the inhabited territory and most fragile populations.

In their own way, each of these three case studies highlights the potential and limitations of urban planning. Appropriate spatial planning and a better organization of social and economic activities are indispensable, particularly when resources are scarce. Though extremely different in their histories and geographies, the three cities chosen for our case studies have in common the fact that they are intermediate cities and play a central role in their regions. Though less confronted by problems of extreme poverty than larger metropolises, they face issues as their populations – for whom they must provide essential facilities and services such as schools, hospitals and public transport – increase. This, of course, comes at a cost, as investments made for the benefit of urban and rural inhabitants necessitate defining choices and priorities based on universally comprehensible criteria and taking into account the available means.

In the conclusion, I will again touch upon the similarities and differences between the different cases. This will allow us to develop alternative urban planning models that can better tackle poverty and the negative consequences of the urbanisation process, namely territorial fragmentation, environmental contamination, social disparities and exclusion, informal economy and habitat, urban governance and democracy.

Reference

Pedrazzini Y, Bolay J-C, Bassand M (1996) Habitat créatif, éloge des faiseurs de ville. Habitants et architectes d'Amérique latine et d'Europe. Fondation Charles Léopold Mayer pour le progrès de l'Homme, Paris

Chapter 2
Urban Facts

Abstract Today, the majority of the world's population – roughly 54% – lives in urban areas. Though global, this trend nonetheless varies greatly depending on the country and continent. It appears that in Europe and the Americas (both North America and Latin America) the urban population has reached roughly 80%, versus less than 50% in Asia and Africa. Yet, it is in the two latter regions that 90% of the world's urban transformation process will take place and have the greatest impact in terms of living spaces, economic activities, culture, lifestyles and mobility.

While considerable differences exist between countries, the same can be said of cities. Though most research focuses on major urban agglomerations (cities of over a million and megacities of over ten million), the fact that nearly 50% of the world's urban population lives in cities of less than 500,000 inhabitants has been somewhat overlooked. Infinite in number, these small and medium-sized cities are extremely interesting in terms of the role they play as intermediate cities that serve their surrounding regions, providing public and private services and facilities that benefit both rural and urban populations. Yet, research on these cities shows that they are at a disadvantage compared to larger cities in terms of poverty, insufficient financial resources and skilled workers.

By considering the environmental, economic and social dimensions of sustainable development independently, we are able to differentiate South cities and integrate our 30 years of research within the framework of this multi-faceted problem. We argue the fight against poverty and instability are both a common thread and the greatest challenge to creating sustainable, inclusive cities.

To begin, environmental issues must be analyzed bearing in mind that urban life generates waste and pollution of natural resources (water, air and ground). The latter negatively impact individuals' health when the sources of contamination and their effects are not monitored. In many South cities, where makeshift housing with substandard hygiene and sanitation conditions prevail, such monitoring is still in its nascent stage. Thus, many poor are exposed to environmental risks that far surpass those in other neighborhoods.

In South and North countries, cities are drivers of the economy. As home to half of the world's population, they contribute 80% of the global GDP. In emerging and developing countries this economic dynamic couples with a high proportion of informal employment, a key source of urban insecurity. Far from being a space of

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transition between the rural and urban economy, the informal economy is an integral part of the globalization of modes of production and marketing that goes together with the modern industry sector.

The picture of the South city would not be complete without an analysis of its social dimensions. Cities continue to grow with waves of rural migrant populations. These new inhabitants account for about 40% of urban growth in developing countries. For these individuals and families, urban integration means development potential not only economically and monetarily but also socially, culturally and healthwise, especially for new generations who were raised and educated in the city.

This positive urban vision should not overshadow the fact that the city is a machine designed to produce poverty and social inequalities. Nearly a billion people are living in slums, more than 90% of which are in poor countries. Economic growth is only partially reflected in the improved living conditions of the most destitute. The number of urban poor is expected to double in the next 30 years, a glaring indication of the need to rethink urban planning based on this mixed reality of wealth creation and growing disparity between social groups.

Keywords Urbanization · Small and medium-sized cities · Globalization · Economic growth · Social inequalities

2.1 Urbanization: A Global Trend

> Since 1990, the world has seen an increased gathering of its population in urban areas. This trend is not new, but relentless and has been marked by a remarkable increase in the absolute numbers of urban dwellers. In 1990, 43% (2.3 billion) of the world's population lived in urban areas; by 2015, this had grown to 54% (4 billion). The increase in urban population has not been evenly spread throughout the world. Different regions have seen their urban populations grow more quickly, or less quickly, although virtually no region of the world can report a decrease in urbanization. (UN-Habitat 2016) (Fig. 2.1)

In 1950, 30% of the world's population was urban; by 2050, 66% of the world's population is expected to be urban. Today, the most urbanized regions include North America (82% living in urban areas in 2014), Latin America and the Caribbean (80%) and Europe (73%). In contrast, Africa and Asia remain mostly rural, with 40 and 48% of their respective populations living in urban areas (Fig. 2.1).

Here, as briefly summarized on the occasion of the Habitat III Conference. The facts are clear: the world is now mostly urban, with 3.96 billion urban dwellers in 2015 for a global population of some 7.55 billion, and a projected 6.41 billion for a global population of 9.77 billion in 2050[1] (UN DSAPD 2017) (Fig. 2.2).

This is the result of urban growth, which is not consistent at the global level. Such impressive differences have long distinguished continents based on dividing lines between countries and within each country. Systematically speaking, the more

[1] http://www.urbanet.info/world-urban-population/ (Accessed 21 May 2019).

Fig. 2.1 Ouagadougou, an African capital in constant renovation, 2005. (Reproduced with permission from Bolay)

a rural the country, the higher its current urban growth rate. Conversely, the larger a country's urban population, the lower its urban growth rate.

Thus by 2050, more than half of the world's population growth will be in Africa, with an estimated additional 1.3 billion people, followed by Asia, with an increase of 750 million people. Latin America, the Caribbean and North America will also experience modest population growth (Fig. 2.3). Europe is the only region whose population is expected to decline between 2017 and 2050. In total, 90% of urban growth will be in South countries, and in Asia and Africa in particular (UN DSAPD 2017).

The world urban population has grown rapidly, from 746 million in 1950 to 3.9 billion in 2014. Despite a lower level of urbanization, Asia is home to 53% of the world's urban population. With 758 million urban dwellers, China alone accounts for 20% of the world's urban population, followed by India with 410 million and the United States with 263 million. Europe is home to 14% of the world's urban population, and Latin America and the Caribbean 13%.

These changes, both the recent ones and those to come in the next decades, result in urban population growth rates that vary considerably from one continent to another. Growth rates in historically urbanized regions like Latin America and Europe are currently very low (1.3% for Latin America and the Caribbean and 0.5%

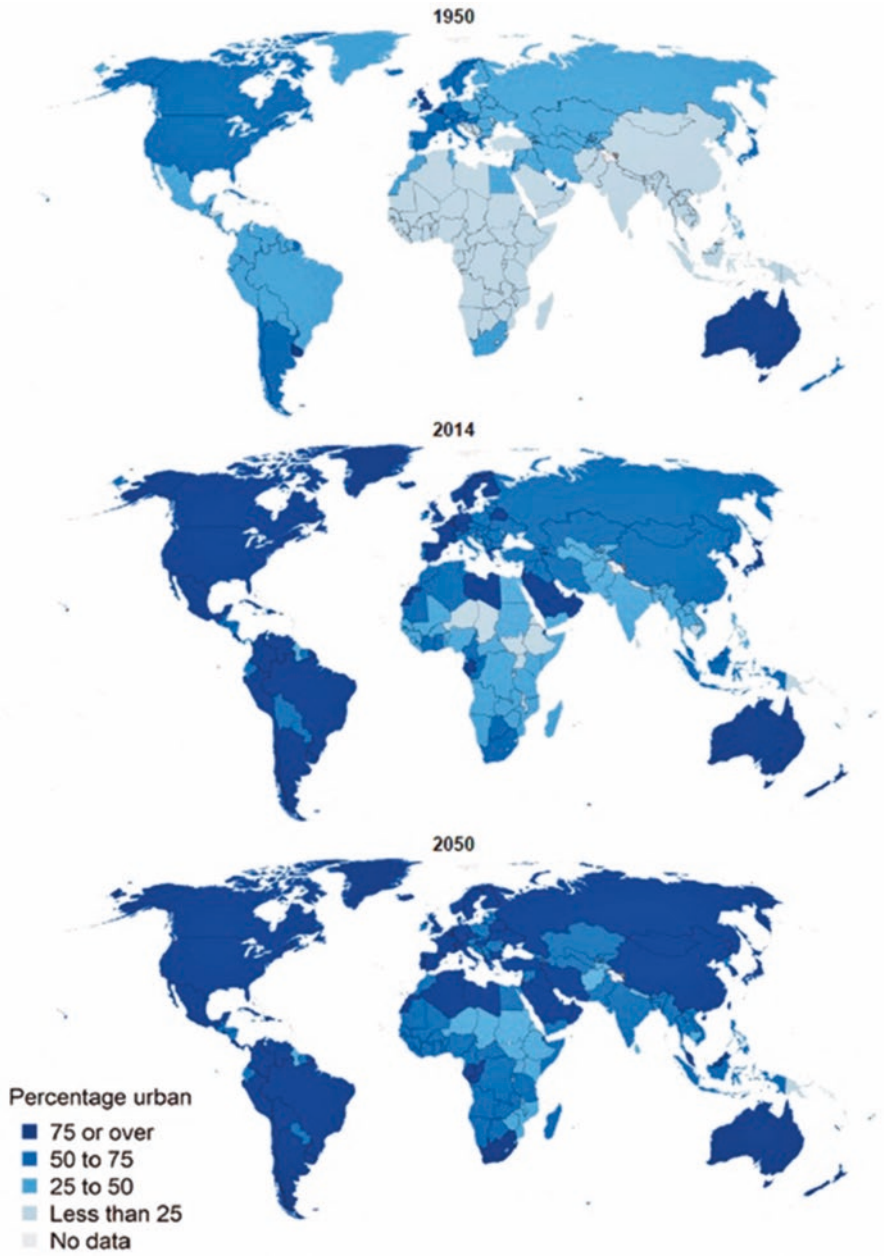

Fig. 2.2 Percentage of the population residing in urban areas in 1950, 2014 and 2050. (Reproduced from UN DSAPD 2015)

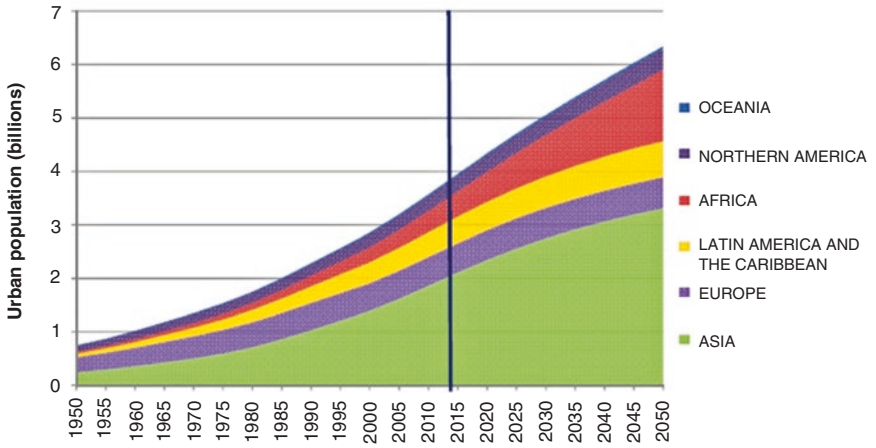

Fig. 2.3 Urban population by major world regions. (Reproduced from UN DSAPD 2015)

for Europe in 2017, according to World Bank data).[2] Asia and Africa, on the other hand, still have relatively high growth rates, though they too have gradually declined in recent decades (3.55% for Africa between 2005 and 2015 and 2.65% for Asia over the same period) (UN-Habitat 2016).

Jedwab et al. (2014) also point out that the pace of demographic and territorial change has accelerated appreciably throughout history and in different parts of the world (Fig. 2.4).

> Urban expansion in the developing world has been dramatic. Between 1950 and 2015, the total urban population in developing countries increased from 300 million to 3 billion; the urban share tripled from about 17% to 50%. Overall, there are many similarities with the urban expansion process of developed countries in the 19th century. Yet, there are also important differences. First, urban expansion has been so much faster in today's developing world. In Europe, urbanization accelerated with the advent of the Industrial Revolution, rising from 15% in 1800 to 40% in 1910. Both Africa and Asia reached the same rate in half time, moving from 15% in 1950 to 40% in 2010. (Jedwab et al. 2014:6)

In recent decades, the focus has been on large agglomerations of several million inhabitants (cities of more than million inhabitants) and megacities of more than ten million inhabitants. Effectively, the numbers in such cities have increased exponentially. In 2000, for instance, there were 16 megacities versus 31 in 2016. It is estimated that by 2030, this number will have risen to 41, with most of the new megacities being in Asia) (United Nations 2015). Yet, all in all, these megacities will only be home to 8.7% of the world population in 2030. The 662 metropolises of more than a million inhabitants (United Nations 2016) on the other hand will be home to 27%. At the other end of the spectrum and 26.8% of the world's population will live in cities of less than 500,000 inhabitants. Small and medium-sized cities are therefore extremely important, given that they are currently home to 49.1% of the urban population (44.6% in 2030) (United Nations 2016:3).

[2] https://data.worldbank.org/indicator/SP.URB.GROW (Accessed 21 May 2019).

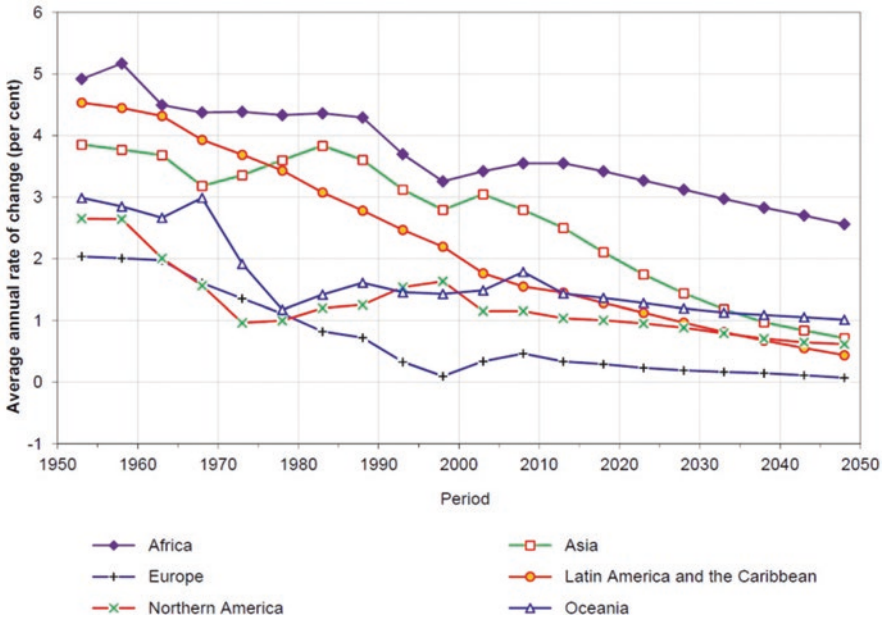

Fig. 2.4 Rate of urbanization by major area, 1950–2050. (Reproduced from UN DSAPD 2015)

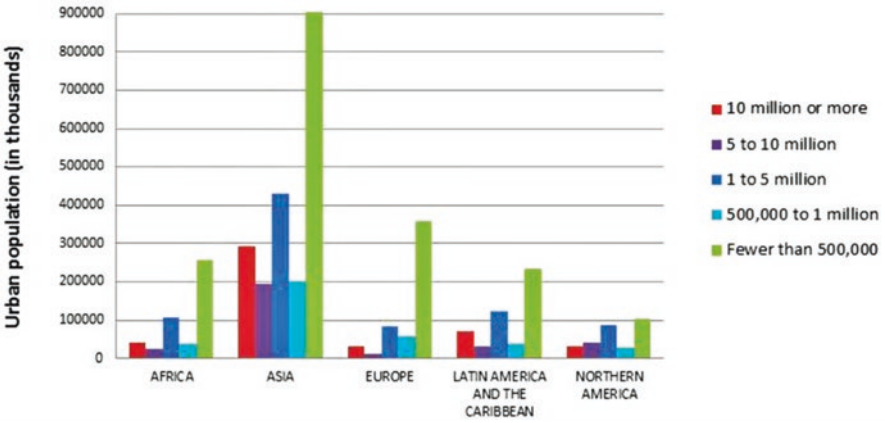

Fig. 2.5 Distribution of the urban population by city size and world region. (Reproduced from Berdegué et al. 2014)

Focusing solely on the urban population, we can deduce that nearly half of the world's urban dwellers reside in relatively small settlements of less than 500,000 inhabitants (Fig. 2.5). UN-Habitat emphasizes the essential role these cities play in terms of their relationship to the rural world (UN-Habitat 2015). This phenomenon is not unique to developing countries; it can be seen on every continent, thus

supporting on our polycentric our view of population growth and urban development (Berdegué 2014; Adam 2006; Cohen 2004). We insist on the fact that these small and medium-sized cities face specific, relatively unknown issues and effectively play a strategic role in terms of regional development by providing services to both local and regional populations (Bolay 2016). We will consider this point in greater detail in Chap. 5 in our discussion of Montes Claros.

This rural-urban connection is all the more strategic for the planet's future development, given the rural population worldwide is still high (currently nearly 3.4 billion but expected to fall to 3.2 billion by 2050). Africa and Asia are home to nearly 90% of the world's rural population. Though predominantly rural, Africa and Asia are urbanizing faster than the other regions and are projected to become 56% and 64% urban, respectively, by 2050.

Small and medium-sized cities often act as intermediary cities, as defined in previous works (Bolay and Rabinovich 2004; Bolay et al. 2003). Rather than focusing on population size and urban sprawl alone, we decided to examine cities' dynamics in terms of their intermediary function at several scales: (1) locally, with regard to their periphery, (2) regionally, with regard to economic activities and the rural/suburban population, (3) nationally, relative to their role in the urban network and (4) internationally, in terms of their attractiveness and globalized trade. To comprehensively explore the dynamics of urban intermediation, we established several areas of investigation: demographics (to determine migration flows); economics (to identify key sectors and markets); politics and institutions (based on the existing public institutions and the range of services offered); services and amenities (to highlight the diversity of the offer and demand); the environment (identifying the natural resources available and the impact of urban life on their balance); social relations (to analyze behaviors and social networks) and; culture (to understand local creativity and outside influences).

Using this frame of reference, which is still valid today, we can differentiate three types of intermediate cities according to their position in the spatial context:

- So-called "affected" intermediate cities: autonomous cities that have a strong territory position and trade relations with comparable or smaller urban hubs, but belong to a socioeconomic network that allows them to benefit from the influence of the closest city.
- So-called "satellite" intermediate cities: intermediate cities near large cities that offer their complementarity in terms of manpower, infrastructure and facilities;
- So-called "remote" intermediate cities: intermediate cities with a more closed system vis-à-vis the outside given their remote location (Bolay and Kern 2019).

Although still often poorly defined and often equated with medium-sized towns, intermediate cities are increasingly attracting the attention of researchers, policy-makers and politicians[3] given that they are now home to a large percentage of the world's urban population.[4]

[3] A good example is the first World Forum of Intermediary Cities, organized in Morocco in July 2018.

[4] https://intermediarycities.uclg.org/en, (Accessed 21 May 2019).

Bellet and Llop (2002) explore the role these medium and intermediate cities play in their territories at the local and regional scales as centers of social, economic and cultural interaction. They are also connected with infrastructure networks that untie local, regional, national and international partners, and are usually home to various levels of local and regional government administration that must meet the demands and needs of large sectors of the population – a result of the decentralization phenomenon that can be observed in many South countries.

The authors present additional characteristics based on a survey of some 90 intermediate cities around the world. The former must be solidly argued, as they might seem opportunistic in a somewhat idealized vision of small and medium cities "where life is good," versus the "urban hell" of large agglomerations. For now, however, they must be explored in order to clearly distinguish between the generic DNA of intermediate cities and their specific characteristics. The authors also speak of more stable, sustainable systems that allow for more balanced relations with the respective territories, and of using natural and human resources in a more equitable way at the regional level. They purport that intermediate cities are more easily governable, manageable and controllable, thus allowing for greater civic participation in the governance, administration and management of the city as well as settlements that are more human and livable, allowing citizens to identify with their city more easily. These cities do not suffer the environmental issues associated with megacities (e.g. social conflict). They are also less economically competitive than cities where the higher administrative functions tend to be located (Bellet and Llop 2002: 248–249). However, in a more critical stance, Kern and I (Bolay and Kern 2019) counter argue that a majority of these small and medium-sized cities lack the necessary institutional capacities to manage their rapidly growing populations. Data collected in different countries confirms that residents of smaller settlements suffered a marked disadvantage in terms of piped water and electricity supply, waste disposal services and schools compared to residents of larger cities (Cohen 2006), where levels of infant and child mortality are negatively proportional to city size (National Research Council 2003). Making smaller cities a focus on urban agendas must be a priority, particularly given their exponential demographic growth.

The research we conducted on intermediate cities in Latin America at that time led us to other, more nuanced conclusions about this set of qualifiers (Bolay and Rabinovich 2004; Bolay et al. 2003, 2004). More equitable, balanced relations between society, political powers and the environment are far from being the reality in all intermediate cities. As we will see later in this book, government funding is often proportionally inferior to that of large cities. Moreover, economic and social poverty are more prevalent, and paternalistic relations and cronyism between decision-makers and citizens commonplace, giving rise to dependency, subordination and even corruption. Infrastructure and technical networks may also be less efficient than in big cities, which has a negative impact on the quality of natural resources. What is certain is that intermediate cities – though quintessential given the issues they raise – remain little studied and merit further investigation.

UN-Habitat effectively reminds us that small and medium-sized cities have the highest population growth (UN-Habitat 2016) and that little effort has been made to

solve the urban planning and social integration issues they face, despite their demographic importance and strategic role, and compared to investments made in major cities. According to Birkmann et al. (2016), the population of small and medium-sized cities is projected to rise by 32% between 2015 and 2030 – meaning 469 million more people in these cities – whereas large cities and megacities are projected to grow by 26%, or 203 million people. Satterthwaite (2016) tells us that, in 2010, while there were 81 cities of more than 500,000 inhabitants in sub-Saharan Africa, there were 1612 urban centers of less than 50,000. As regional markets, these cities establish a continuum between villages and rural populations. Yet, the risks their populations face are greater than those faced by inhabitants of larger agglomerations, as community services – be it water, sanitation, electrical supply or wastewater treatment – are less efficient and generally less prevalent.

This renewed commitment to medium-sized cities and their strategic role in serving as a link between the rural and urban worlds came to fruition at the latest UN's conference on housing and sustainable urban development in Quito, Ecuador, in 2016. After a week's worth of work and debates, a theme group issued a declaration supporting the idea that intermediate cities are an important link in the territorial system between larger cities, towns and other human settlements. With populations of 20,000 to 500,000 (and up to one million in some countries), they offer, among other things, a form of governance that is closer to the people. The also offer health, education, social and cultural infrastructure that extend to the surrounding rural areas and, as such, often become "stopping points" for populations who might have migrated to larger cities and metropolises (Habitat III).[5] As previously stated with regard to the work of Bellet and Llop (2002), the vision here may again seem somewhat idealized and ignorant of the difficulties (including a lack of planning) intermediate cities face. However, it does highlight the potential for development, provided the necessary means are made available in a medium and long term perspective.

2.2 Fragmented South Cities. Between Poverty and Environmental Risks

Far from statistical abstraction, an analysis of South cities highlights two symptoms specific to current urbanization trends around the world: the insecurity and resilience symbolized by the "slum" and the deterioration of natural resources (versus sustainable development).

Today, insecurity and impoverishment epitomize the construction, development and thus future of cities. This spatial and socio-economic marginalization (informal/makeshift settlements, illegal occupation of private/public land, gated communities and peri-urbanization) can be translated by the symbolic term "slum," which, in some Spanish-speaking countries, is translated *villa miseria*, *bidonville* in French,

[5] http://habitat3.org/the-new-urban-agenda/preparatory-process/urban-dialogues/intermediate-cities-cuenca/ (Accessed 21 May 2019).

favela in Brazilian Portuguese and shantytown in English. Yet, behind these etymologies lies the same reality. The contemporary city – be it planned or not, and whether well or poorly managed – develops at the price of obvious contradictions: though a shelter and refuge at the individual and family levels and while serving as center for economic, cultural and educational opportunities, the city remains an arena for antagonistic struggles between the common good and individual interests, public and private, rich and poor.

A third of the world's urban population – one billion individuals – live in precarious conditions, while 94% of slum dwellers live in developing countries. Africa and Asia will be predominantly urban by 2030; 72% of urban populations in Africa live in extremely poor conditions. This figure rises to 80% in the poorest regions of the world. Cities in developing countries will absorb 90% of the world's urban growth over the next two decades. Today, 560 million city dwellers have no access to sanitation. UN figures (UN-Habitat 2008) show that this demographic expansion varies greatly depending on the world region. In 2010, roughly 32.7% of the world's urban population – 61.7% in sub-Saharan Africa, 35% in Southern Asia, 31% in Southeast Asia, 23% in Latin America and the Caribbean and 13.3% in North Africa – live in slums," (Bolay et al. 2016:11–12).

This issue – omnipresent in our work since the 1990s – continues to raise questions and guide our thinking. How can we invest so many human and financial resources to better manage cities and their future without having eliminated (or at least greatly reduced) the thousand and one material and social forms of insecurity and poverty? In our view, this is still the greatest challenge for urban planning: creating an innovative approach designed to improve the city's organization for residents and visitors and to be more inclusive of populations in need.

Perhaps it is best to begin with some photos taken during our years of urban research in different countries affected by such realities, in order to highlight some of the more critical issues (Figs. 2.6, 2.7, and 2.8).

Some 25 years ago, a large-scale interdisciplinary and international research project was launched for greater Ho Chi Minh City (Fig. 2.6). The project explored the links between the rising number of informal settlements and water contamination (Bassand et al. 2000). The goal was to understand what insecurity meant in the Vietnamese context at that time and to determine how Vietnamese and Swiss scientists from different disciplines could advise the government and support community groups in their local development activities (Bolay et al. 2002). The country had recently embraced the market economy; business had improved and control over individuals was diminishing. The result was strong rural flight towards HCMC that continues today.

At the time, 25,000 families were listed as living in cabins on stilts on the canals and rivers that run through the Vietnamese economic metropolis, which was already overpopulated and had little vacant land. These same canals were and are still used as dumps and toilets by the people who live along them in makeshift self-built houses. As such, the water has become highly contaminated, with frequent flooding during the rainy season. In just a few years, HCMC's population and inhabited area grew phenomenally.

Fig. 2.6 Ho Chi Minh City (HCMC), Vietnam, 1994. (Reproduced with permission from Bolay)

Scientific cooperation was established between disciplines that, at first glance, seemed completely unrelated. However, they were quite complementary in their approaches to and understanding of this complex problem. The result was an innovative and novel scientific partnership between Vietnamese and Swiss researchers in the areas of economics, sociology, geography, environmental engineering and chemistry. Based on this coordination between various disciplines, scientists and urban managers, we were able to (1) objectively diagnose the nature, causes and effects of water contamination, (2) determine the human, urban and industrial factors that con-

Fig. 2.7 El Alto, suburb municipality of La Paz, 1997. (Reproduced with permission from Bolay)

Fig. 2.8 La Paz, Bolivia – *left to right: top to bottom* 1990, 1997, 1993, 2012. (Reproduced with permission from Bolay)

tributed to this pollution (and what the consequences on individuals' health would be) and (3) evaluate technical solutions in terms of water distribution, waste collection and wastewater recycling. The goal was to strengthen the HCMC government's environmental services in consultation with the grassroots organizations at all levels and urban decision-making bodies (people's committees) (Bolay et al. 2000).

1997, La Paz, Bolivia, an Andean city carved into the earth, clinging to the rock and surrounded by mountains (Fig. 2.8). Your breath forgets to disembark with you at El Alto airport, 4150 m above sea level. The highway cuts across the overpopulated slopes, and the city's historic center (situated at 3600 m) charms visitors with its Hispanic cathedral, colonial streets and colorful, discreet *cholas*[6] with their bowler hats. Activity buzzes, indigenous peoples (mainly Aymaras and Quechuas) shoulders rub with mixed-race townspeople. Yet, a silent segregation can be felt at all levels: vernacular languages versus Spanish, poor neighborhoods in the Altiplano and rich residential areas in the southern part of the city, housing, formal/informal economic integration, cultures and religions (Fig. 2.8). The beauty of the Andean landscape is impressive, with men and women moving quietly behind the urban bustle of horns and pollution. The further down one goes, the richer the neighborhoods, with their milder climate, become. The further up one goes into El Alto, a poor suburban area, the scarcer the vegetation and more rustic the small *adobe* mud houses become.

[6] Name of indigenous peasant women in Bolivia.

At the time, we were working on setting up an inter−/transdisciplinary research and support group to advise the Ministry of Urban Planning on the implementation of its new law on social housing involving representatives of the aforementioned ministry, a banking cooperative, an NGO that supports the construction of low-income housing in poor neighborhoods and university researchers. This innovative approach was designed to integrate non-scientific actors involved in implementing the new regulatory text early on in the process. The goal was twofold: to first take into account the characteristics of the potential beneficiaries of this new plan and then to adapt the system to individuals (not the other way around (Bolay 1998; Bolay et al. 1993). Interdisciplinarity was essential to this process.

The plan posed architectural and technical issues as concerns building materials (raw earth or *adobe*, which is used in popular neighborhoods the world over, fired bricks or cement), sanitary installations and access to public facilities in developing peripheral areas. Financing was another major concern: what private or public institution would be willing to make loans to individuals with no fixed income based on alternative guarantees, versus usurious lenders with interest rates of more than 10% a month! Administrative and regulatory questions such as building permits and land ownership recognition are expensive procedures that take months to process for applicants with no special privileges or who are unwilling to bribe officials, as De Soto (1989) noted in a liberal view of deregulation. Many popular microcredit experiments, whose results are still highly debated, have developed around the world (Glévin and Moulévrier 2011; Marconi and Mossey 2006; Weber 2002).

In the wake of these institutional changes in Bolivia, several non-profit organizations have become solidarity banks for people with low-income but with the means to repay individually through savings groups (Velásquez González 2007). The question of how to implement technical, financial and institutional solutions that allow modest citizens who work outside the formal framework (and are thus unsalaried) to get loans to buy land to build quality housing is still a critical topic.

Contrasting yet similar realities in divergent climatic and socio-political contexts: Vietnam – a socialist state that is reaping the benefits of unbridled, globalized capitalism – on the one hand, and Bolivia – a country entangled in disastrous policy reversals on the other. Elected in 2005, Presidential Evo Morales, a former trade unionist and spokesperson for the indigenous majority, called for indigenous socialism in a country where a large, though often hidden, proportion of the income comes from the production of coca leaf and the illegal processing and export of cocaine.[7]

Initially colonized by powerful Western countries, South countries have seen a variety of labels, including "underdeveloped," "developing," "emerging "and finally "Global South." These terms, whose meaning is increasingly blurred and imperceptible, symbolically mark the "smooth" transition towards the globalized integration of these countries as well as the economic and social inclusion of their citizens, though statistics tend to show quite the opposite: while wealth production continues to increase at the global level, inequalities between countries are on the rise both at the country level and between social groups (rich vs. poor, center vs. periphery, etc.)

[7] https://lostiemposdigital.atavist.com/ley-coca-bolivia (Accessed 21 May 2019).

(Dabla-Norris et al. 2015; Kanbur and Sumner 2012; Bolay et al. 2005). The globalization that allegedly was to democratize international relations and facilitate developing countries' entry into the market is in fact a red herring (Artus and Virard 2008; Bolay 2004). Customs control has become increasingly rare and protectionism – at least until recently – had fallen out of fashion.[8] However, agreements between industrial superpowers (like NAFTA between USA, Canada and Mexico) and countries desirous to enter the game strengthen the strong and further weaken less technologically- and financially-developed countries. Thus today, the genetically-modified maize industrially produced in the US is cheaper in Mexican supermarkets than the national maize, jeopardizing the livelihoods of thousands of small-scale rural farmers whose survival depends on this resource. Joseph Stiglitz (2010) speaks of globalization intrinsically linked to crises and their contagion.

Willingly or by force, the Global South has been integrated into this connected, interdependent, unequal planet (Birdsall 2006). But the globalization of trade, goods, funds and people is not limited to certain regions of the world. The Global North and Europe in particular is not immune to increasing poverty (Ballas et al. 2017), due in large part to fierce global competition (Europe is expensive!) and economic stagnation whose consequences on the urban environment are undeniable.

A technical and social assessment of living environments done in Bulgaria in 2000 opened my eyes to an unknown face of Europe. The provincial city of Targoviste, plagued by the closure of its arms factories, was discovering post-socialism and doubt in the face of a future that was uncertain to say the least. The Swiss Cooperation wanted to assess the housing needs of Bulgaria's poor following the political and social changes brought about by the end of "socialist" relations between Russia, the last relic of the former USSR, and Eastern Europe. The immediate consequences of the dismemberment of this "socialist bloc" were the closing of factories, the privatization of low-income housing developments (tenants suddenly became owners), the rise of unemployment and open resentment of the Roma people. In striking parallel to urban evolution in developing countries, the Malcho Malchev district in Targoviste was home to 5000 inhabitants of Roma origin for an urban population of some 60,000 inhabitants.

Their self-built houses (40–60 m^2 on average) accommodated five or six families (Fig. 2.9). With drainable trench latrines, running water outside the home, inadequate sanitation and unpaved dirt roads, pathologies due to insalubrity were commonplace and irregular school attendance remained a problem. Moreover, strong cultural ties to the gypsy tradition, a markedly ethnic social organization and the desire to be integrated in the city socially and economically while continuing to live in "their neighborhood" were all factors for consideration (Bouvet and Bolay 2000). Two parallel proposals were made to the Swiss Cooperation Agency. The first was a project to rehabilitate the Malcho Malchev neighborhood based on what existed, using local labor and providing technical and social assistance. The second was to

[8] The election of Donald Trump as US President in January 2017 challenged this international consensus on the benefits of international rules favoring the free market.

Fig. 2.9 Self-built house in the Malcho Malchev neighborhood, Bulgaria 2000. (Reproduced with permission from Bolay)

create a privatized housing development management system designed to empower new owners with administrative and financial organization allowing for the maintenance of buildings and housing units and reappropriation of public spaces. The goal was to balance the project so as to not focus solely on the Roma, at the risk of making them the unintentional victims of resentment from the rest of the population. In

Fig. 2.10 Targoviste, Bulgaria 2000. Privatized units in the Zapad neighborhood. (Reproduced with permission from Bolay)

the end, the Swiss backer chose to invest in other sectors in the country to facilitate the transition to capitalism and accelerate its integration into the European Union. Thus our intervention in Bulgaria was not truly a success. However, it highlighted the similarities and differences between a European country in transition and our experience of cooperative projects with Asia, Africa and Latin America. Here, too, did we observe growing poverty, the need for urban planning that takes into account the needs of the poor and a widespread desire to become part of a globalized world with more individual and collective opportunities (Fig. 2.10).

More recently, we considered two cities that seemingly have nothing in common but are, in fact, both booming intermediate cities – one in Brazil and the other in Burkina Faso. The first, Montes Claros in the State of Minas Gerais, has 400,000 inhabitants and an impressive concentration of industrial companies (Figs. 2.11 and 2.12). The other, Koudougou, is the provincial capital of Burkina Faso and an economic center with 120,000 inhabitants about 100 km from Ouagadougou (Figs. 2.13, 2.14, and 2.15). Both face similar problems associated with spatial extension and the emergence of new neighborhoods on their outskirts. The local governments, which suffer from budget shortages and a lack of human skills, are unable to handle the situation or effectively respond to the issues at hand. Planning is on the agenda in both cities, which rely on support from the national government, international agencies of cooperation, NGOs and major industrial groups.

What do we learn from all of these differences and unique forms? First of all that our concepts, theories and analyses are rooted in a historical and temporal reality that are of little use if we cannot understand them contextually based on specific

Fig. 2.11 Montes Claros city center, Minas Gerais, Brazil 2015. (Reproduced with permission from Bolay)

interpretations by different actors who, in their own way, participate in the construction of the city, to follow ethnopsychiatrist Devereux (1967). At the same time, it is important to recognize the relationships that researchers, contributors and specialists establish with actors on site. Behind the specificities of each city lie major trends (the globalization of economic exchanges, decentralization of decision-making powers, territorial extension and ever-present, ever-increasing pauperization). Individuals and families must navigate these complex waters using formal strategies (notably work, school, housing and health care), which makes the city highly attractive, especially in places where the majority of the population is rural (Figs. 2.16 and 2.17).

To conclude, cities are increasing in number, size and population, particularly in the Global South and Asia and Africa more specifically. However, these regional and national distinctions do not hide the two key trends that emerge from an analysis of these figures: (1) though the overall changes in the urbanization process strengthen the position of major cities, metropolitan areas and megacities, nearly half of the world's urban population today lives in small and medium-sized cities (Bolay and Rabinovich 2004) and (2) urbanization gives rise to a double phenomenon of spatial fragmentation of cities and socio-economic segregation of their populations (Bolay et al. 2016).

Fig. 2.12 Montes Claros, Brazil 2015, with its new social housing developments (the federal government's *minha casa, minha vida* project). (Reproduced with permission from Bolay)

2.3 Sustainable Urban Development: Dimensions and Questions

For the past 25 years, sustainable development has been the catchword for global initiatives designed to preserve the planet's resources while ensuring better social and economic conditions for all peoples regardless of the continent, country or region. This is the case both in the current context and for generations to come, which brings us back to 1987 and the United Nations World Commission for Development and the Environment, headed by Mrs. Brundtland, a former Norwegian minister. It was the report provided by this commission that was to serve as a reference for the first Earth Summit held in Rio de Janeiro in 1992 (WCDE 1987). The report was a historical milestone in terms of raising awareness about environmental issues and their impact of our societies. We will come back to this point later.

In the years that followed, numerous researchers criticized and questioned the very foundations of this approach (Pogge and Sengupta 2015; Smythe 2014; Connelly 2007; Hove 2004; Rist 1996), claiming that the term "sustainable development" was as much politically and 'mediatically'-motivated as scientifically based. As Sneddon et al. (2006: 254) state, "Inequalities in access to economic opportunities have dramatically increased within and between most societies, making pragmatic governance toward social and environmental goals increasingly difficult." The authors note, however, that sustainable development's universal notoriety

Fig. 2.13 The main marketplace in Koudougou, the third largest city in Burkina Faso 2014. (Reproduced with permission from Bolay)

has put the critical questions of socio-economic equity and human-environment relations back on the agenda with renewed interest, due to (1) the extremely pessimistic forecasts of specialists regarding the impacts of climate change (IPCC 2014), (2) debates on current economic guidelines (Milner and Mukherjee 2009; Amin 2004; Bolay 2004; Ravaillion 2003) and (3) the divergent and conflicting interests that give rise to them. The fact remains that the terminology itself is rooted in language and has become quite popular with time. It is therefore fair to regard it critically and to consider how the term "sustainable development" can useful in analyzing the modern world and better understanding cities in order to improve them.

The question of sustainability is much more complex than it appears at first glance, particularly when it comes to harmonizing various areas of development (environmental, economic and social) that tend to clash in a world with an ever-growing population (7.3 billion in 2015, 8.5 in 2030 and 9.5 in 2050, UN 2017[9]). Three key dimensions must be balanced: (1) the preservation of natural resources and mitigating climate change, (2) economic growth that respects the environment and (3) social equity and the fight against disparities, a major challenge that researchers have highlighted for decades. Since the 1970s, Sachs (1997) has drawn attention to the contradictions between our devastating economy of non-renewable resources and the growing number of poor people worldwide. What he called "eco-

[9] https://esa.un.org/unpd/wpp/ (Accessed 21 May 2019).

Fig. 2.14 Stalls at the main market in Koudougou, Burkina Faso 2014. (Reproduced with permission from Bolay)

development" – in other words, an economy that is respectful of the environment, lands and cultures – is, among other things, the source of everything included in the concept of sustainable development beginning in the late twentieth century.

These global challenges inevitably affect cities of all types all over the world, now that most of the world's population lives in urban areas and that this rate is expected to reach 66% by 2050 (United Nations 2015). These issues are being raised in a critical way given the complexity of urban growth and its importance demographically, its spatial extension and the need for services and infrastructures generated by the development of the economic, social and cultural activities of city dwellers (Klopp and Petretta 2017; Yigitcanlar and Teriman 2015; Khakee 2014; Bolay 2012; Keivani 2010; You 2007). Urban challenges are now among the 17 sustainable development goals that were established by the United Nations for 2030 at the third Urban Summit in Quito in 2015.[10]

It is therefore important to reexamine the key points of these dimensions – environmental, economic and social – in order to reform urban planning in a way that integrates them into a future vision and translates them into coherent, coordinated actions. In this way, economic interests and social concerns can become compatible with the preservation of environmental resources.

[10] http://habitat3.org/the-new-urban-agenda/ (Accessed 21 May 2019).

Fig. 2.15 The new bus station, Koudougou, Burkina Faso 2014. (Reproduced with permission from Bolay)

2.3.1 Urban Environmental Risks

While everyone publicly agrees that protecting the environment and preserving natural resources, be it locally (where individuals can act at their own level) or in light of more global threats (e.g. climate change, desertification, marine pollution and biodiversity loss), it is hard to find an international consensus on a specific, comprehensive definition of what constitutes the environment, and more specifically, the urban environment. This is due to the fact that the city is at the junction between the natural resources essential to individual and social life – earth, water and air – and the material resources that comprise the built environment, which shape human settlements.

This is also understandable given that both the city and its inhabitants are consumers of natural resources (land and water, in particular) and energy (electricity, oil, nuclear, solar, wind, etc.), as well as massive polluters of these resources (air/water pollution, lack of wastewater treatment, soil contamination, household and industrial waste, etc.). This consumption requires sophisticated protection mechanisms, effluent treatment and recycling of used resources. Moreover, the issue cannot be addressed solely from within the uncertain borders that delimit the urban area. Urbanity invariably involves interactions with the "outside," be it a hinterland comprised of peri-urban and rural areas (Allen 2003), more distant rural and agricultural areas or remote natural areas with little or no population (mountains,

Fig. 2.16 Street vendor in downtown Koudougou, Burkina Faso 2014. (Reproduced with permission from Bolay)

Fig. 2.17 A main road in Koudougou, Burkina Faso 2014. (Reproduced with permission from Bolay)

oceans, deserts, etc.). Any change to the external environmental can have an impact on the supply of natural resources to cities (for example, rising sea levels due to global warming, desertification, etc.). Similarly, the impacts of human, economic and/or domestic activities (heating, industrial fumes/smoke, transportation, etc.)

Fig. 2.18 Soil erosion in the city of La Paz, Bolivia 2012. (Reproduced with permission from Bolay)

can be felt far beyond the urban limits when purification procedures are not systematically implemented, as is often the case in South cities (Dodman et al. 2013; UN-Habitat 2012; D'Amato et al. 2010; Tong-Bin et al. 2005; Hardoy et al. 1992).

Environmental issues have been on the agenda both locally and globally for nearly 50 years. Many scientists have warned against the negative ecological impacts of economic development in industrial societies (Fig. 2.18). The book that raised the most alarm was undoubtedly *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind,* a report by MIT researchers who were commissioned by the Club of Rome to demonstrate the risks and limitations of the current economic model (Meadows et al. 1972). Criticized for its "zero growth" stance and, hence, its impact on the future of emerging countries and comfort levels acquired in Western countries, the book nevertheless denotes increased awareness and the need for better long-term development solutions. It is in this alternative spirit that, from 1970 to 1990, several researchers fueled the debate, highlighting the term "eco-development." The term was first coined by Maurice Strong, Secretary General of the Conference on the Human Environment[11] in Stockholm in 1972, to

[11] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwio5rXz0-ncAhUSbFAKHT0sBkAQFjABegQICRAC&url=http%3A%2F%2Fwww.un-documents.net%2Faconf48-14r1.pdf&usg=AOvVaw0VF-o83hQFBfO6QpbAFeSN (Accessed 21 May 2019).

signify an alternative form of economic development to the present pattern of economic expansion (Mellos 1988). Several authors have contributed to this thinking (Georgescu-Roegen 1971; Schumacher 1973; Sachs 1978, 1980; Daugherty et al. 1979; Galtung 1980). The fact is that any form of economic production invariably has an impact on the ecosystem and, as such, must be managed in order to minimize the latter. Remediation costs therefore must be included in the production process and product prices.

Extremely innovative at the time, Sachs (1980: 12) makes what today is a very obvious link between the environment and development. In the introduction to his book, he says, "The philosophy of development (or if we prefer the ethics of development) outlined below applies to both Third World countries and the opulent countries of the North, and to rural and urban projects and industry. Contrary to what detractors of eco-development and some outrageous supporters of soft techniques claim, there is no question of going back to a bucolic way of life that has been nothing more than an idealization against historical and fallacious of the past. On the contrary, eco-development is a tool for foresight and exploration of development options challenging the prevailing trends that currently prevail. The increasingly dramatic conflict between growth and the state of nature can be resolved differently than by stopping growth. The challenge is finding ways and means to grow that create compatibility between social progress and the sound management of resources and the environment."

Beyond political and ideological divergences, this period of questioning and reassessment of the world's chosen economic path was seized upon internationally during the famous United Nations Earth Summit in Rio de Janeiro in 1992. Its founding text, a report entitled "Our common future," published in 1987 by the Committee on Environment and Development, is still a reference today. The report lays the foundations for what would later be called "sustainable development." Two fundamental principles served as its basis: (1) safeguarding the needs of the present generation without compromising those of future generations and; (2) creating compatibility between the ecological, social and economic dimensions of development. These principles were strongly contested by certain scientists, who saw them as strategic and political first and foremost (Bolay and Taboada 2011; Brunel 2004; Bolay 2004; Latouche 1993; Partant 1983). Nevertheless, they resulted in a set of standards, indicators and initiatives designed to translate these principles into concrete actions at the local, national and global levels based on the Agenda 21 action plan.[12] Sneddon et al. (2006:257) clearly discern the challenges behind these issues and other pronouncements: "Environmental issues are pervasively integrative in the sense that the value of preserving the environment and maintaining its viability is widely shared at every level of community, yet the very same issues have led to pervasive and divisive fragmentation among and within groups, communities, countries, and international systems when actions designed to implement the proposed commitments proved to be highly controversial and… largely ineffectual."

[12] https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf (Accessed 21 May 2019).

Ignacy Sachs was one of the first to put the urban question in the spotlight in the 1980s, highlighting its vital importance in the quest for "harmonious" development that respects the environment. He argues that because "the urban explosion in Third World countries is the most significant event in the second half of the 20th century, so much that, soon, the majority of the world's inhabitants will be living in slums in Asian, African and Latin American cities," (Sachs 1984:802) that "the approach to eco-development is precisely characterized by a desire to harmonize social, economic and ecological objectives. This applies to both urban and rural development" (Sachs 1984:806).

During a research project on Ho Chi Minh City, Vietnam's economic metropolis, in the 1990s (Bolay and Du 1999), we found obvious ambiguities in the analysis of the environmental impact of urban development and the appropriate scales of intervention to recommend. On one hand, preserving natural resources (water, air and soil) that were being threatened by pollution and often at the expense of individuals' health (especially the poor) was critical. Yet, it was also necessary to improve living conditions by providing jobs and services to the community. In addition to these concerns about priorities in terms of responsible public action was the question of the reference territory, between macro-dimensional analysis, which incorporates the entire metropolitan and suburban area, and micro-dimensional action at the neighborhood and communities level, which takes into account the environmental risks specific to each location and the living conditions of each family and/or social group.

For these reasons, we describe the urban environment at four levels:

1. The local level, which focuses on the environmental damage produced by urban activities and their impact on the quality of local resources (e.g. clean water supply, waste water treatment system, treatment of household waste and human excreta, etc.) within the urban fabric, taking into account its immediate effects on the population's health.
2. A level connecting local and surrounding regional levels that focuses on the interfaces between the city and its hinterland, whose repercussions are less immediately felt by urban populations but rather extend beyond its borders (e.g. like the air pollution resulting from most urban transport, the pollution of rivers, lakes and seacoasts, the deforestation of nearby forests, and the spread of the suburbs at the expense of agricultural lands and other green areas.
3. An extra-urban level that focuses on the impact of long-distance urban activities (e.g. greenhouse gases, industrial acid emissions and aquatic transport of heavy metals).
4. A global level whose origin is not specifically urban but that affects the living conditions of urban populations, among other things (e.g. natural disasters, hurricanes, earthquakes, global warming impacts such as rising sea levels in coastal areas where urban populations are higher (Baird 2009); 40 to 50% of the urban total population according to Barragan and Andrés 2015).

Hardoy and Satterthwaite (1991) distinguish the different geographical scales at which environmental issues must be analyzed, the first being the home and workplace. According to the authors, the fact is that much of the urban population in the Global South lives in poverty. Hence they argue that it is mainly at home and in the workplace that people run the risk of coming into contact with pathogenic microorganisms (especially those found in human excreta and in crowded, cramped, living conditions). Such poor hygiene conditions can also often be found in the workplace, be it on the streets or in companies that operate in non-compliance with environmental regulations (when they exist). In their neighborhoods, these same individuals are the first to suffer from the lack of infrastructure and services (piped water supply, sewage connections, garbage collection and basic measures to prevent disease and provide health care). Moreover, these neighborhoods, which are often informally settled, are often located in officially unbuildable urban and peri-urban areas because they are dangerous or present risks (e.g. steep hillsides, floodplains, polluted areas around solid waste dumps, near open sewers or in industrial areas with high levels of air pollution).

At the wider city level, the three main environmental risks are toxic waste, water pollution and air pollution. These issues require heavy investments from authorities in the form of decontamination systems for industrial fumes, wastewater treatment, vehicle control, household/industrial waste management and recycling. However, the costs far exceed the financial capacity of urban governments and inhabitants.

The interaction between the city and surrounding region is also a source of environmental concern: the more cities grows in terms population and industry, the more external inputs (water, fossil fuels, land and material goods for these populations and industries) they require, and the more contamination (air, untreated water discharged into rivers, lakes and seas, waste dumping, etc.) they emit beyond their limits. As a result of pollution and poor management of natural resources, cities can become "one of the most health-threatening of all human environments: disease-causing agents and disease vectors multiply; the large concentration of people living in close proximity to each other increases the risk of disease transmission; and health care systems become unable to respond rapidly and effectively" (Satterthwaite 2003:77). This poses a constant threat to all inhabitants and the poor in particular, who cannot solve these problems on their own due to lack of financial means (Fig. 2.19). Environmental degradation alone does not help us fully grasp urban poverty, however (Satterthwaite 1999). Thus, we will now consider the urban economy, which is both a driver of growth and a marker of social difference.

2.3.2 The Urban Economy and Sustainable Development

We can safely say that the economy, the production of goods and services and consumption are inherent to life in society, regardless of the type of modes of production or their commercial success. Given that an increasing majority of individuals live in urban areas, we can easily assert that the urban economy plays a determining

Fig. 2.19 Waste in a suburb of Ulan Bator, Mongolia 2013. (Reproduced with permission from Bolay)

role in the dynamics of cities and the integration of their inhabitants. Albeit work and income are not the only reasons people settle in cities (Bolay 1986), the need to "earn a living" remains predominant and thus, in part, explains rural-urban migration.

Analyzing the urban economy is first and foremost a way of trying to understand the spatial relationships between places (cities), the people living and working there, and the production/commercial sectors present in them. Based on this analysis, which combines both territorial and human dimensions, we can better grasp the current dynamics and the strength that economic development brings to cities and their inhabitants. As Polèse (2013) argues, a city's location and size (from small towns to mega-cities) undoubtedly determine what types of activities will be profitable and which will not. Nevertheless, the link between geographical position and cities' function is shifting. In late twentieth and early twenty-first-century modernity, two factors have proven decisive in the transformation of urban economies: technologies and their use by urban actors, and the city's connection with the outside, be it in terms of transportation or through accessibility to telecommunications networks. The case of the city of Nueve de Julio, which we will analyze later in this book, aptly illustrates this.

As Davis and Vernon Henderson (2003) note, it is clear that, historically speaking, cities' development is symptomatic of the rise in power of the secondary (industrial) and tertiary (services) sectors, and to the detriment of the primary sector

(i.e. agricultural) at both the national and global levels. Regional and national differences in terms of the concentration of labor by sector and the geographical distribution of economic activities can be explained in part by the raw materials available, the age of the infrastructure, the lines of communication between cities and regions and the profitability of each sector. Public policies, which can be more or less interventionist, in turn influence these changes over time. African cities are the counterexample; their lower economic performance is more closely related to shortcomings in the urban infrastructure (UN-Habitat 2011a, 2013a).

Changes in the economy, both locally and globally, now favor cities, be it with regard to movement between economic sectors or modes of production. According to Dericke (2009), the dramatic rise of the tertiary sector benefits cities (Fig. 2.20), restructuring the economy as a whole and strengthening the urban network in parallel to international globalization (Bolay 2004). The recent liberalization of international trade rules and instantaneity of telecommunications have favored the development of a more virtual economy. According to Sassen (2001), this global opening of the economy will serve to favor multifunctional, global cities like New York, London, Zurich, Shanghai, Buenos Aires and Sao Paulo that are linked to international networks. Following the author, these cities are more than that: they are city-regions – immense spaces with population basins of millions or even tens of millions.

This is obviously the case of Greater Buenos Aires, where two-thirds of the 14 million inhabitants live on the outskirts of the Argentinian capital. The same can be said of the Mexico City metropolitan area (the Federal District, Mexico's capital), which is home to nine of the urban agglomeration's 22 million inhabitants. However, this reticular view of the global city and its interconnected economy can be extend to an entire diverse and multifaceted region (such as by referring to Switzerland as a "Swiss metropolis"). With its 8.6 million inhabitants (Bassand 2004), Switzerland has made the mobility of social and economic activities its primary factor of distinction, above and beyond urban-rural differentiations. This metropolitan focus highlights the largest cities but tends to overshadow small and medium-sized ones, though the latter, which likewise enjoy technological advances, can also exploit their comparative advantages economically.

According to the McKinsey Global Institute, "[h]alf of the world's population already lives in cities, generating more than 80 percent of global GDP today (Fig. 2.21). But the urban economic story is even more concentrated than this suggests. Only 600 urban centers, with a fifth of the world's population, generate 60 percent of global GDP," (Dobbs et al. 2011:1). Yet, only 20% of the world's population lives in them. For their analysis of the world's 2000 largest cities, they found the latter contribute 75% of the global GDP. In the top percentile, the 23 megacities of more than ten million inhabitants generate 14% of the global GDP, proving that economic power and capital production are still highly concentrated in a few major urban centers.

Fig. 2.20 Shopping mall in Kuala Lumpur, Malaysia, new urban services, 2013. (Reproduced with permission from Bolay)

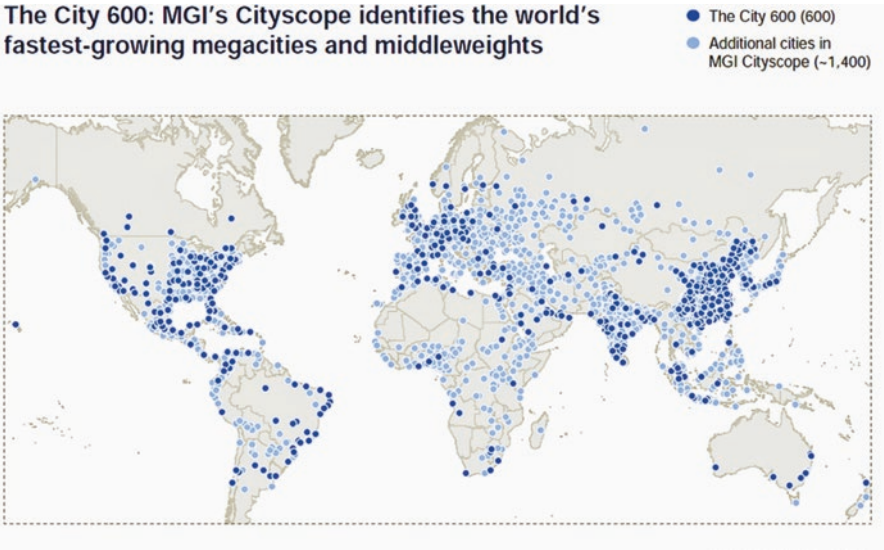

Fig. 2.21 The world's 2000 most economically dynamic cities. (Reproduced from McKinsey Global Institute 2011)

Following McKinsey, however, the economic importance of the largest agglomerations is decreasing, especially in megacities of more than ten million inhabitants. Thus, by 2025, megacities' contribution will represent 11% of the global GDP, versus 13% for cities of five to ten million, 18% for cities of two to five million, 19% for cities of 150,000 to two million, and 38% for smaller cities and rural areas. The distribution of economic hubs also indicates a profound change in the world economy, whose center of gravity in a globalized economy is shifting from formerly industrialized Western countries to emerging countries. Thus, 70% of the 600 most dynamic cities in the world are now in South countries, led by China, whose cities will contribute 30% to the increase in global GDP. The 143 cities in sub-Saharan Africa included among the 600 in the MGI report (above) provide 50% of the region's GDP and will represent 60% in 2025. This inevitably results in a significant increase in the middle and upper classes' buying power. Thus, by 2025, the authors estimate that among the 600 cities evaluated in the report, the 423 located in emerging or developing countries will have 235 million households earning more than $20,000 annually, versus 210 million households in "developed" countries.

Using the World Bank's figures, Xing Quan Zhang (2016) shows the close link between urbanization and wealth creation, suggesting that "that urbanisation is a very strong indicator of all aspects of productivity growth over the long run. It demonstrates the co-relationship between urbanisation and economic development level. The higher the urbanisation level in a country is, the higher the GDP per capita. This trend is more obvious for countries with GDP per capita below USD 10,000. Very few countries have reached income levels of USD 10,000 before reaching about 60 percent urbanisation level" (Zhang 2016:243). The statistics the author uses demonstrate that, in general, cities have a higher rate of economic pro-

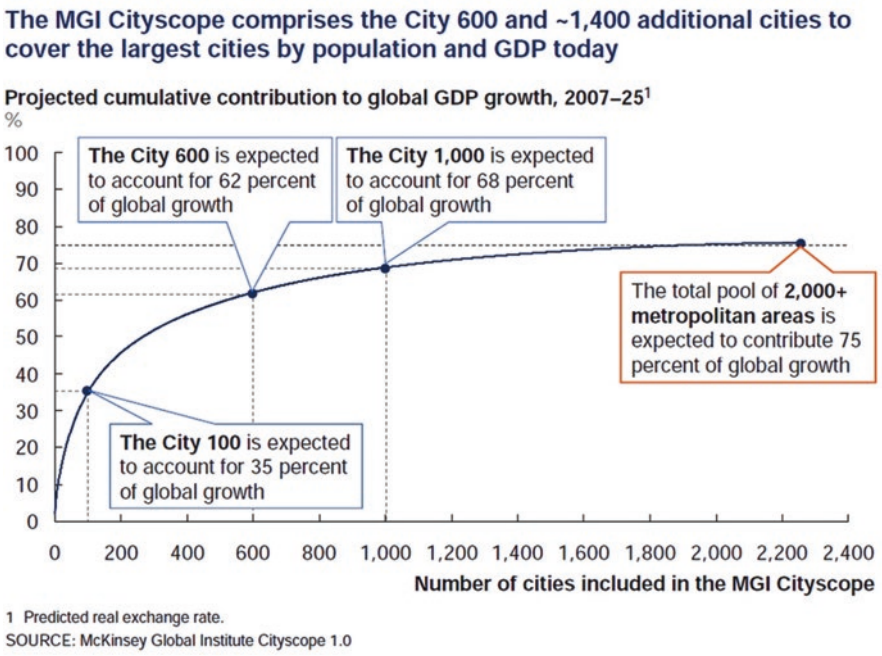

Fig. 2.22 The economic contribution of the world's 2000 most active cities. (Reproduced from McKinsey Global Institute 2011)

ductivity than rural areas, particularly in developing countries – a fact that has been confirmed by the United Nations (UN-Habitat 2011b). The example of certain large South metropolises and megacities like Sao Paulo, Buenos Aires, Shanghai, Mumbai, Nairobi and Dar es Salaam proves this: with 32.5% of the national population, Buenos Aires produces 63.2% of Argentina's GDP. Mumbai, which is home to 2% of the Indian population, produces 6.3% of the national GDP. Nothing, however, is said about small and medium-sized cities' specific contribution to economic production, though we are well aware that it is these cities whose populations and urbanized spaces are increasing the most rapidly.

Beyond these macroeconomic considerations, Glaeser and Henderson (2017) highlight what it is that differentiates the urban economies of Western countries from those of South countries by considering two characteristics that distinguish the latter as "developing economies." The first is the prevalence of the informal sector in economic production (which is very clearly the case in urban areas). The second concerns the dominance of the state sector in the economy at the expense of private enterprises.

Michael Cohen (2016) confirms that all countries depend heavily on the productivity of urban areas for economic growth, given that 75% of the global GDP comes from cities of various sizes (Fig. 2.22). According to the author, the informal sector accounts for 50% of urban employment in developing countries. Small and medium-sized businesses (SMBs) provide 80% of formal employment.

Fig. 2.23 Building the city, Suzhou, China 2013. (Reproduced with permission from Bolay)

The statistics presented by WIEGO (Women in Informal Employment: Globalizing and Organizing) are even more alarming. According to them, the percentage of informal non-agricultural jobs is 82% in Southern Asia, 66% in sub-Saharan Africa, 65% in East and South-East Asia and 51% in Latin America (Vanek et al. 2014). This obviously has a major impact on the urban economies of South countries and on their overall competitiveness (i.e. lower productivity, poor social/physical protection for workers, and more limited access to the market) (Fig. 2.23). Moreover and less directly, the informal sector has little concern for environmental issues and thus is more polluting. Finally, as the revenue generated is not officially recorded, it does not contribute to public revenues (taxes and taxation), thus limiting the government's financial investment capacity. In contrast to this critical analysis, some opponents argue that the informal sector can actually encourage entrepreneurship and innovation during the early stages of economic development (Jütting and

Fig. 2.24 Street market in Port-au-Prince, Haiti 2015. (Reproduced with permission from Bolay)

de Laiglesia 2009). More importantly, given the reality of rural-urban changes, it is the only way to integrate new urban dwellers and poor populations into urban economic life.

Notably – and contrary to conventional wisdom – the informal sector is not a transition from ancestral and/or traditional forms of production inherited from rural agricultural societies to nineteenth-century industrial modernity. The OECD states that the informal sector is not only contemporary, but is also expanding both geographically and in terms of number of active workers. While this is clearly the case in Latin America and Southeast Asia (Jütting and de Laiglesia 2009:12), it is in fact true for all South countries and even certain North countries (Brown and McGranahan 2016) due to increasingly globalized competition and pressure with regard to production and marketing costs. Hence, with regard to the formal sector, the informal sector is actually more complementary than competitive (Portes et al. 1989).

Many of these scholars emphasize the dual nature of the urban economy in the Global South, with a growing proportion of the labor force joining the informal system of production of goods and services (Fig. 2.24). However, there is little specific information on the sectors that make up the urban economy or their influence on and evolution in both the formal and informal systems. While local studies have been done, a global synthesis is still missing.

Controlling and guiding this economic aspect of urban development is one of the goals of urban and regional planning. As such, public policies must define the

framework conditions in which economic actors can act. Land must obviously be allocated for these activities, and infrastructure and community services created in order to facilitate economic development (i.e. energy supply, telecommunications networks, traffic lanes and means of transportation). Regulations and training strategies must likewise be considered. The community must also benefit from these investments through job creation, production conditions that respect the natural and social environment and the redistribution of the revenue generated through taxation and public finances. It is in this perspective that the UN's Habitat agency makes recommendations for a responsible, job-creating urban economy.[13] The agency also emphasizes that these goals can only come to fruition if urban competitiveness is founded on economic rationality, which is strongly linked to political stability (UN-Habitat 2013b).

Several SDGs (sustainable development goals) thus focus on the different facets of economic development.[14] Goal – "decent work and economic growth" – emphasizes the need for strong growth that creates decent jobs, promotes the role of women in the economy and protects natural resources, especially in developing countries. *Goal 9* – "industries, innovation and infrastructure" – focuses on the multiplier effect of jobs created in the industrial sector and on the key role of SMBs, which provide 90% of jobs worldwide. Thus, research, innovation, quality infrastructure and support for small and medium-sized industries are both an indispensable and profitable investment. *Goal 12* – "responsible consumption and production" – considers the raw materials and processes required for any economic production and their recycling at the end of their lifecycle. Three key areas can be distinguished here: water, energy and food, the goal being more efficient management and less contaminating processes for 2030. *Goal 11* – "sustainable cities and communities" –, which focuses on the city and its inhabitants as its name indicates, posits that a positive dynamic between economic, social and environmental dimensions in urban and peri-urban areas requires a strengthening of urban and regional planning.

2.3.3 Sustainable Development, Urban Poverty and Social Disparities

The city is a gigantic machine that produces and consumes. It is also a place where people live, and a natural/built environment – comprised of landscapes, geography, a climate, history and atmosphere -that makes it unique and facilitates or not the integration and fulfillment of those who live there. Once again, economic, environmental and social dimensions are inseparable, whatever order we consider them in. To begin, the magnitude of social challenges due to a growing urban population at

[13] https://unhabitat.org/urban-themes/economy/ (Accessed 21 May 2019).

[14] https://www.un.org/sustainabledevelopment/sustainable-development-goals/ (Accessed 21 May 2019).

Fig. 2.25 Colonia Seminario, Toluca, México – *left to right: street plan and satellite image* (Reproduced from Google maps 2018)

the global scale is exponential. As such, more individuals means more infrastructure and services in order to enjoy decent, healthy living conditions. Moreover, living in the city is a choice, an aspiration for many of the individuals, families and communities that make up urban society. While the city fosters integration, social inclusion, sharing, exchanges and solidarity, it can also create differences, segregate, exclude and marginalize certain individuals.

This is one of the major challenges facing sustainable urban development, a challenge that gives rise to the questions: what unites us? What reinforces (and deepens) inequalities? Sociological and political analysis are essential for understanding how urban societies are structured and the dynamics that are changing social hierarchies, be it socioeconomic classes, gender or immigrant groups.

As a PhD student in Mexico in the early 1980s, I interviewed more or less recent rural migrants living in the outskirts of the city of Toluca, some 70 kilometers from Mexico City (which then was home to some 500,000 inhabitants, versus the 22 million in the federal capital) (Fig. 2.25). Colonia Seminario was the name of this informal settlement that since has grown, with three geographical areas corresponding to three waves of rural migrants. Most of the migrants, who are from the State of Mexico,[15] had come to make a better life for themselves and their children, but still maintained ties with their native villages and continued to participate in family farming (corn, beans and other commodities).

Moving from one sub-district to another, I conducted in-depth interviews with heads of household (male or female, depending on their availability) to look at similarities and differences in the forms of urban integration over time. After obtaining a description of their families and activities, one of the first questions I asked was why they had come to the city. I visited their homes: some were meticulous, as certain families had already been living there for 20 years, others were mere shelters of salvaged materials. I was surprised by their answers, which were often similar and

[15] Mexico has 32 federal entities called "States," including the State of Mexico, which borders the federal capital, Mexico City, to the north, east and west.

far from my initial preconception. All said the two main reasons they had come to the city were the quality of the schools for their children and the proximity to health centers. I had expected them to talk about jobs and income.

Surprised, I asked if finding a job had not their main reason for moving. Their response was even more surprising: "Work? We've always worked, in the countryside and now here in the city now. We were born poor and will certainly die poor. But being in the city is a new opportunity for our children, whose lives will be better than ours." The argument was clear, logical, undeniable, and explained the city's attractiveness, its function in a long-term vision of their families' development (the proverbial "success story," even at a modest level) and a magnificent projection into the future through family ties and community solidarity as new citizens with kinship ties in the countryside.

This introduction could be considered a methodological bias, as it suggests that urban growth is solely linked to the arrival of migrants from rural areas. However, this is only partially true and is becoming less and less so. Once again, logic would have it that the more a country urbanizes, the more urban growth depends on the natural growth of the resident population and, to a lesser extent, immigration, as Montgomery confirms (2008: 763). Based on his sources, he concludes that "in developing countries, about 60% of the urban growth rate is attributable to natural growth; the remaining 40% is the result of migration and spatial expansion. Recently, a very similar rule was established for India over the 4 decades from 1961 to 2001, with urban natural growth again accounting for about 60% of the total." Potts's (2009) hypothesis based on statistical and demographic studies in 14 African countries in the 1980s and 1990s drew similar conclusions. This analysis would be more nuanced in modern-day Africa due to the urbanization process being less advanced there than on other continents. Brandful Cobbinah et al. (2015) distinguish three factors with regard to demographics: natural urban population growth, rural-urban migration and the reclassification of rural settlements as urban. However, according to these authors, rural-urban migration is once again on the rise and now accounts for 40–50% of urban growth in Africa. In addition to urban attractiveness, two other factors partially explain this trend: the organization of the agrarian system with its low rate of employability, and climate/social insecurity (drought, war, interethnic conflict, etc.). Rural migrants, who are poorly trained for urban jobs, represent the majority of urban Africa's unemployed.

In addition to wanting to enter the growing urban market, migration flows, which are often seasonal and individual initially but later become familial and definitive, can be explained in several ways. To begin, there are cultural reasons (individualism and the draw of "the bright city lights"). There is also the question of social protection (better-educated children who, in turn, get safer, better-paid jobs and thus compensate for the welfare, unemployment and retirement benefits that do not exist in many South countries. Following the analysis of Lall et al. (2006), these rural-urban migrations are selective and mainly concern young adults (mostly male) in a context of compounded 'push factors' that force migrants out of rural areas and 'pull factors' that attract them to urban areas. The origins and destinations of these movements reflect the strengths and weaknesses of certain cities and regions. Far from

being a break, urban migration acts as support for rural families "back in the village" thanks to the transfer of remittances.

Given this, it would be illusory to confuse immigrants of rural origin and urban poverty, even if many of these new city dwellers live in slums. This is obvious from the analysis of Tacoli et al. (2015:17), who show that "migrants may be disproportionately represented within some of the worst-quality informal settlements (for instance, temporary camps for construction workers or small temporary structures on public land or settlements set up by recent migrants on the urban periphery)."

Two indicators can be used to assess rural and urban poverty in South countries. The first, which is monetary and defines poverty based on a family or individual income threshold, is useful for international comparison (i.e. by putting poor people with incomes below a given poverty threshold, usually 1 or 2 $ US per person per day) (O'Hare and Rivas 2007:309). However, the practice of applying this calculation as a standard for the entire national or even world population without taking into account differences in terms of cost of living (which is much higher in urban areas) has been criticized. The second type of indicator, which is non-monetary, attempts to assess how basic needs such as housing, access to health care and education, as well as provision of water and electricity supply are more or less satisfied.

We essentially worked using this second type of indicator, regardless of the country, based on the idea that the main question was not whether individuals and families could be considered very poor, poor or lower middle class, but rather how they can best fit into the city and benefit from its development potential, both in terms of integration into the job market and more fundamentally as citizens, through access to basic urban services. This is why we focused on living environments (decent housing, social housing, public policies and the real estate market) (Bolay and Rabinovich 2003; Wust et al. 2002; Bolay 2002) and social/material forms of urban insecurity (access to technical networks and community services such as schools and health centers, the informal economy, etc.) (Bolay 2006; Bolay and Cissé 2001) to better understand the gaps and bottlenecks and recommend new ways of improving living conditions in the city, especially for the poor.

An emblematic figure of precarity and poverty, the slum represents the urban reality for nearly a billion people across the planet (Bolay et al. 2016). To say all slum dwellers are poor would be an exaggeration. Rather, it is fair to say that coming to the city and making a place for oneself (however modest) is less of a choice than an opportunity to be seized, with the hope that their descendants will become bona fide citizens of fact and law a couple of generations down the road.

Urban poverty is multifaceted and diverse. Ursula Grant (2010: 11) lists some of its features: "Urban spatial poverty traps exist within urban areas (e.g. urban slums along transport routes, peri-urban areas, city dumps, etc.). Such sites tend to be informal or illegal, which leaves them less likely to be represented in formal data collection and therefore less likely to be recognised within formal policymaking processes. The urban poor tend to live in disadvantaged neighbourhoods, where average income is low, employment is informal and public services are limited. Residence on the outskirts of the city, where links to work opportunities are restricted, is also characteristic. Urban spatial poverty traps can also be found at

Fig. 2.26 Slum and housing along the canal in HCMC, Vietnam 1993. (Reproduced with permission from Bolay)

national level, where urbanisation has occurred alongside low or no economic growth, e.g. in small or medium-sized towns and in refugee centres. Rapid urbanisation associated with conflict-related displacement is linked to poverty."

Poverty, precarity and disparity are three terms that punctuate urban literature on South countries. In this chapter, we have attempted to focus less on statistics to quantify the phenomenon, despite its magnitude. The slum, which itself can be defined and analyzed from different angles, transcribes the most glaring social inequalities and their physical manifestation (i.e. territorial fragmentation), into the urban space (Fig. 2.26). As we mentioned in our recent book on the subject, "A third of the world's urban population – a billion individuals – live in precarious conditions, while 94% of slum dwellers live in developing countries. Africa and Asia will be predominantly urban by 2030; 72% of urban populations in Africa live in extremely poor conditions. This figure rises to 80% in the poorest regions of the world. Cities in developing countries will absorb 95% of the world's urban growth over the next two decades" (Bolay et al. 2016:11).

We must maintain therefore a critical stance and may even feel a sense of awe when listening to the official discourses of cooperation agencies and the United Nations in particular, which praise the many advances made in terms of urban development and the strengthening of policies that favor more inclusive cities, all the while recognizing that this picture does not reflect the reality. The reality is that the world's urban population is growing, and this growth is predominantly in Asia, Africa and Latin America. Many of the urban dwellers in these regions are poor and live in situations of multiple risk. This trend is in line with population growth, which

is steadily increasing and is mainly due to increasing socio-economic disparities among urban populations in recent decades, despite the fact that studies comparing income levels between rural and urban populations show the latter are comparatively privileged (PRB 2015; Pradhan et al. 2000).

According to the World Bank, 76% of the 1.3 billion poor surveyed in 2008 lived in rural areas (World Bank 2013). However, things are changing; poverty is shifting from the countryside to cities. Again, the World Bank's report on urban-rural dynamics shows that poverty is becoming increasingly urban in a continuum that extends from the countryside to small towns to larger agglomerations. This continuum "reveals interesting insights on the relationship between poverty and city size. Recent research for a large number of countries shows that it is clearly in the largest cities" (World Bank 2013:87).

In its report on children in the urban world, UNICEF shows that disparities between social strata are widening and that, in some countries, these urban disparities are now more pronounced in urban areas than in rural ones (UNICEF 2012). Worldwide statistics show that children from disadvantaged neighborhoods have more limited access to schooling, clean water, sanitation and hygiene facilities. Several examples of countries cited in the report highlight the extent of these inequalities.[16] In Angola, for instance, between 2000 and 2010, the poorest 40% of the population shared 8% of national household income, while the richest 20% enjoyed 62% of the latter. The situation was similar in Bolivia during this decade, with 9% of the wealth shared by 40% of the poor and 61% by the top 20%. In Brazil, the figures were 11% for 58% of the same population segments. They differed slightly in Chile, however, with 24% for the poorest and 31% for the richest, versus 18% for 45% in Vietnam and 18% for 47% in Burkina Faso. Among the Western countries, Germany had a more egalitarian distribution, with 22% of income shared by the poorest 40% and 37% by the wealthiest 20%, 24% for 37% in Norway, and 16% for 46% for the United States. More generally, these figures are surprising as the distribution of wealth at the global and regional levels hardly differs.

It would seem that no major differences exist based on a country's level of development. Of all the continents, it is in Latin America – which is far from being the poorest region in the global South – that the distribution is the most unequal. A country-by-country analysis would be needed to investigate public policies as well as business and personal strategies that accentuate or reduce inequalities within the society.

Moreover, these disparities are not homogeneous across national territories. Spatially, this means that the gap between dynamic urban areas with new production activities and cities less anchored in economic modernity will widen (Venables 2005). Comparing social and technical data on 167 cities around the world, Liddle (2017) finds that urban growth does not necessarily translate into lower poverty rates.

[16] The statistics are national and cover the 2000–2010 period. It would be necessary to look at how this information applies to the urban population and to differentiate it from the rural one.

Table 2.1 Distribution of wealth by socio-economic strata (Reproduced from UNCTAD 2012)

	% share of household income (2000–2010)	
	Lowest 40%	Highest 20%
Africa	16	49
Sub-Saharan Africa	16	49
Eastern and Southern Africa	16	50
West and Central Africa	16	48
Middle East and North Africa	19	44
Asia	18	46
South Asia	20	45
East Asia and Pacific	16	48
Latin America and Caribbean	12	56
CEE/CIS	18	45
Industrialized countries	**18**	**43**
Developing countries	**17**	**48**
Least developed countries	**18**	**46**
World	**17**	**47**

However, by way of an example, growth of 1% in the GDP per capita in these cities was reflected in a 0.3% increase in access to electricity. Similarly, this growth led to only a 0.4% decrease in the population living in slums. Generally speaking, statistical analysis shows that urbanization is generally positive with regard to income and access to urban amenities and services, but that this correspondence only applies to the upper quantiles of the urban population. Confirming this analysis, Gonzaléz-Pérez (2018) goes even further, arguing that this trend towards inner city polarization and social inequalities is symptomatic of the early twenty-first century city. To his mind, it is directly related to the globalized evolution of capitalism, the effects of the 2007–2008 economic/financial crisis and austerity policies at the local and national levels in most countries, which have a discriminating urban impact on North and South cities alike.

As Vieira highlighted (2012:4), "Income inequalities have been increasing significantly in emerging economies between early 1990s and 2008, reflecting the concentration of income among top earners." This general trend continues today, even if the effects of the crisis a decade ago are beginning to fade (Table 2.1). These inequalities are reflected in urban areas, as the majority of the populations of most South countries reside in cities. These social disparities are amplified over time when the strategies of economic actors' target profitability over territorial and social redistribution of wealth. As many studies have shown, integrating rural migrants and poor people in urban areas remains on the margins of public policies and primarily take the form of social and individual struggles. It is in this context of urban precarity and given the urban authorities' inability to face social demands that we must rethink urban planning so that it reflects an inclusive, harmonious vision of the city with realistic rules and tools that reflect present and future economic, financial and human resources.

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Chapter 3
Global Sustainability: How to Rethink Urban Planning

Abstract In this chapter, we will dissect the salient elements of urban planning in terms of theoretical foundations and methodology, in order to demonstrate that in addition to criticism expressed by a certain number of authors regarding its transfer to cities of the South, urban planning does not focus on the key issues faced by local authorities and inhabitants, both in terms of target population groups and the infrastructures and services that should be given priority.

We will highlight the translation of these theories, essentially of western origin, and their application to "other societies", trying to understand how throughout the course of history, this intellectual configuration of the city has been replicated in contexts subject to other injunctions and constraints. We will then deconstruct urban planning, viewing it not as a science but rather as a method that is applied with field-adapted techniques, based on precepts that often lack clear definition, yet that is guided by instruments that can spatially and materially organize the distribution of individuals, their activities, goods, services, facilities and equipment, within a territory that is identified for geographical and administrative reasons. Urban planning takes into account the potential and the limitations of the natural (spatial and environmental) and human entities in question, including in its analysis the causes and impacts of the dynamics that affect the transformation of the city and its dwellers. The difficulty with urban planning is that it is based more or less explicitly on different disciplines (urbanism, architecture, engineering, economics, sociology, geography, etc.), that function independently with no formal obligation to work together/cross reference, which means that many professional practices are used periodically and repeatedly.

Sustainable development and urban sustainable development represent a conceptual framework allowing us to rethink urban planning. More than a technical tool giving voice to all stakeholders, a participatory approach is the most advanced methodological manner of anchoring planning in a local and regional democratic policy.

As broadcast by the United Nations in 1987, "sustainable development" is defined above all by two essential components. First, the time factor, by emphasizing that development can only be sustainable if it "meets the needs of the present without compromising the ability of future generations to meet their own needs".

J.-C. Bolay, *Urban Planning Against Poverty*, Future City 14,
https://doi.org/10.1007/978-3-030-28419-0_3

Second, the focus on "an equal balance between the necessary ecological, social and economic dimensions of development".

In addition to these aspects of sustainable development, two complementary dimensions will directly involve urban stakeholders. On the one hand, spatial organization would better regulate the distribution of human settlements and economic activities in the territory. It would also mitigate the excessive concentration of people and activities in saturated and weakened areas in favor of a decentralization that maximizes spatial planning with a lower ecological imprint on available resources. On the other hand, there is a cultural dimension, in that the proposed changes would take into consideration the value systems, the historical development of the human communities involved, the socio-political context as well as the social and cultural organizational structures prevailing in the regions concerned.

These conceptual precepts have to be linked to technological innovations capable of facilitating the creation and processing of urban and regional data, such as geospatial software (free and open source) and crowdsourcing.

Keywords Sustainability · Urban theories · Urban planning · Conceptual framework · Spatial organization · Cultural dimension · Technological innovations

3.1 Urban Planning in Question

I have spent more than 30 years following the changes in the urban world in both a general way and more specifically through fieldwork in three major world regions: Latin America, Asia and West Africa. This work, which takes the form of research, teaching and publications, has a common theme: namely issues of social, economic and territorial inclusion of the poor in urban areas. This includes individuals and families who living in urban areas for a generation or more, as well as new urban immigrants (mostly of rural origin) living in the precarious conditions. Through this work, I have gained a clearer understanding of their attempts to settle and make a life for themselves, generally outside the legal framework through informal arrangements, interpersonal/community cooperation and connivance with landowners and government agencies, and despite their limited means. Whatever the objective reality, their urban integration (i.e. housing, access to infrastructures, facilities, community services, job opportunities, income, education and health) must be a priority on urban agendas. Let us not forget that a third of inhabitants of South cities live in slums – an estimated 863 million people in 2014 (UN-Habitat 2014), or roughly one-third of the Global South's urban population, a figure that has been steadily rising for decades. This is mainly due to strong urban growth combined with socio-economic segregation and increasingly fragmented urbanized areas.

The concerns that prompt this need to rethink urban planning are simple. Experts and decision-makers alike would like cities to be more human, more inclusive and, as such, more harmonious for inhabitants. However, translating these laudable principles into decisive actions is more complex and obviously less concrete.

Implementing spatial planning solutions different from those that have failed in the past is difficult, as it forces us to rethink the entire issue, given that it is no longer simply a matter of tweaking existing techniques. Rather, it is a question of identifying fundamental issues, translating them into planning objectives and determining what actions to take.

In the previous chapter, we saw that urbanization is most prevalent in South countries and brings with it an increase in urban poverty. This poverty is reflected in material, economic, social and even psychological impacts on city dwellers' well-being, despite thinking and investments to make cities more hospitable and productive (international programs, public/private funding, sharing experiences, etc.).

Hence, there is a real discrepancy in the diagnosis of the causes of urbanization in the Global South and in the efforts being made to develop the city. This has resulted in a sincere, deep questioning of urban planning practices in developing countries, whose impacts in the short, medium and long term are not truly felt and often fail to meet the challenges at hand. How is it that the number of urban poor continues to rise, despite record-high investments in planning and construction? From whence the hypothesis that informed the studies used as examples in this work: in most South cities, urban planning does not serve to (1) visualize the future, (2) prepare for it at the urban and regional levels, or (3) guide its development. The reason for this is simple: urban planning, as it is conceived and applied, is based on precepts that were forged *outside* of the contexts it is intended to address. Hence its impact is limited, and impacts neither the entire urban space nor its population, and thereby directly or indirectly accentuates social disparities and territorial fragmentation.

The goal of this renewal in the urban sciences and planning practices is to analyze the many forms of urban poverty (precarity, segregation, marginalization, informality, exclusion, vulnerability and growing disparities, to name a few) and to take a closer, more anthropological look at what "institutional and social practices in urban planning" actually means in real life. How can public, private, associative and community stakeholders position themselves and partake in designing planning solutions that are better suited to the territorial/societal context and better managed by urban actors in the long-term? The ultimate goal is to create more coherent, friendly cities that meet the needs, expectations and demands of all citizens, including the poor.

Of all the analyses made of urban planning – be they theoretical, conceptual or relative to methodologies, practices and their impact in the field – it appears that this vision of the city and the resulting urban and/or regional organization is historically rooted in the West. Its translation to the Global South was long replicated based mainly on technical and procedural considerations, and without taking into account the human, cultural, geographic or urbanistic realities of local and regional contexts. The results have been mixed to say the least, and in reality are rarely instrumental in the planning and development of cities and the human activities that take place there. Many of the changes that take place in urban environments do so outside of normative and programmatic frameworks. The public administrations responsible for planning must manage investments and urban administrations that lack human

and financial resources and whose goals are often based on the political priorities of leaders, without any link to master or sectoral plans. Inhabitants – especially the poor – must therefore "navigate" outside the formal framework, which is often inaccessible to them (land rights, building authorization, legal access to basic networks, etc.) to meet their basic needs while awaiting the authorities' recognition of the fait accompli. Urban planning that takes into consideration the realities of inhabitants should, by our analysis:

- be based on a multidimensional diagnosis of the social, economic, environmental, spatial and urbanistic reality;
- forge a vision of the city and region based on the interaction between urban, peri-urban and rural areas combined with the demographic dimension with societal dynamics (urban/supra-urban infrastructures and amenities, economic exchanges, social relations, environmental impacts, etc.);
- develop medium and long-term planning based on both needs analysis (according to expert studies) and requests from civil society (inhabitants, stakeholders, lobby groups, community associations, etc.), in order to establish a comprehensive, coherent assessment of unresolved issues and priority initiatives;
- formulate plans tailored to the priorities outlined in the diagnosis, given the available financial (budgets, fees/taxes, outside funding, loans for new facilities and to ensure maintenance costs thereafter, etc.) and human (administrative/technical skills, delegation to third parties, public-private partnerships, citizen participation, control, communication) resources;
- negotiate these priorities with partners involved in governing, financing and supervising planning (Ministries and national directorates for urban planning, provincial and/or regional administrations, private companies and international cooperation) to consider them within a framework that sets out the obligations, limits and potential of urban management;
- translate these plans into actual urban guidance through the use of project and monitoring tools (GIS and planning software, databases, monitoring, control of procedures and processes, accountability, exchanges between actors, tools and technological innovations).

3.2 The City, Urbanization and Urban Planning

Urbanity is almost as old as humanity itself. However, its description, analysis, projection and transformation have, over time, been commandeered by scientific and technological advances, social causes and political ambitions that aim to govern its morphology, land use, infrastructure, equipment, networks and connections with the immediate and surrounding environment. This has taken place at both the technical level as well as based on the social and economic dynamics that transform cities and the socio-spatial interactions they generate.

This urban paradigm that has evolved over time mirrors the changes that have taken place in societies where this model of "living together" developed (i.e. more or less densely populated human settlements with cultures, histories and relationships to the land).

The approach to addressing settlement and development issues in cities in emerging and developing countries must be completely rethought in an innovative way based on the scope and nature of more or less urgent needs. As mentioned previously, South cities have the highest population growth rates (Fig. 3.1). Yet, their urban administrations suffer most severely from a lack of financial and human resources for the issues associated with this growth. These complex urban societies, whose local and national realities often vary markedly, must endure the consequences of planning's failures, i.e. material/social precarity, contamination of natural resources, informal economic activities, spatial marginalization, failures in governance, lack of citizen participation, etc.

We will begin by reviewing the theoretical foundations of theories on the contemporary city that, though rooted in a specific history and context, are also changing with local, regional and global challenges. This will enable us to better grasp the models they inspire, both in terms of the universality of the approaches taken and in their local implementation. Because of their varied and controversial nature, these "ideas of the city" have guided builders, i.e. "city makers" (Harvey 2012; Paquot and Younès 2010; Ascher 2010; Costès 2010; Pattaroni et al. 2009; Choay 2006; Davis 2006; Agier 1999; Lefebvre 1968;). We will now look at how these ideologies have spread throughout the world and inspired thinkers, researchers and operators in their effort to understand the city in its actual context to determine whether or not urban theories are taken into account in the actual planning and development of human settlements.

The question therefore is whether these theoretical debates are invariably reflected in plans based on the precept that urban planning is a translation of concepts into concrete approaches and methods. Yet doubt remains, given the seeming disconnect between the "intellectual" production of the city and its "material" production (Fig. 3.2). Given the magnitude of this obstacle, other major issues must also be taken into account, notably the origin of the ideas, methods and techniques. The translation of these theories (which mostly are of Western origin) to "other" societies (colonialism, post-colonialism, commodification and a globalized Northern vision imposed on the South) has been denounced. We must now attempt to understand how this conceptualization of the city has been historically replicated, translated, transformed, denied and even fought on in Asia, Africa and Latin America.

We will also consider urban planning as a concretization of the theories designed reflect and transform the material, social, economic, environmental and political dimensions of reality. What do we observe in South cities from the field? How are Western planning theories and approaches used? Are existing models merely replicated, or have they been revisited and/or hybridized based on the requirements and constraints of the context?

Fig. 3.1 Destruction for renovation in downtown Shanghai 2014. (Reproduced with permission from Bolay)

Planning in itself is not considered a science but rather a methodology designed to meet the needs of a given field. This methodology, which is based on precepts that are often either poorly defined or altogether inexplicit, is then reoriented using technical tools designed to spread individuals, activities, goods, services, infrastructures

Fig. 3.2 From planning to reality, Huaian, China 2014. (Reproduced with permission from Bolay)

Fig. 3.3 Master plan model for the city of Huaian. China 2014 (Reproduced with permission from Bolay)

and amenities over a territory defined by administrative and/or geographical borders (Fig. 3.3). Urban planning should take into account the potential and limitations of this "entity" both spatially and in terms of the population's characteristics. Its analysis *should* also incorporate the causes and consequences of the dynamics that affect residents and cause urban transformations, though this does not always occur in practice. The difficulty in designing urban planning and making it operational stems from its multidisciplinary heritage (planning, architecture, engineering, economy, sociology, etc.) but demands no specific requirements when it comes to justifying choices.

This diversity has given rise to a number of professional practices that are often used as a basis for specific and recurrent exercises. However, two disciplines in particular enjoy the upper hand: urban planning (often as a simple extension of architecture) and engineering (civil and environmental). The social sciences (geography, economics, sociology, management and finance) usually play as a supporting role rather than that of methodological co-creator.

Our thinking – both ambitious and modest – revisits the dictates, methods and applications of urban planning based on the societal, spatial and environmental realities of the cities we have studied in recent years. Our goal is to identify their similarities and differences, and to understand how their realities are interpreted and

translated into planning practices. The idea is to provide urban actors with a path that will take them from analysis to actual urban planning tools. This process is pragmatic, realistic and useful in terms of finding lasting solutions to the problems urban populations in general face (given that they are recurrent in most cities in developing countries) as well as more specifically, given the histories of places and people and current/future constraints and potentialities.

We shall start by looking at the general goals and move on to the theories that underlie them and methods and tools for implementing them (Table 3.1). This should provide outputs with deliverables that benefit the decision-makers, stakeholders and social actors who "live in and create the city."

3.3 Urban Theories and Planning: Links and Practices

Though often appreciated for its projective and operational capacities, urban planning can also be used to observe and analyze a territory's material and human reality. It is also informed by various theories, i.e. a body of knowledge and/or ideas that helps us understand and give meaning to a reality in the present based on its historical foundations and future projections. It is difficult to separate these two distinct but complementary dimensions of planning – one theoretical, the other practical – though the two are rarely combined in the discourse or practice of urban stakeholders (i.e. researchers or urban practitioners), as we will see in the case studies.

There is a discourse – or rather there are discourses – on the city; our vision of it is changing, echoing the shift from the city to the urban, to follow Françoise Choay (1999). Spaces, which have become globalized in accordance with normative global urbanization models, are nonetheless born of distinct, contextually-specific local and national histories, indigenous cultures, social practices and geographies, all in the complex ambiguity of massive heterogeneity (Paquot et al. 2000). This complexity must be taken into account in discourses on cities and urban environments.

For Castells (1969), and referring to the work of Chicago School researchers in the 1920s, the contemporary city can theoretically be understood as a "specific cultural system that produces norms and values that are characteristic of modern societies; a space shaped by changes in the socio-economic structure; and self-balancing environmental organization to respond to the new needs that develop inside or outside of it, " (Castells 1969:173). This definition is still valid today and allows us maintain certain generic elements that will guide our future analyses. The first and most important is that the city is a social system that reflects a modernity forged on societal and technological interactions. Urban morphology is changing in tandem with society and the economy. The city is an environment that is both natural and built, and whose endogenous dynamics, external interactions, balance and breakpoints we will analyze.

Neil Brenner (2009) explores the many profound changes that have taken place in our contemporary societies in recent decades. The urban sector continues to expand in highly industrialized parts of the world with the diversification of land

Table 3.1 The different dimensions and steps of an alternative planning

Ultimate goal	Sustainable urban development	Appropriate planning	Socio-economic dimensions	Spatial and environmental dimensions	Urban planning and architectural dimensions
Objectives	Urban planning	Priorities: Functional, efficient planning	Planning: Suited to the needs of South cities and their current/future capacities	Methods: Inspired by the reality of the people and resources available to resolve priority issues	Tools: Adapted to stakeholders' (inhabitants, community groups, private professionals, public administrators) skills
Theories	The city and urban setting	Priorities: Up-to-date knowledge	The contemporary city in developing countries: Social, economic, cultural, institutional and political organization, for whose benefit?	Urban spatial and environmental organization: Characteristics, impacts, consequences and costs, for whom, borne by whom?	Territorial, urban planning, architectural and constructive organization, for whose benefit?
Methods	Approaches and indicators regarding urban issues (quantitative, qualitative and iconographic)	Priorities: Methods for diagnosing the local/ global situation	Socio-spatial diagnosis: Settlement history, census of the population and its activities, urban public policies, evaluation of needs (by inhabitants/ specialists), participatory approach, SWOT, etc.	Spatial/ environmental diagnosis: Inventory of the state of natural resources (water, air, soil), water supply, drainage systems, land and property status	Urbanistic and architectural diagnosis: Territorial mapping, infrastructures and housing amenities
Tools	Information and analysis tools	Priorities: Tools that can be used in a context of limited resources	Pre-existing documents, surveys, quantitative/ qualitative surveys, individual interviews, focus group	Pre-existing documents, surveys, plans, interviews with specialists, computerized databases	Pre-existing documents, surveys, plans, interviews with specialists, computerized databases

(continued)

Table 3.1 (continued)

Ultimate goal	Sustainable urban development	Appropriate planning	Socio-economic dimensions	Spatial and environmental dimensions	Urban planning and architectural dimensions
Outputs	Analyses and recommendations	Priorities: Decision support	Diachronic and synchronic knowledge of social, economic and institutional issues updated, helping to establish priorities in terms of intervention	Diachronic and synchronic knowledge of territorial, environmental and climatic issues updated, allowing for the setting of priorities in terms of intervention	Diachronic and synchronic knowledge of urban planning, architectural and material issues allows for the establishment of priorities in terms of intervention
Outcomes	Urban planning	Priorities: Use of a context-appropriate planning method/ tools by urban operators	Social, economic and institutional elements used to measure urban planning action are identified and classified	Spatial, land and environmental elements used to measure urban planning actions are defined, identified and classified	Urban planning, architectural and infrastructural elements used to measure urban planning actions are defined, identified and classified
Products	Software & training: Creation of a high-performance, easy to use software program	Priorities: Creation of a free, innovative, efficient software program	A tool combining social, economic/ institutional data allowing for the configuration of modes of intervention, their location, graphic configuration and temporal/ remote control is created	A tool combining territorial, environmental and climatic data allowing for the configuration of modes of intervention, their location, graphic configuration and temporal/ remote control is created	A tool combining urban planning, architectural and infrastructural data allowing for the configuration of modes of intervention, their location, graphic configuration and temporal/remote control is created

use, new infrastructures and the regional reconfiguration of rural-urban interfaces and modes of investment and governance. Marcuse et al. (2014) highlight the lack of reflection at the micro, meso and macro urban scales and the power struggles these urban dynamics generate. More recently and more pertinent to our discussion here is the fact that urbanization follows on the coattails of the globalization of economic exchanges and rural-urban demographic shifts. Moreover, it now affects the entire planet and is jostling more or less un-urbanized countries with record speed. The intensification and extension of the urbanization process is therefore changing the territory and social relations at various scales.

Three of Lefebvre's (1970) observations are still valid today. The first is the idea of urban centrality based on a concentration of inhabitants, infrastructures and activities. For the author, this centrality, which is economic and political first and foremost, is the result of the capitalist mode of production that now pervades the world. This echoes what we now refer to globalization, which is a process that is recognized for its largely economic dimension and wherein cities are a structuring element (Newman and Thornley 2011; Bolay 2006; Sassen 2000). However, we must also manage new rarities such as space, land and water, as well as climatic conditions, which further complexifies the urban reality. Lefebvre was far ahead of his time when he predicted the major environmental and service supply issues contemporary cities would one day face (Bolay 2012). Finally, this human, environmental and technological complexity makes the urban phenomenon a reality that 'fragmentary sciences,' as Lefebvre called them (i.e. disciplines of and relating to the city), can only partially analyze. Truly understanding this complexity requires an interdisciplinary vision that transcends scientific divisions (Bolay 1995).

As Scott and Storper (2013) point out, the debate is endless. The clash between different schools of thought is inevitable given that the subject itself is in constant transformation. While some deny the existence of 'urban singularity,' others conversely dissect cities' divergent natures (the global city (Sassen 1991), the neoliberal city (Storper 2016), the creative city,[1] the ordinary city (Robinson 2006), the postmodern city (Newman 1995) and the smart city (Marsal-Llacuna et al. 2015)). The disembodied virtuality of new communication technologies have not replaced the physical/human reality. Rather, they reinforce these links and extend them sociologically and spatially (Riggs and Gordon 2015; Shiode 2000). Cities are also places where power (political namely, in the form of national, regional and/or local authorities, depending on the city) concentrates. However, this power is not only political; in their socio-territorial context, cities are places for decisions that have an impact well beyond their borders (public administrations, banks, small/large companies, lobbies, etc.) (Parker 2010).

These typological distinctions are real and merit investigation. Certain general trends should nonetheless be borne in mind, given the global nature of this phenomenon, which heavily impacts emerging and developing countries. To begin, there is the synergy between economic development and urban growth as, generally speaking, cities tend to be highly technified hubs and motors of the contemporary econ-

[1] https://en.unesco.org/creative-cities/ (Accessed 27 May 2019).

omy[2] (Csomós 2017; Ellen Mac Arthur Foundation 2017; Sassen 2011). The concentration of infrastructures and the sophistication of technologies and services are assets that reinforce cities' spatial centrality, economic primacy and social interactions (Duranton 2014).

It is in this multi-dimensional spirit that the Institute for Urban Strategies (2017) ranks the 40 most powerful cities in the world according to six urban functions – economy, research and development, cultural interaction, livability, environment and accessibility – and 70 identification.[3] We might easily be tempted to do the same for agglomerations on a country by country basis, while attempting to compensate for what is – in our opinion – the lack of a political dimension in this global nomenclature. Intentionally or not, the authors forget that governments and their administrations also bring power to cities. The work of GPCI also helps us better understand what is happening in terms of urban planning and places where public action concentrates.

Before considering how and whether planning as it is designed and practiced today is adapted to South cities, we must recognize certain emblematic features that characterize all cities. These include spatial/economic polarity, political/economic power, a concentration of individuals, capital, goods and activities, and dynamics of proximity, gathering and interaction. Cities themselves are systems, networks of interdependent technological, institutional and sociological elements that form a system of systems (Wyly 2012). Today, cities are the framework upon which contemporary societies and decision-making are configured and organized.

These urban characteristics are everywhere, in both the histories of cities and in their contemporary geographical diversity. It is based on this interplay of similarities and differences that we know how to think and act knowledgably in cities. However, it is essential that we become more aware of the challenges the Global South faces through the application of urban planning tools. In their introduction to *Urban Theories beyond the West*, Edensor and Jayne (2012) show that theoretical debates on "the urban reality" are dominated by Europe and North America, and that South cities are almost always studied *in contrast* to these models (Fig. 3.4). And yet, their human and spatial realities differ in numerous ways.

Regarding attention to social practices in the field, I clearly recall the authority of tribal leaders in the Nylon zone of Douala, where old Biteck (now deceased) held authority over almost 200,000 people – which is more than the government delegate, prefect or governor who actually requested *his* authorization to renovate the neighborhoods in question (Bolay 1988). I also recall the religious and sacred dimension of certain public spaces in African cities, like the Sacred Wood, which urban planning colleagues in Lomé, Togo, showed me.

These are not the remnants of the past but rather of another modernity that shapes the cosmopolitanism of South cities. It is not possible to consider the urban South simply in light of the processes taking place at the planetary level. Rather, these cit-

[2] https://www.citylab.com/life/2015/03/sorry-london-new-york-is-the-worlds-most-economically-powerful-city/386315/ (Accessed 27 May 2019).

[3] These criteria define Global Power City Index (GPCI).

Fig. 3.4 The poor Nylon neighborhood in Douala, Cameroon, in 2013, with its informal settlements. (Reproduced with permission from Bolay)

ies are marked by the multifunctionality of their spaces (be it the different uses of sidewalks, when they exist, or roadsides with no pedestrian crossings and that serve as areas for foot traffic, vending and informal business). They are also shaped by forms of control, social integration, exclusion and negotiation that have little to do with what we know in Europe or the United States. It is therefore both impossible to model South cities on theories produced elsewhere and unrealistic to implement planning models created in environments and societies that are different in more ways than they are similar.

3.4 From Words to Deeds: Thinking About the City

According to Fainstein and De Filippis "…Planning theory is divided into those who understand planning through analyzing existing practices and those who theorize in an effort to transform planning practices," (2016:2). They add: "most planning practitioners largely disregard planning theory and not so often think of any planning theory course they had to take a student..." (De Filippis 2016:3). Hence the difficulty of considering a continuum that does not exist (planning) through the theories that define it, as planning is derived from various scientific fields and uses specific methods. Planning practices are self-referential, meaning that current and future planning are based on an analysis of the objectives and results of previous works and rarely question their aims, or how they contribute to a certain "idea of city" or projection of urban society in the making. Focusing specifically on urban planning practices is therefore extremely important as it reveals their theoretical and ideological underpinnings.

Returning once again to the two authors cited above, we easily understand the distinction they make between what they consider to be the two crucial dimensions of planning: "We also see planning theory as sitting at the intersection of the city and region as a phenomenon and planning as a human activity. Planning adapts to changes in the city and region, which in turn are transformed by planning and politics. Planners not only plan places; they also negotiate, forecast, research, survey, and organize financing. Nor do planners have an exclusive influence over territories; developers, business groups, politicians, and other actors also shape urban and regional development" (De Filippis 2016:4).

In my opinion, planning should primarily be regarded as an anticipatory action whose purpose is to modify the city in the long term and, as such, the spatial planning and socio-spatial organization of the urban environment. The goal of planning therefore is to make a difference by reckoning the whole, and not merely acting as the sum of the sectoral entities and projects for the months or years to come. Planning drinking water supply and household waste treatment are essential but must be part of a more global vision of the idea of "today's city" in 10, 20 or 50 years. Plans must establish an order of priorities that will ultimately be translated into actions and anticipate the effort required to do so. Ideally, urban planning should extend beyond personal, corporate and special interests to reflect an entity (the city) and a collectivity (urban society) without naivety, differences of view, conflicts of interest or power struggles. Such an approach must be supported by institutions (i.e. local government) and shared with individuals and entities who will (1) participate in its implementation (planning professionals, companies, social organizations, politicians, etc.) and (2) theoretically benefit from it (namely inhabitants, the public community, political representatives and the managing urban administration). The latter must ensure that the approach and interventions planned are legitimate in the eyes of inhabitants and urban stakeholders.

There is, of course, a broad spectrum of possible interpretations in such a dynamic, notably with shared implementation and decision-making between the

public and private sectors and given the political forces involved, their ideologies and their vision of the "city of the future". This multiscale process is linked to the collaborative (i.e. non-oppositional) relationship between decision makers at the local, regional and national levels based on the distribution of their decision-making powers in terms of policies in general and urban planning more specifically. Thus, depending on the city, it may be conceivable to move from a highly "centralized" model that is fully supported by the public sector to a highly "liberalized" one in which the local government delegates urban management to private companies. Between these two extremes we find other configurations. Some are chosen (e.g. public-private partnerships (PPP)) while others are the fruit of necessity or indifference (i.e. laissez-faire or focusing on only certain sectors where the local governments' intervention is deemed necessary and which vary from one city to another (e.g. electricity supply, public transportation, subsidized housing)). In either case, these models are chosen in lieu of others, which are deemed either secondary (and thus are left to private initiative, e.g. housing, health, culture) or too expensive and beyond the financial means of urban governments (e.g. waste recycling or the fight against air pollution).

Identifying the variations between the different areas, sectors and projects, and determining who is responsible for them would allow us to develop an analysis grid that can provide an overview of the city's layout and operational organization. Such analysis is critical to urban planning design and production for the decades to come, quite simply in order to determine who will do what, with what authority and with what financial resources. This should take place at three key phases in the planning process: the design phase, the realization phase and in the maintenance and development of existing works.

Newman and Thorney (2011) point out that understanding the national context is important for understanding urban planning in both its historical context and current reality. Even if the national government defers certain decisions to the supranational level (as is typically the case in the European Union) and delegates other responsibilities to lower levels of the political structure (provinces, federal states, cantons), as in the United States, Switzerland and many South countries (e.g. Brazil, Mexico and Argentina), the contemporary era is marked by decentralization that is not only limited to highly industrialized countries. Decentralization, which is a key phenomenon in the transformation of political systems and can be observed in both Latin America and Africa, has obvious repercussions on the territory. As the case studies presented hereafter show, the central government remains a decisive player in planning and establishes the normative framework for the different sectors involved in urban development and land use. However, the State is often the main lender due to the more or less conditional granting of public funds and/or international loans at the regional and communal levels. Given this, the interfaces between the local, regional and national levels are also decisive in determining the degree of legitimacy of the planning programs and projects envisaged. Conversely, decentralization will have to be carefully examined to fully grasp the scope of the delegation of power – from the relocation of central political bodies to the redistribution of budgets and national, regional and municipal devolution of decision-making powers

(taxation of individuals/businesses, property and property taxes and other market and service taxes).

One must also not forget funding from foreign cooperation agencies, NGOs and other foundations that, more often than not, also play a role in urban development on a project by project basis. However, as Beard et al. (2008) note based on analyses of decentralization processes in different South countries, certain similarities were observable between decentralization policies and neoliberal policies during the 1980s and 1990s. At the time, it was not simply a question of restoring certain decision-making powers to the local governments, but also of transferring responsibilities in terms of the management of services provided to the community (water, energy, public transportation, etc.) to the private sector. This often involves heavy investments that not all communities can afford but that, in most cases, are also significant sources of income.

The picture would not be complete without again considering the city's size (area and population) and function given that, as mentioned earlier, small and medium-sized cities are often overlooked or discredited. Yet, we know that replicating the planning used for big cities is not appropriate (Way 2016). Not carefully considering the characteristics of intermediate cities would mean ignoring their potential for growth and development (Bolay and Rabinovich 2003). We must therefore look more closely at how the situation is developing in the Global South, both in terms of the perception of the relationships between urban theories and at how planning is concretely implemented.

3.5 South Cities and North Planning

Among the authors who have explored urban planning in the Global South, it appears that the initiatives taken in this area are far from being consistently satisfactory and only partially address the problems at hand.

The first shortcoming is that plan development, be it comprehensive (e.g. master plans) or sectoral, is no guarantee of future investments and actions. The necessary funding is not always available at the local level, and foreign lenders generally prefer to support individual projects than series of projects over time (Fig. 3.5). This is what we found in Koudougou, Burkina Faso, which we will be the topic of a later chapter.

The second shortcoming that often emerges concerns the territorial scope of planning. Often, potentially hazardous informal urbanized areas (i.e. land regularization, the construction of new infrastructures, evictions and material destruction) are simply ignored. Development planning tends to focus on city centers and formal (i.e. legal) residential areas and to improve amenities and collective services in them, thus reinforcing the socio-spatial segregation of the poorest segments of the urban population. This is what we gleaned in Montes Claros, Brazil, and will consider later in the book.

Fig. 3.5 The new bus station in Koudougou, funded by the Swiss Agency for Development and Cooperation 2014. (Reproduced with permission from Bolay)

Finally, issues emerge from the potential contradictions between the local government, planning agencies and residents, who are often the informal producers of poor neighborhoods (Fig. 3.6). Planning processes seldom allow for a true societal dialogue that takes into account social demands and jointly set priorities (Fig. 3.7). Nueve de Julio in Argentina has been facing such issues for over 25 years, as we will discuss later in the book.

All of these shortcomings combine and, again, can be attributed to the fact that the foundations of urban planning were developed in Western countries (i.e. norms, cultures and ways of life) and are thus ill-suited to the realities of South cities. This is what Devas (2001) concludes from a comparative study conducted in nine South cities. He found that, in all of the cases, the standards chosen in terms of infrastructure, amenities and buildings were unsuited to the conditions of the poor and actually constitute a system that is designed for citizens with economic, financial and/or

Fig. 3.6 A poor neighborhood in Montes Claros, Brazil in 2018. (Reproduced with permission from Bolay)

political power. Based on comparable criteria, Nagendra et al. (2018) compare North and South cities, showing that the differences clearly outweigh the similarities: "As demonstrated, the city prosperity index, infrastructure development index, quality of life index and environmental sustainability index are significantly lower

Fig. 3.7 A poor neighborhood in Nueve de Julio in 2018. (Reproduced with permission from Bolay)

in cities of the global south compared with the global north" (Nagendra et al. 2018: 341). Like many authors, they also add that urban knowledge is largely founded on examples from the Global North: "Many metrics of sustainable cities were developed using data from European and North American cities, and may not sufficiently take into account the vastly different per-capita consumption levels between the north and south, as well as within the south" (Nagendra et al. 2018:243).

At the same time, South cities are gradually being integrated into the global economy and are thus benefitting from computer connectivity and new communication technologies. This economic and political integration of countries that 20–30 years ago were more or less marginalized offers new technological capabilities for better managing cities and foreseeing future changes. Yet, this integration further commoditizes the relationship between urban society and its territory through investment priorities (public budgets facilitate the emergence of or increase in private operators) and the privatization of collective services (namely water, energy, transportation, culture and public spaces). The most "dynamic" cities – i.e. the most populated and internationally-connected – will be the first to enjoy this "internationalized urban liberalism." (Fig. 3.8) What is less clear is the fact that small and medium-sized cities are the prime targets of this urban marketing and that differences between cities are likely to become more marked if management models are based on economic profitability alone. Small and medium-sized South cities of 5000, 10,000, 50,000 or even 100,000 inhabitants rarely have urban planning departments. When they do, are merely bare-boned and without permanent and/or competent staff trained in state-of-the-art GIS and mapping techniques, high-performance equipment or the latest generation of computer systems. In some cases,

Fig. 3.8 Shanghai and Huaian in 2014: new cities, construction and destruction. (Reproduced with permission from Bolay)

they do not even have an internet connection. Practically speaking, in most cases, the local government mandates foreign or local private firms to produce urban planning documents. Regardless of the quality of the plans it is clear that, for these firms, the issues are not the same as for the political authorities or local government

officials. For private firms, it is a business that must be profitable and meet the terms of the contract, with little time to spend on citizen consultation procedures or other participatory planning processes.

Watson (2009) reminds us that demographic and territorial growth in South cities inevitably results in a concentration of poverty and social, economic and spatial inequalities. Today's urban planning is therefore unable to anticipate the needs of these cities, much less solve their many interrelated issues (individual/family/community needs, projections for the entire territory, etc.). The result is slums that, located on the margins of the models applied by decision-makers and planners, are in fact the epicenter urban problems due to their number, size (area and population) and the urgency and severity of the issues they face. The slum is a tutelary figure of the contemporary South city founded on disparities and shortages.

However, slums are also representative of urban dynamics that favor the integration of the poor into urban life through job creation, income generation, community organization and collective participation in rehabilitation projects in informal areas. Dharavi, the biggest slum in Mumbai and perhaps the world, is a perfect example of this economic and social creativity (Crerar 2017). Again, according to Watson, the question is twofold: on the one hand, the planning models and practices come from North countries whose socio-spatial contexts are incomparable; on the other hand, planning is applied in a strictly technical way and has little regard for local urban history, local actors, specific interests or a holistic vision of urban society.

In a more recent article, Watson sarcastically evokes "African urban fantasies" to describe the pharaonic plans the continent's major cities are making in collaboration with major North American and/or Asian urban planning agencies (Watson 2013). According to the author, these "urban follies" have certain elements in common that merit critical analysis: "They are large scale, in that they involve the re-planning of all or large parts of an existing city or (more often) restructuring a city through the creation of linked but new satellite cities; they consist of graphically represented and three-dimensional visions of future cities rather than detailed land use plans, and most of these visions are clearly influenced by cities as Dubai, Shanghai or Singapore; they are clear attempts to link physical visions to contemporary rhetoric on urban sustainability, risk and nest technologies, underpinned by the ideal that through these cities Africa can be "modernized"; they are either on the websites of the global companies that have developed them or are on government websites with the references to their origins within private sector companies; their location in the legal or governance structures of a country is not clear – where formal city plan exist these visions may simply parallel or over-ride them; there is no reference to any kind of participation or democratic debate that has taken place" (Watson 2013:217). Implementing such projections would have an undeniable social cost for populations in urbanized and restructured areas as well as for rural populations whose land would be monopolized to create new cities. Again, these investments – initially private but built on public lands – would mainly benefit the most powerful players in the largest cities and further widen the gap with small and medium-sized cities.

Quoting Roy (2005), no connection exists between the spatial and social levels; territories, networks and amenities are not actually designed based on how people

live. Moreover, a blind eye is turned to informality, which is the only way for the poor to integrate the city, whether they want to or not. In most cases, the poor are neither consulted nor involved in planning decisions. Rather, they simply suffer the consequences rather than enjoying changes that would improve their daily lives. Later in this book, we will closely examine the master plan creation process in Montes Claros, Brazil. The results of such top-down approaches are poorly-targeted investments that do not solve the crucial issues poor urban dwellers face. The question arises for both the choice of amenities and, more commonly, accessibility, with costs that are disproportional to the financial conditions of the poorest segments of society. We found evidence of this in a comparative study of different urban services in Argentina, Bolivia and Cuba (Bolay et al. 2004, 2005).

These changes result in increasingly fragmented urban territories, gentrification (depending on neighborhoods' amenities) and socio-economic segmentation of functions and uses of the city (Marcuse 2006). In short, slums on one side, gated communities on the other, and a city center in collapse.

Taking the example of the Palestinian territories and reflecting on planning alternatives in a context of high demographic pressure, Yiftachel (2006) feels it would be useful to rethink planning based on five crucial points for more coherent development of the urban territory. These include (1) land use and distribution criteria; (2) public policies against segregation; (3) decision-making procedures (with social participation to help integrate the urban poor); (4) considering the socio-economic dimensions of the city (disadvantaged urban populations more specifically) in a holistic way and; (5) the impact of urban changes in terms of increasing property and real estate value in rehabilitated neighborhoods.

Here we are faced with a dilemma. On one hand, private investors, who are often supported by the local government, are primarily concerned with urban competition and profitability, while most citizens are focused on their urban integration and access to urban services. Urban planning is torn between these two lines of reasoning, one based on economic profitability, the other on integrating the city socially. What is more, the changes are rarely transparent; instead, much of the process remains opaque, inaccessible or simply unknown based on goals that vary according to the actors involved, power struggles and attempts to monopolize "urban capital."

If the goal is indeed to move away from classic plans that are ill-suited to the South context, planning must then focus on the different facets of urban poverty. These include informality in key areas such as employment, land, habitat and access to basic networks (e.g. water and electricity) as well as economic inaccessibility to key areas of urban development (e.g. health, education and culture) to support the poor in their quest to live in conditions that are worthy of urban life, rather than favoring megaprojects that marginalize them further into the urban periphery (Harrison 2006).

Any change (made or planned) must be understood within in a dynamic system whose evolution depends not only on the planning as implemented but also on endogenous and exogenous factors over which there is little control. This applies to all developing countries and should encourage us to think of urban planning as a

creative, innovative approach that is has been designed to face the unexpected—and not as a routine step doomed to failure (Grunau and Schönwandt 2010). In this sense, innovation that favors efficient, contextually-appropriate planning in South cities must be a coherent, multidimensional approach that focuses on the human dimension of urban development before translating it into technical and constructive programs and projects.

A multitude of variables must be taken into account in planning processes, including interactions among social, environmental, economic, political and administrative actors. As planning is often applied in rapidly changing, poorly controlled contexts, it can no longer be designed in a linear way as it was in the 1960s. Rather, it must provide for a certain degree of uncertainty that, in order to be understood and accepted, must be allowed for in the planning process itself based on communication and collaborative efforts between the many actors involved in planning the city's future (Woltjer 2000).

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Chapter 4
Convoluted Urban Planning

Koudougou, a Poor African City

Abstract The efforts made to plan cities in emerging and developing countries are confronted to multiple issues, especially in small and middle sized cities which can be considered as poor through several criteria: socio-economic level of majority of population; low levels of public investments, weak quality of local administration, and large dependence of external donors. Following several authors, one of the main reasons is that philosophy and methods of urban planning applied to these specific contexts are directly reproduced from a Western tradition which doesn't correspond to the local and national context in terms of needs, priorities and organization of the financial resources. The case of Koudougou, a medium sized city of about 100.000 inhabitants, third largest city in one of the poorest countries in the world, Burkina Faso, will give the opportunity to understand concretely how these deficiencies are translate in an urban context. And foresee, more globally, alternative models of urban planning better adapted to poor cities, whose number of inhabitants is growing steadily.

In Koudougou, as in many African cities, the urban planning process is exogenous, not really consistent with the requests of the people, nor with the human, material and financial resources of the city, and therefore rarely applied. This is easily explained when we know that urban planning in its design, is initiated as part of a collaborative framework between the central government and foreign donors. The initial diagnosis is made by quality professionals but who are disconnected from local administrative and social realities. In fact it is a census of all needs to be met. Without guidance on how to implement a program of urban improvement when the facilities to be created whose costs are more than ten times that of the annual municipal budget reserves? In fact, plans produced in this context do not serve to guide local authorities in the current and future development of the urban territory. Neither are they an instrument of dialogue between the said authorities and the population. On the contrary, any consultation with the community that does not result in expected and desired deliverables will strengthen the distrust, or even defiance towards public, political, and administrative powers. At best, the plans, losing their principal essence, become promotional tools, pure marketing products, a catalogue of intentions of penniless communities at the mercy of the donors' desideratum, whether they be State or foreign cooperation agencies.

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This distortion of urban planning destroys any coherence in the process, both in establishing priorities in infrastructure and equipment to realize, in the economic and social sectors to be favored, as in the implementation timeframes. Nothing more can be programmed, since all work is done depending on external funders, without continuity, without a guiding principle, and without any possible guarantee that things will be done on time, potentially creating more long term disorganization than anything else.

Based on this experience and in comparison with other researches on urban development in African cities must be entirely reconsidered. The essential point – too often overlooked – is to begin from a participatory diagnosis in which the actual situation of the city is examined in its various dimensions, both demographic and spatial, infrastructural, but also economic, social and environmental, permitting all the stakeholders to position themselves.

Keywords African cities · Non-standard development · Koudougou · Burkina Faso · Poor city · Regional pole · Financial and human resources · External dependence

4.1 African Cities: Non-standard Urban Development

As Chenal (2013) says with humor, urban city planning in Africa is a bit like of the video game SimCity; everything seems possible. The recipe for a "good city" is simplistic: housing estates for the middle class, sanitation for the poor, fresh food markets scattered here and there, a bit of land regularization to squeeze money out of squatters to whom one promises a land title, a few basic technical networks and paved road to boot, and presto, you're done! So why do we continue to see slums? Why do the poor continue to negotiate their way along potholed streets? What is the actual status of these markets with their DIY stalls to which customers rush? However, the urban reality is more complex than the many plans produced by private offices in Africa and in North countries and elsewhere would suggest. And very few result in actual projects in the field. Alas, there is no magic formula (i.e. "you just have to…..!"). Demographic growth, territorial extension, increasing poverty, environmental degradation, the informal nature of most urban activities - be they for artisanal, commercial or construction purposes - are all challenges to urban planning in terms of the approaches to take and the goals to set. They are likewise so for the actors who have the enormous responsibility of managing an ever-changing present while trying to plan the African city of tomorrow.

According to UN-Habitat (2014), the African population was approaching a billion in 2010 and is expected to rise to 1.29 billion in early 2019.[1] By 2040, it will have reached two billion, and by 2070 will have exceeded three billion. This increase

[1] http://population.city/world/af (Accessed 23 May 2019).

will be most marked in cities. Africa has been the world's most urbanized region since the 1990s. Although the urban annual growth rate has gradually decreased over the decades to 3.29% in the 2000s (versus 4.16% in the 1980s), it remains very high. In 2015, the 404 million city dwellers represented 46% of the African population. This figure is expected to rise to 49% by 2035 (UNECA, 2017). By 2050, 1.2 billion urbanites will account for 58% of the continent's population. As we recently stated, this spatial and demographic extension and its effects in terms of poverty and urban precariousness should serve as the foundations of urban planning in Africa (Bolay 2011). In 2006, UN-Habitat said that poverty would be the main challenge for African cities' in the future (UN-Habitat 2005). This accelerated urbanization is also characterized by a skyrocketing slum population (166 million poor urban dwellers in Africa in 2001). This trend continues today, with nearly 200 million in 2010.[2] The United Nations regretfully states that no real pro-poor policies exist in Africa (Güneralp et al. 2017).

Forecasts suggest that the African urban population will represent 1.4 billion in 2050 and will account for 21% of the worldwide projection. All this in just 30 short years, and with a mass of individuals who will represent 55% of the total African to contend with. More than anywhere else in the world, the urbanization process on the African continent is a real revolution in progress, with urban growth rates that, though they will gradually decline, may still reach 8% depending on the country. This urban transformation concerns not only major cities but all types of agglomerations. According to figures analyzed by Kessides (2007), more than half of city dwellers live in cities of less than 200,000 inhabitants (Fig. 4.1).

All of this occurs in national contexts that, in many cases, are still unstable due to exacerbated political centralism, authoritarianism, nepotism and oligarchism. They are also accompanied by a lack of democratic alternation, civil war and a fear of terrorism, food crises and famine with repercussions on citizens' trust with regard to elites and investors. Although macroeconomic figures this past decade have been encouraging in terms of job and wealth creation, the social effects of this accumulation of capital are not clearly perceptible. According to Cohen (2006), sub-Saharan Africa is home to a third of the world's poor, an increasing number of whom live in urban areas.

Economic growth in Africa was negative between the 1960s and the late 1990s, as reflected by the increase in mass poverty. However, positive growth has been observed since the beginning of the twenty-first century, according to the McKinsey Global Institute[3]: "Overall, the continent achieved average real GDP growth of 5.4% between 2000 and 2010, adding $ 78 billion annually to GDP (in 2015 prices). But growth slowed to 3.3%, $ 69 billion, a year between 2010 and 2015." Although private and public investments have increased, exports are down from 2013 (ADB 2018). The year 2016 marked a low point in the continent's economic growth rate,

[2] https://www.un.org/africarenewal/magazine/april-2012/towards-african-cities-without-slums (Accessed 23 May 2019).

[3] https://www.weforum.org/agenda/2016/05/what-s-the-future-of-economic-growth-in-africa/ (Accessed 23 May 2019).

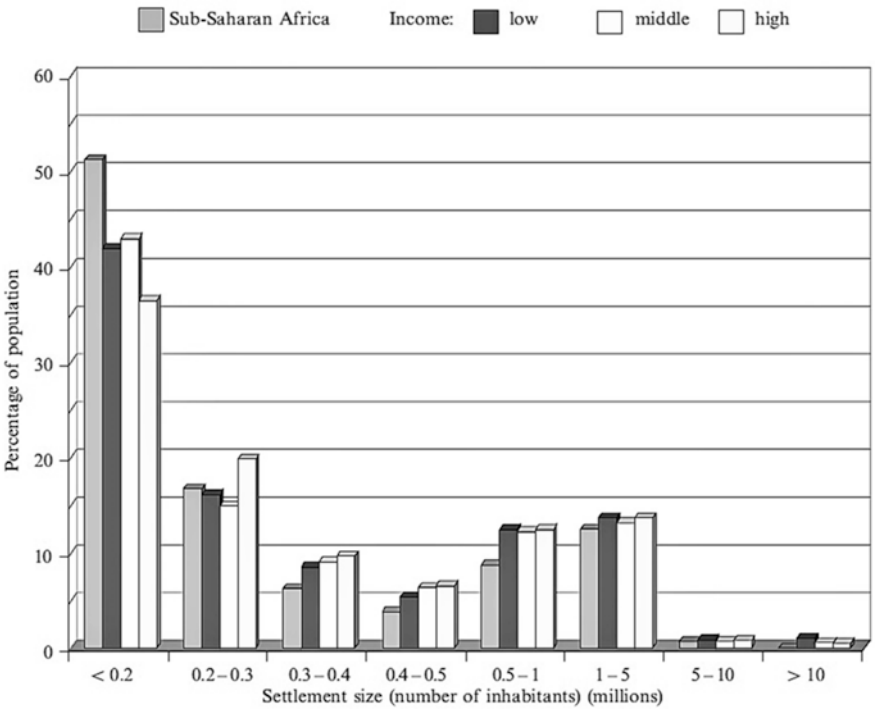

Fig. 4.1 Africa's urban population distribution by settlement size. (Reproduced from Kessides 2007)

which fell to 1.7% in contrast to 3.7% in 2015. This was partially due to instability in a number of North African and Middle Eastern countries, lower oil and raw materials prices on international markets and adverse weather conditions. Some countries, however, such as Ivory Coast, Kenya, Tanzania, Ethiopia and Senegal, continue to ride this wave with economic growth rates of more than 5%. A more general recovery can be felt. According to the World Bank, Sub-Saharan Africa's growth was expected to reach 3.1% in 2018 and 3.6% in 2019–2020,[4] which is feasible so long as oil and commodity prices remain stable. Curbing these fluctuations requires diversifying the economic fabric, improving infrastructures, strengthening electrical systems and tighter control of the public debt, with 18 African countries now considered "at risk" versus eight in 2013.

In an analysis of Africa's urban economy based on a study of 90 developing countries, UN-Habitat points out that only in sub-Saharan Africa were the positive relationship between urbanization and poverty reduction and positive correlation between urbanization and economic development not confirmed. This is likely due to urban immigration largely resulting from rural poverty, versus a strong, diverse

[4] http://www.worldbank.org/en/news/press-release/2018/04/18/economic-growth-in-africa-rebounds-but-not-fast-enough (Accessed 23 May 2019).

urban job supply (UN-Habitat 2013). In its report on the African economy and urban development, UNECA insists that compared to other regions of the world, African cities face low productivity that in turn generates little job creation (UNECA 2017). According to this commission, a significant amount of fundamental data must be modified in order to enhance the economic potential of these cities. To begin, there is a critical lack of infrastructure and services as well as crying need for an institutional and regulatory framework that supports entrepreneurialism and financial investment. Without these foundations, the urban economy as it exists today will remain poorly connected to rural areas and continue to have negative repercussions on the environment, social equality and efforts towards formalizing the economy. The informal nature of the urban economy cannot be denied and, according to Alter Chen (2017), represents 66% of non-agricultural jobs in sub-Saharan Africa (ranging from 33% in South Africa to 82% in Mali). The problem of urban employment is also gendered, with 74% of non-agricultural employment for women versus 61% for men. According to an ILO (International Labour Office) study cited by Africa Expansion, the informal sector represents 93% of new jobs created, while the formal sector employs only 10% of the continent's workers (Afrique Expansion 2012).

This reality, which has been quantified and observed in all African cites, not only is undeniable; it also cannot be eradicated or fought, as it is the economic driver of the urban environment. Informal work must be analyzed in order to be better understood, improved, galvanized and humanized. Chen specifies that two-thirds of urban workers in Africa are freelancers, either individually or in family micro-units. These freelance jobs help alleviate poverty but do not offer any security (ILO 2014). Moreover, they are critical in strategic urban areas such as food supply (two-thirds of urban households buy their food from undeclared street vendors) and construction. Such facts support the need for urban governments to acknowledge the informal sector's existence and to take measures to integrate and protect small producers, artisans and business owners by gradually formalizing African cities' most dynamic economic and socially inclusive sector in an acceptable way.

In many sectors, informality has become more the rule than the exception, be it land appropriation, building construction, infrastructure, technical networks, health care or social protection. Continuing to ignoring it impacts both the organization of the city as a whole and the mobilization of its assets. "Ordinary" African cities today are still poor, with little tax revenue that might be invested in medium and long-term projects to improve land use planning and environmental protection.

Many African cities have in common fragmented territorial development in their peripheries and low land use, whose influence extends further and further into the suburbs. Arable land thus changes uses at the expense of the peasant populations and cities' food supply. Territorial expansion also has environmental impacts by upsetting the natural balance through deforestation, water contamination and groundwater depletion – phenomena that, when combined, can pose a real challenge in terms of coherent regional development between the city and countryside (Nunes Silva 2015).

Fig. 4.2 Douala 2013 (Nylon area) 200,000 slum inhabitants. (Reproduced with permission from Bolay)

The problems African cities face are not only economic. There are also imbalances in the urban network that are marked by the influence of a few multimillion-dollar cities that control much of the political and economic power, at the expense of smaller cities. This is the case for many capital cities, as we can see in the table below, be it Lagos, Kinshasa or Cairo, which are among the world's most populous megacities, or other large African cities of over a million inhabitants.

Below are some images of these sprawling capitals with their poor neighborhoods, low land use and budding business centers – globalization of the urban image and international positioning vying for the "Manhattanization" of the twenty-first-century city (Figs. 4.2, 4.3, 4.4, 4.5, and 4.6).

But the question remains as to what is happening *outside* of these cities. How are cities (and city life) organized in less attractive small and medium-sized agglomerations? These secondary cities replicate another characteristic of African cities: that of territorial sprawl. Few cities are, in fact, concentrated, vertical and dense. Rather, their boundaries are fuzzy and their peripheries – comprised of dirt roads, public lighting (in some cases) and cookie-cutter housing developments and parcels with buildings under construction – unclear. And yet we know that any posteriori large-scale development in the urbanization process is extremely expensive, particularly with regard to technical networks, roads, drainage, schools, health centers and other collective services. Other logics therefore govern the implementation of suburban

Fig. 4.3 Urban sprawl in Yaoundé 2013. (Reproduced with permission from Bolay)

housing and development of central business and commercial areas. The city of Koudougou, which we will examine more closely later in this chapter, will help us understand this logic of making the city and watching it grow.

We must keep in mind the wide variety of urban agglomerations (Fig. 4.7). Small and medium-sized cities have the largest number of urban inhabitants in Africa and

Fig. 4.4 Kinshasa 2015, Democratic Republic of Congo, Africa's third largest city. (Reproduced with permission from Bolay)

are home to the largest number of migrants of rural origin. Though their populations are smaller, these cities nonetheless have the highest population growth. 52% of the urban population in Africa lives in cities of less than 200,000 inhabitants (Fig. 4.7), versus 42% for developing countries (Kessides 2006). These small and medium-sized cities, both in size and in number of inhabitants, are also intermediate cities (Bolay and Rabinovich 2004), given their central position in the surrounding rural area (i.e. the rural-urban continuum) (Montgomery et al. 2004) and distinction as regional urban centers (Bolay et al. 2004). These centers have not only urban and local services and infrastructure, but also regional ones (public administration, markets, businesses, banks, hospitals, etc.). But like small and medium-sized cities in Europe and other industrialized regions (Knox and Mayer 2009), these African agglomerations benefit less directly from globalized economic exchanges and can sometimes even suffer the consequences (i.e. a local market undermined by highly competitive Asian imports). Their dynamics are and will remain largely dependent on their physical and economic integration into national urban networks, notably through the quality and density of the road network, public transportation and as centers for processing and distributing agricultural products).

Comparing different African cities, Myers (2011) attempts to move away from the Western models that shape thinking about African cities by highlighting the variety and distinctiveness of urban development patterns on the continent. Though

Fig. 4.5 Abidjan, business center, in 2013. (Reproduced with permission from Bolay)

aware of the strong colonial influence as regards the physical manifestations of urbanism and the neo-colonialist thinking of "city makers," he stresses that African city dwellers develop their own forms and standards for building and managing the city, and are often obliged to do so due to their living conditions and the local government's inaction. Though poor, these inhabitants are active in that they create their jobs (often informal), homes and neighborhoods. All this self-construction of the city clashes with other forces, such as the land market, the real estate sector, technical networks, local governments and their administrative departments.

Though seemingly conflictual, these logics are often subject to negotiations. People know the rules, even if they then misappropriate them. Land ownership is governed both by modern, official law and traditional authorities with power over customary land. In the African context, such factors often lead to arrangements between stakeholders that differ from those on other continents. The practices – both formal and informal – that make up the African city are anchored in innovative modes of urban governance based on the realities and actions of their residents. If we take housing and economic activities as an example, unlike the local government, most poor African urban dwellers consider that their informal, undeclared or even illegal activities are not only legitimate but normal and functional (Tranberg and Vaa 2004).

Fig. 4.6 The skyline of Abidjan 2013, the capital of Ivory Coast, and long considered the modern metropolis of West Africa. (Reproduced with permission from Bolay)

Here we touch on an African specific feature that makes African cities not only a dichotomy between historical colonial centers and recent informal extensions, or between self-construction in poor neighborhoods and modern technical networks (water, drainage, electricity, waste management, etc.). Of greater importance here are the superposing references, such as the customary land rights that underlie the "modern" laws passed down by European colonists. Stakeholders both utilize and fight these underlying frameworks with the aim of developing strategies to maximize the financial value of land and real estate. Neighborhood residents, however, remain in fearful expectation of the hypothetical application of master plan decisions taken in high places and their obligation to pay land rights in order to legally stay on their plots and in their homes.

Faced with this seeming "cacophony," the situation is evolving and awareness is growing everywhere in Africa in an attempt to better align urban theories, planning methods and the resulting actions.

For Agboda and Watson (2013), African cities are changing rapidly, and considerable investments (notably in real estate and amenities) are reshaping the landscape. According to their study, the problem is that these changes have no real impact on what is needed to implement sustainable urban development. For the authors, the majority of these large-scale projects are and remain climatically, socially (as they target African and foreign elite) and infrastructurally inappropriate. These forecasts, which are often designed at the federal level, either draw their

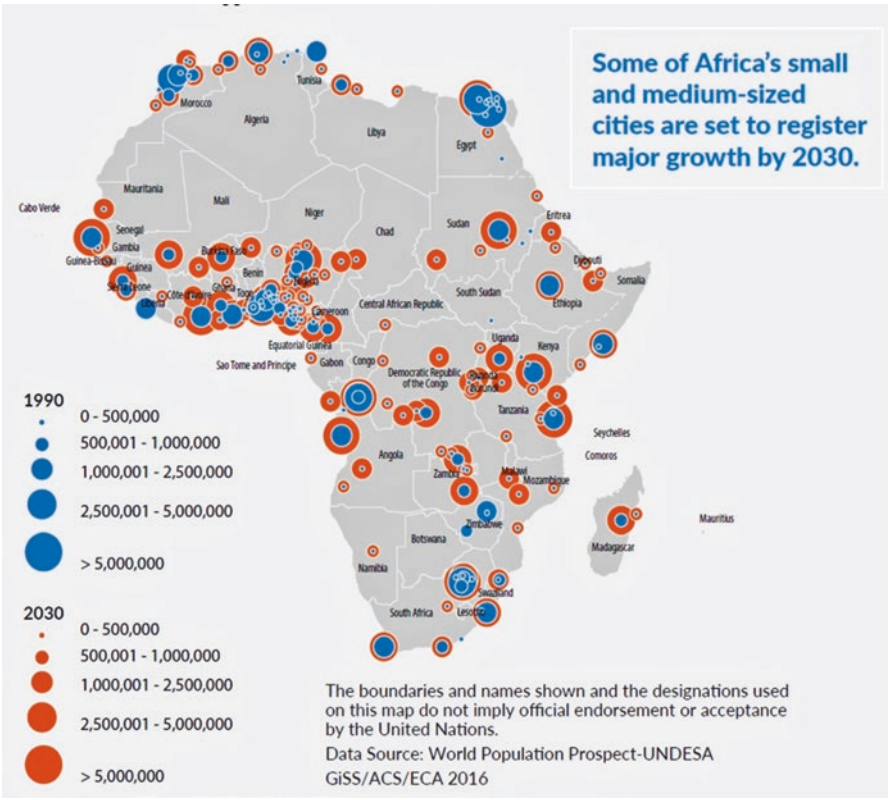

Fig. 4.7 Types of urban agglomeration in Africa (1990–2030) (Economic Report on Africa 2017: Urbanization and Industrialization for Africa's Transformation). (Reproduced from UNDESA 2017)

inspiration directly from colonial planning norms, or are original and extravagant but turn a blind eye to the informal city, or worse, simply eradicate it. Hence, the formal city is becoming increasing inaccessible to ordinary people each day, as informal settlements spread to the outskirts.

In response to this trend, the Association of African Planning Schools, a network of 43 institutions that are training urban planners in an effort to reform planning education on the continent, was created in 2008. According to its coordinator,[5] we must first realize that urbanization in Africa "does not follow the "conventional" patterns of industrialization and concomitant job creation in the North, where rapid urban growth was first experienced. Rapid urbanization in Africa is simply not matched by the job creation required to secure livelihoods, and public intervention is not keeping pace with the demand for shelter and land." Most urban master plans

[5] http://www.citylab.com/design/2011/11/improving-urban-planning-africa/549/ (Accessed 23 May 2019).

do not take into account the informal nature of urban, social and economic life, real estate and land. Yet, these dimensions – which greatly impact the lives of the poor – must be reintegrated in planning and in training curricula for future professionals so that they can develop new approaches. Thus planning should not serve to sanction norms that are inappropriate to the context, but rather to reorganize and standardize what already exists and to better plan cities in the future by considering their inhabitants first and foremost.

As Harrison et al. (2008:17) say in their introduction to *Planning and Transformation*, taking stock of the post-apartheid experience in South Africa, "The purpose of planning is to contribute to the realization of socially just and sustainable cities and regions, although if we recognize that there are different interpretations of what these concepts may mean. To this end we believe that both the process and products of planning are important and that they cannot be considered separately from each other." We fully agree with this idea of how urban planning should be done in Africa in the future.

4.2 Koudougou, a Regional Hub in Burkina Faso

To illustrate these considerations, the history of Koudougou in Burkina Faso will serve as an excellent example.

With just over 100,000 inhabitants, Koudougou (Fig. 4.8) is located 100 km west of Ouagadougou and connected to it via a wide asphalt road. It is the administrative

Fig. 4.8 Aerial view of Koudougou. (Reproduced from Google Earth, 2019)

Fig. 4.9 Koudougou, city entrance in 2014. (Reproduced with permission from Bolay)

center of the province of Boulkiemde, which is the departmental prefecture of the same name and capital of the Centre-Ouest region. This major city is the country's third most populated after the capital and Bobo Diolasso. Koudougou's role as an urban center dates back to the end of the nineteenth century, with the arrival of French settlers and the forced immigration of rural populations to increase its number of inhabitants (Hilgers 2005).

Our first impression of Koudougou is that of spatial sprawl and extremely low building density. As one enters the county, one finds few parcels that are not yet overdeveloped (Figs. 4.9 and 4.10). With hesitating constructions (houses made of raw earth or bricks), everything is designed and made for in a short term vision. The houses are inhabited, but often only partially as they are still under construction. At the same time, a new, luxury private housing development at the city limits, whose construction was launched with pomp on the occasion of the Independence Day celebration on December 11, 2012, accommodates the city's most affluent residents.

Beyond its suburbs, Koudougou resembles an open-air shopping mall (Fig. 4.11). The city center is home to every business activity imaginable (fresh food, restaurants, cafes, workshops, taverns with music pouring out of open doors, shops that sell everything from mechanical parts to clothing imported from abroad). People everywhere on bikes, motorcycles and on foot (though rarely in cars) make Koudougou a lively, vibrant city. Its mish-mash collection of modest-sized build-

Fig. 4.10 Koudougou suburbs under construction in 2014. (Reproduced with permission from Bolay)

ings seems cramped in so vast a territory. The overall tone is that of raw earth, from the beaten dirt tracks that branch off from the main roads to the houses: beige to brown and sometimes ocher. Koudougou is a rural town where rural farmers who come to sell their produce at the market can feel at home.

Crossing the center, one immediately observes this mixture of urbanity and rurality, with empty plots, houses still under construction and billboards. A city more that is more like a gigantic village, and that one would not suspect – compared to other cities of the same size – is home to 100,000 people of all ages.

Our final impression is that the city is extraordinarily clean: the downtown with its gleaming stalls, the orderly markets and little garbage along the roadsides at intersections.

In Burkina Faso, 77.30% of the population lives in rural areas while 22.70% lives in urban ones. Clearly, the Burkinabe population is predominantly rural. 46.4% of the country's urban population lives in Ouagadougou, the nation's capital (Fig. 4.12).

76.8% of Burkina Faso's urban population is concentrated in its ten most populous cities, with an average annual growth rate of 7.26% in the urban population between 1975 and 2006.[6] While the country's urban population accounted for only 10.8% of the national total in 1975, this number rose to 18.5% in 1990, 24% in 2010

[6] Urban development plan for Koudougou, p. 19.

Fig. 4.11 Downtown Koudougou market and its business activities in 2014. (Reproduced with permission from Bolay)

and 28.7% in 2018, according to the World Bank.[7] If this trend continues, this figure could reach 37% to 44% by 2030.[8]

For World Bank experts, contemporary urban development in Burkina Faso can be divided into three periods. Between 1960 and 1983, urban development began emerging from the colonial era with two types of zoning: one for poor indigenous populations and the other equipped with houses, roads, drainage and electricity for Western expatriates and African officials. In 1983, the Sankara revolution had an urban impact, resulting in the nationalization of lands and the creation of national public lands. A highly centralized national policy emerged to regulate land and housing issues, marking the beginning of the development of many housing estates and the allocation of parcels. After the fall of the regime in 1990, the new government began negotiations with the World Bank to create and strengthen technical departments responsible for urban issues within the local government in Ouagadougou and Bobo-Diolasso, the country's two largest cities (World Bank 2002).

[7] https://donnees.banquemondiale.org/indicateur/SP.URB.TOTL.IN.ZS?locations=BF (Accessed 23 May 2019).

[8] Profile of Burkina Faso's urban sector, IAGU (UN Habitat 2005:10).

Fig. 4.12 View over Ouagadougou, the capital of Burkina Faso in 2017. (Reproduced with permission from Bolay)

4.2.1 A Central Pole in Its Region

The surface area of the commune is approximately 580 km^2. In 2006, its urban population totaled 88,184 inhabitants (plus the municipality's 15 villages), with an average density of 11.91 inhabitants/hectare for a surface area of 7407 ha. In 2030, in other words the horizon of the City's Urban Development Plan (SDAU), the commune will be home to 235,085 inhabitants (rural and urban populations combined), following an annual communal population growth rate of 4%. This constantly increasing population generates enormous needs which must then be met. Moreover, Koudougou is in an area where natural resources are scarce and the environment is facing challenges in terms of balance.[9]

Koudougou has inspired numerous studies, planning documents and foresight. The first was the Communal Development Plan (PCD), developed via a long participatory process that started in 2002 and ended in 2006. This plan identified the priority needs for a budget of more than seven billion CFA francs[10] and was incommensurate with the municipality's financial capacity. The term expired in 2006 without any third party financing, and the plan was never implemented. During a 2014 field study, the plan was reviewed with more modest ambitions (to the tune of one billion CFA francs this time), which was more in line with the municipality's limited means. The City Council's approval was expected in March of that year.

There was also the first development and urban planning master plan (SDAU) (Fig. 4.13), which covered the period from 2002 to 2017. Its creation was overseen by the Directorate General of Urban Planning in 2002, but it could not be implemented. A new version of the plan was adopted by the Council of Ministers in December 2013. Among the key initiatives was a strategic sanitation plan financed by France (FDA, French Development Agency) and adopted in 2005 for a 10-year period. The plan provided for the construction of 7000 latrines, 5000 of which have been installed to date. Additionally, a study on household waste management in Koudougou resulted in a strategic plan in 2007 that is still pending. At the federal level, two directives incorporate Koudougou's urban planning: the national regional development plan for 2025, whose final stage is currently underway, and a city contract financed by the World Bank for six regional capitals, which was completed in 2011 as part of the "Regional Development Poles (RDP)" national program.

Multiplying along the way, plans are developed one after the other at the request of the federal government or at the suggestion of international donors. In reality, however, they are not used and have no real outputs; though they are based on the needs identified, they do not take into account local resources or possible outside support. This is a conundrum that many poor cities, which lack the means to realize their goals or have little say in national decisions, must face.

[9] Urban development plan (2012) Koudougou urban development plan Portrait (Word doc in AB archive).

[10] At a rate of 1 euro per 655 FCFA, this represents a total of 10.7 million euros.

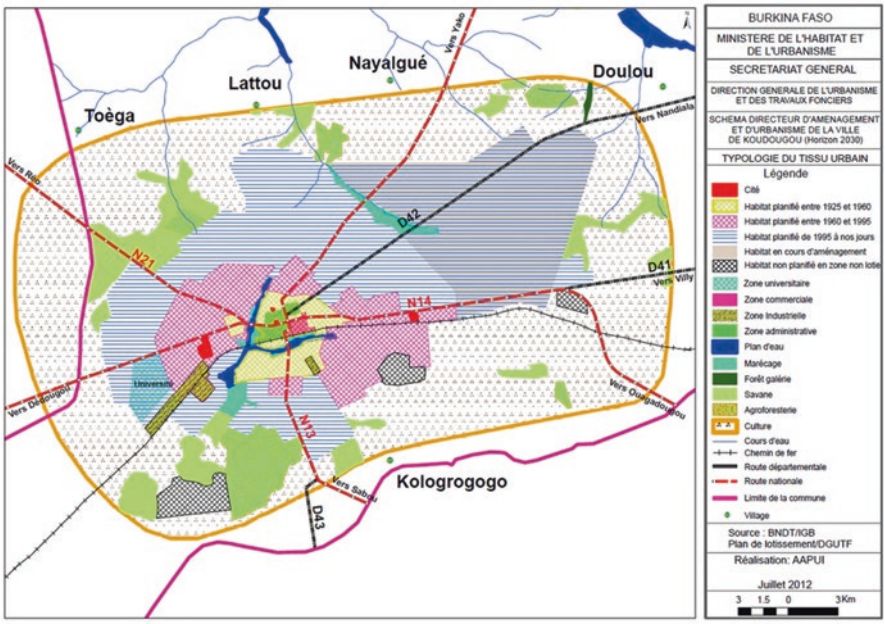

Fig. 4.13 Typology of the urban of Koudougou, urban development plan 2012 – SDAU. (Reproduced from Ministry of Housing and Urbanism 2012)

The issues, however, are elsewhere and remain unsolved. According to Léandre Guigma (2010), Koudougou's urbanization has gradually extended both linearly (along the main Ouagadougou-Dédougou road and the railroad tracks) and concentrically (around a first housing development built in 1925). Today, the city spans over 10 km from east to west and 9 km from north to south.

The city has an administrative area, a commercial area, an industrial area, a university area, as well as residential areas. The latter represent both lawfully developed neighborhoods (mainly in the highly urbanized center), informal housing on undeveloped land with unmarked roads and former villages that are now administratively attached to the town. This is problematic as, with the exception of one area in the southwest of the city, these informal settlements do not actually figure on the Koudougou urban development master plan reference map created by the supervising Ministry in 2012. Yet, this issue is crucial to the city's future development. It is clear that the so-called cultivable lands (i.e. for agricultural production) closest to the recently urbanized areas have become peripheries that are not covered by any formal planning projects in the transition towards urbanization (Fig. 4.14). To date more than 60,000 parcels totaling nearly 7000 ha of the city's public lands have been made available to third parties, which is considerable for a population of almost 113,000 inhabitants and will pose major issues in terms of land regularization and development of these parcels in the future. The reasons for this are both political and nepotistic. Depending on the period, mayors sell plots of communal land to fill the city's coffers…and line their pockets along the way. However, this is

Fig. 4.14 Peri-urban land near Koudougou, first developments in 2014. (Reproduced with permission from Bolay)

done without any reference to the various urban development plans that have marked the city's recent history.

4.2.2 Of Texts, Resources and Projects

How does this all of this translate in concrete terms? How are these institutions and texts turned into specific concrete actions, given that this is not merely an abstract idea but an actual medium-sized city that, in Burkina Faso's case, is one of the five or ten cities that constitute the country's urban fabric (Fig. 4.15).

Like Fada N'Gourma and Ouahigouya (other cities in Burkina Faso), Koudougou has benefited from the development program for medium-sized cities financed by the Swiss Cooperation that, in addition to the investments in collective utilities (which, in Koudougou's case, includes two fresh food markets (Fig. 4.16)[11], a soon-to-be operational bus station and a future slaughterhouse) also helped to create a

[11] The Koudougou central market was renovated in 2005. The rehabilitation project was financed by the Swiss Agency for Development and Cooperation and designed by the Swiss architect Laurent Séchaud, whose project won the Aga Khan Architecture Award in 2007.

The jury noted that the project was the fruit of a genuine participatory process that involved the whole community in the choice of the site, and the design and construction of the market.

Fig. 4.15 Burkina Faso and its main cities (Reproduced from http://www.ohada.com/etats-membres/burkina-faso.html. Accessed 23 May 2019)

specific organization to design, implement and monitor these projects under the supervision of the local government in 1997. The EPCD,[12] a municipal public development institution, was initially the program's oversight division but later established itself as the City Council's delegated contracting authority. As such, it designed and created all of the infrastructures and activities that were jointly selected to promote the city's development on behalf of the municipality. In Koudougou, the EPCD's director is also the director of the City's technical services, which has three departments: buildings, roads and water/sanitation. Each sector is represented by a single technician. To make up for the lack of competent staff, the City Council appeals to the various departments, which provide it with a few specialized officials.[13] Local and regional representatives also intercede in areas ranging from the economy to agriculture, water resources, land, infrastructure, education, social action, sports and leisure and health. Three public companies are responsible for water and sanitation, electricity and telecommunications.

[12] http://www.google.ch/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDMQFjAB&url=http%3A%2F%2Fwww.cooperation-suisse.admin.ch%2Fburkinafaso%2Fressources%2Fresource_fr_92982.pdf&ei=K_wiU5eVCMGetAbklYCQCA&usg=AFQjCNGFnmplr-_Q_CpoNUCb5BLaTgOOGg&bvm=bv.62922401,d.Yms (Accessed 23 May 2019).

[13] Currently, the city administration has a treasury inspector, an educational advisor and a communications specialist. The City Council has likewise requested an urban planner, a real estate specialist, a quaestor and a human resources director.

Fig. 4.16 The central market in 2014 (Reproduced with permission from Bolay)

Fig. 4.17 Water fountain in a Koudougou neighborhood, overseen by the municipality in 2014. (Reproduced with permission from Bolay)

The fact remains that, in a context of decentralization, the municipality is responsible for the maintenance of schools, health centers, cultural/sports facilities, markets, bus stations, parking areas, streets, rainwater pipelines, green spaces, boreholes and wells (Fig. 4.17).

In 2014, Koudougou's annual budget totaled 450 million CFA francs (686,350 euros[14]). Of this, the Mayor estimates that 85% was used for operating costs (salaries and other recurrent charges). The city's actual financial capacity is currently 70–80 million CFA francs[15] per year. The EPCD's outside delegation responsible for managing the two fresh food markets succeeding in accessing an extra 35–40 million CFA francs per year depending on the year, which in turn is reinvested in new markets or in the maintenance of existing ones[16] (Fig. 4.18). Including the federal government's funding for municipal infrastructure and facilities, the total public budget for 2014 was one billion CFA francs (approximately €1.5 million). From this, 75% of the expenditures were for the local administration's operating costs, while 25% was invested in the municipal territory (SDAU 2012).

This immediately sheds light on three dimensions of urban planning that we will examine based on respondents' answers and the documents we consulted: (1) the public budget is very low given the needs identified by the authorities and the population; (2) the municipality has few employees, and (3); many consider the compe-

[14] One euro equals 655 CFA francs (March 2014).

[15] 106,750–122,000 euros.

[16] Following social unrest in Koudougou in 2011, shopkeepers stopped paying rent on their shops and stalls. Taxes fell to about five million CFA francs. The financial situation has improved with calm restored.

Fig. 4.18 Shops at the Koudougou central market in 2014. Maintenance provided by the municipality and taxes paid by the shopkeepers (Reproduced with permission from Bolay)

tence level of the political, administrative and technical staff relatively low, thus necessitating the involvement of third parties.

In short, one can say that at first glance, Koudougou has neither the financial nor the human resources to deal with the problems its territory faces autonomously; it must rely on outside partners in a relationship which, while not directly dependent, nonetheless fuels a relationship of interdependence wherein the municipality's position is weak.

Taking this analysis one step further, one can say that from the outset, all of the written and oral communication on planning in Koudougou is primarily technical and functional. Without pretending to be objective, it rarely refers to concepts specific to the urban sciences or other key areas. General documentation that use international concepts undoubtedly exist. For example, in its National policy on housing and urban development (2008), the Ministry of Housing and Urban Planning mentions the need to "find a comprehensive approach to urban issues in order to create the conditions necessary for sustainable urban development." In turn, it describes a holistic understanding of the urban reality and takes a step towards "strategic planning." In 2005, Bayili and Aweh (2005) developed a national profile report on Burkina Faso's urban sector at the request of UN-HABITAT. According to the authors, the goal was "to help develop policies to reduce poverty at the local, national and regional levels in African and Arab regions, through needs assessment and response mechanisms to help implement Millennium Development Goals

Fig. 4.19 An active population in a Koudougou shopping street in 2014. (Reproduced with permission from Bolay)

(MDGs)." In 2011, Alain Bagré reminded us that cities are not built by urban planners but by the people (Figs. 4.19 and 4.20). The new vision of urban management must reflect the idea of cities "for and by the people" and strengthen its efforts to support the dynamism, creativity, democracy and sustainability of the latter. Professionals (city planners, administrators, engineers, etc.) must be convinced that it is in their best interest to move away from the old urban management principles that mainly benefit a powerful minority and move towards a new approach. (Bagré 2011)

These references are highlighted to emphasize both their importance (actions in the field do not come out of nowhere) and the fact that they are consistently absent from most technical and administrative reports on and for the city. Rather, these concepts are disappearing in favor of almost exclusively descriptive diagnoses. The documents we saw – be it official municipal texts or requests to consultants working for a national or local public officials (often financed by third-party organizations, international organizations (such as the World Bank) or bilateral cooperation agencies) – did not offer any real perspective or allow for broader, more critical thinking on the immediate objectives.

Our second observation was that there is very little urban research on Burkina Faso,[17] and even less on Koudougou. Those that do exist either focus on Ouagadougou

[17] This is not to say that none exist, but few are easily referenced and discernible using Internet search tools.

Fig. 4.20 Community leaders and crafts in a suburb of Koudougou in 2014. (Reproduced with permission from Bolay)

(Hauer et al. 2018; Delaunay and Boyer 2017; Biehler 2006; Fourchard 2001; Van Dijk 1986) or are done at the national or international level (as comparisons) (Baron and Peyroux 2011; Potts 2009; Beauchemin and Schoumaker 2005). At the sectoral level, the vast majority of articles about urban life in Burkina Faso available on the Internet concern health and medical issues, not urban planning issues (Niakara et al. 2007).

Nevertheless, a number (though not exhaustive) of these works can be cited as emblematic of the centers of scientific interest with regard to the cities of Burkina Faso. One is based on a comparative approach Obrist et al. (2013), but does not focus exclusively on the intentions and actions of public institutions and the experts they appoint. For Söderström, Dupuis and Leu (2013) who describe urbanity in Ouagadougou, models of urbanization are simply replicated from one African city to another: the same experts, the same funders for the same products, whose quality is questionable at best. This is what Chenal (2013) also questions in his book on planning urban space in West Africa: plans produced by national and/or foreign experts do exist, but are rarely followed given that financial resources – even with the support of international donors – do not allow for it. They do, however, sometimes serve as an argument for more specific actions. Hilgers (2009), the only author to have worked on Koudougou, shows how in this rebellious city, a shared urban identity founded on urbanity, collective belonging, mutual recognition among citizens and identification with the rebel city has been created, giving rise to a sense of belonging that in turn produces a global vision of the city. The author does not go

further into the daily life of this urbanity, which is at once the essence of its future development, the current management of the territory and its inhabitants and its future planning.

With a body of scientific literature that planners simply do not utilize, the official texts are more concrete and operational. Thus, Koudougou's urban development master plan for the horizon of 2030 (which was adopted at by the government in December 2013) recalls that with a demographic growth rate of 4% for the coming years, the needs are great and the environmental balance fragile, which thus present a major obstacle to stable development of the territory and its population.

At the same time, these bibliographical references should be compared to what can be learned from the field itself. In total, 16 people[18] were interviewed at length about their vision of the city and its present and future development.

A key word used by many of the respondents was "vision." For them, having a vision and imagining the future of the city and its inhabitants were necessary to regional planning development. Though rarely spoken of in detail, this vision was rather optimistic. The mayor who served between 2012 and 2014 was driven by such a vision that highlighted Koudougou's potential as a young, economically dynamic, geographically strategic city.

Another topic respondents mentioned that of "development," for which the city had great potential. However, they felt that this development should be more pragmatic, i.e. be based on the needs and capacities of inhabitants and the local economy. Development cannot be exclusively endogenous, as the city's resources do not allow for it, neither financially nor humanly, and must involve cooperation with the State, international donors and foreign cities as part of decentralized cooperation projects.

In the case of Koudougou, and by extension Burkina Faso, the political dimension of urban development was a matter of major concern for all respondents. Generally speaking, the people lacked trust in the political world ("the people feel that we do not care about them"). The second criticism was of the unfinished decentralization process in a country where power is highly concentrated. Currently, the State gives itself a considerable amount of decision-making powers, at the expense of the regions and municipalities. This makes the latter highly dependent, both financially and ideologically. For the respondents, the State does not like Koudougou. This politicized nature of the debate on the city's future makes urban planning difficult and unpredictable, given that the city's needs are significant, resources are lacking and inhabitants are wary of politicians, who prefer "megaprojects" to a more coherent, long-term organization of the municipal territory. According to those interviewed, good governance should be the fruit of a genuine political desire to foresee problems and develop strategies to deal with them.

[18] Among them, nine were directly involved in studies on the management of Koudougou; six were urban specialists with extensive field knowledge of Burkina Faso and one was an association manager.

4.3 What Urban Planning Means for Koudougou

Many plans have been developed for Koudougou, especially in the past 15 years; some (like local development plans and master plans) have a comprehensive vision while others are more sectoral (like the strategic plans for sanitation and household waste). Their advantage is that they provide an idea of the investments needed to improve the situation in the municipality. Their disadvantage is that they are not executed because they are not in line with the municipal government's financial resources or skills. Rather, they are used to reassure potential donors during financial negotiations. We will look at this fundamental contradiction in greater detail in order to better grasp and go beyond the prevailing pessimism.

What do the actors say? What are the intentions of this urban planning that has largely developed in Burkina Faso since the 2000s, in accordance with the strategies of international organizations that support the government in its development efforts?

The plans do not meet the classic goals of planning the urban future, but rather are a tool that serves the government's purposes when it comes to organizing the territory. Given the multitude of issues, it is clear that setting priorities in terms of areas and sectors is challenging both politically and technically. Everything immediately becomes urgent, with no criteria explaining the choices made. While both desired and considered useful, the consultative process between decision-makers, service providers and the population are gradually being put aside due to lack of time and resources. As such, there is a strong focus on the tool, which requires technical prowess (that of consulting firms appointed to do so), and on the results to achieved. Little emphasis is put on the approach or the objectives targeted by applying this tool.

The second major difficulty concerns the production conditions of urban development plans in Koudougou and in the other cities in Burkina Faso. Three pitfalls can be highlighted here: the first is that these local plans are decided on by the national government and "imposed" on municipalities; the second is that, like many other cities in Burkina Faso, Koudougou's municipal government lacks competent staff and as such cannot participate in the design, supervision and monitoring of local plans. The glaring lack of financial resources also does not allow the municipality to implement this planning, which is more akin to wishful thinking and used mainly to appeal to funders, rather than as an actual blueprint for local urban development. Funding primarily comes from the donors with whom the federal government negotiates. The municipal government and local inhabitants only play a supporting role during this process, though they become key players during the planning implementation phase. In sum, work is done "on behalf of the municipality" but not with the city as its starting point, or even in direct collaboration with its authorities or citizens. Hence, regardless of the quality of this technical production, a disconnection exists between the designers, operators, users and beneficiaries that greatly weakens the foundations.

Two other points likewise trouble this process. The first is the public's lack of trust in both the local and national government, which makes them less likely to participate. The second is the lengthiness of official procedures. In the early 2000s, for example, Koudougou's participative process planning took more than 5 years. Approval by the national government delayed the process even further. In the end, the whole process was relaunched in 2010 in order to finally obtain government support…in early 2014. This leads to a dichotomy between centralized planning and the municipal government's action.

The experts consulted during the case study agreed. Planning tools do exist but are not used as such and, to date, are unusable in the contexts for which they were designed. In fact, the findings show that they are misappropriated and become tools for urban marketing and communication with the donors. Indeed, donors believe that it is essential that every city in their agency intervenes have a master plan. In the amused words of one speaker, "The master plan is a catalog of everything that needs to be done in the city; donors choose what they want to finance!"

Again, we would like to point out that none of the respondents contested the usefulness of the planning, but that all were skeptical about its impact; "As it is not really used, it is impossible for us to evaluate it." Two logics prove to be completely conflicting with the overall interests of coherent, sustainable urban planning. The first is the wishes and desires of foreign donors (to which the national and local government acquiesces) are priorities that guide investments. On the other hand, national and local political leaders prefer to leave their "mark" with dazzling projects that attest to their presence in power rather than through wise, long-term management. In 2014, the political authorities of Koudougou were proud to showcase the new housing estate reserved for the construction of villas for the middle and upper classes at the city's entrance – the fruit of a partnership between the local government, financial backers and private companies.

4.4 From Marketing to Local Urban Action

The remarks made by local respondents highlight areas that could point to ways forward.

The field study shows that Koudougou has strong potential for regional and national development. At the regional level, this is due to the fact that it is a regional business hub that is centrally located in a major agricultural area; at the national level, Koudougou's geographical proximity and excellent road connection to Ouagadougou (100 km away) increase its attractiveness as a secondary hub for the sale of agricultural products from the entire region, business, tourism, conferences and events (the atypical nights organized annually at end of the year are proof of this[19]) (Fig. 4.21).

[19] http://www.fasomoov.com/agenda/evenements-burkina-faso/nuits-atypiques-de-koudougou-2013.html (Accessed 23 May 2019).

Fig. 4.21 Main road in downtown Koudougou, heading east towards Ouagadougou in 2014. (Reproduced with permission from Bolay)

The most critical and complex issue that merits immediate attention is that of land regularization. While numerous housing development projects exist on paper, little of the land has actually been developed in recent decades. Property tax in Koudougou is extremely low and yields return to the municipality. The current allocation of building plots, which is highly politicized and often conflictual, requires a complete overhaul so as to overcome the current impasse and allow for the construction of low-income housing. The latter settle on agricultural land by obligation, thus extending the city's boundaries through informal settlements in new areas with little infrastructure or basic networks.

This brings us to two other frequently cited sectors: water (through improved drinking water and sewage systems) and sanitation (by improving all forms of waste management, i.e. human excreta and household waste, which must be systematically collected and deposited in landfills created for this purpose). Other areas that also came up frequently during the interviews include various aspects of road improvement (asphalting, maintenance, extension) and road use (traffic congestion and public transportation modes). They also mentioned the privatization of public spaces by formal or informal businesses that have come to monopolize Koudougou's main streets, with little financial compensation for the municipality.

Some also mentioned housing in passing. Again, everything revolves around the priorities and beneficiaries to support in order to move from informal, self-built housing to social housing that is better served by basic networks and public amenities. The topic most likely lingers on the margins of discussions, as it is considered above all as a private issue. The experts we spoke to recognized that the problem of informal housing existed in all African cities and has rarely been solved in a satisfactory way.

Fig. 4.22 Urban public transportation in poor condition in 2014. (Reproduced with permission from Bolay)

The organization of the political governance and public administration only partly meets the repeated observation of the low numbers and weak/poor skills of the administrative staff. To quote a senior government official, "there are 134 municipal employees, and only 10% of them have an acceptable level of training." Strengthening the municipal government's technical and administrative skills is considered a priority, with continuing education for staff as a way to improve the current situation. As mentioned previously, technical services are already running on empty, with three managers in all and for everything, with no permanent staff and faulty equipment as no budget is available for their maintenance or other repairs.

Working conditions are hazardous: currently set up in temporary premises following a fire at the technical offices, there are few computers, the machines are often broken down (Figs. 4.22 and 4.23) and there is no internet access in the technical services department. As such, personal equipment (motorcycles, mobile phones, laptops) is often used. It is difficult to imagine doing more and doing better without reorganizing these departments. But how, and with what means? For the mayor and his deputies, nothing is possible without complete overhaul of communal taxation regulations, i.e. by increasing business and property taxes, taxing real estate, etc. Any measures that would allow the municipality to increase its financial base and strengthen its project management capacity, including raising the salaries of communal staff to attract more skilled workers, would undoubtedly displease the many beneficiaries of this laxity that has prevailed for so long.

The social conditions that favor such changes are based on the dynamism of a population that is very much attached to its city and its development. Many groups exist and are active in creating economic activities, promoting their products,

Fig. 4.23 Defectuous material belonging to the municipality 2014. (Reproduced with permission from Bolay)

defending community interests, public interest works such as sanitation, keeping public spaces clean and raising the population's awareness about social, economic and family issues.

The population's mobilization, either autonomously or at the local government's instigation, is certainly the cornerstone of this "miracle" that allowed Koudougou – with its derisory means, weak administration and grave social conflicts – to preserve a quality of life (at least in downtown areas) of which the political authorities and inhabitants are proud. That said, the majority of the issues concern the public's mistrust of politicians. The local government must recognize the crucial need to establish a more direct link with residents, regardless of their socio-economic status. On numerous occasions, respondents spoke of the need for consultative processes in planning that more actively involve the population, both directly and through representative groupings.

4.5 Planning the African City, a Veritable Challenge for the Twenty-First Century

Today, urbanization in Africa is an irreversible series of changes that are shaping a continent in major transformation, regardless of the country or city. Driven by both the massive migration of rural populations to urban centers and strong natural growth, the spatial, social, economic and environmental issues urban settlements

face are the same as those that all cities face. It is critical to structure this ongoing demographic development and spatial expansion, particularly given the limited financial and human resources. African cities, capitals and other economic/political centers enjoy comparatively greater attention from the government as well as donors, while small and medium-sized cities are still tend be off the radar. The latter are largely neglected or, at best, are addressed in a sporadic, sectoral manner, and often without any continuity. These cities have glaring needs but lack real means to meet to social demands and invest in infrastructure and public facilities. Hence, these issues go unanswered. When they are tackled, it is generally in a state of urgency or when national governments or foreign funders decide to allocate specific funds.

This urban context of prevailing instability and uncertainty about the future allows us to speak of "poor cities." Their poverty stems not only from the fact that the majority of their residents actually live on the edge of poverty, but is also linked to insufficient resources. This can only be addressed through decentralization and public funding. Yet, city governments do not have the financial resources to make the types of investments that are essential for improving citizens' daily lives. What is more, their administrations lack competent staff at every level of the professional hierarchy.

This situation has certain risks, namely planning African cities based on assumptions that will only serve the interests of a small minority of affluent citizens. Such planning will result in economic and territorial development that marginalizes the lower strata of the population, i.e. those living in informal housing in the most underserved neighborhoods. Conversely, it is also an extraordinary opportunity to rethink these cities' futures based on their realities and what actually exists in terms of resources (both financial and social), and to develop planning that targets the fight against poverty and investment in amenities, thus making a lasting impact on the living conditions of the poor.

In this respect, we learn a great deal from the analysis performed in Koudougou. Located a hundred kilometers from Ouagadougou, the provincial capital is the commercial and political center for a large rural area, but has long been considered a rebel city that is unwilling to comply with the dictates of the central government.

As in many intermediate African cities, the urban planning process in Koudougou is exogenous and out of step with the demands of the population, the priorities defined by the local government and its own human, material and financial resources. As a direct result, it is rarely applied and does not act as a management tool or compass for the future.

This is easily explained because planning in its current state is simply an inventory of the needs to be met, but without any real instructions. How then is it possible to create developments that cost more than ten times the municipal budget for annual expenditures, as is the case in Koudougou? In reality, the plans produced in this context do not serve to guide the local government in planning the urban territory now and in the future. Nor are they a tool for dialogue between said government and the population. On the contrary, any consultation with the community that does not lead to the expected deliverables reinforces citizens' mistrust or distrust of

public authorities, political and administrative bodies. Once they no longer serve their original purpose, plans become promotional tools at best, pure marketing products to showcase the good intentions of destitute communities at the mercy of donors, be it the State or foreign cooperation agencies.

This denaturing of urban planning is dangerous, as it destroys any coherence in the process as well as the in priorities to be established in terms of the infrastructure and facilities to be built, the priority economic and social sectors and scheduling timelines. Nothing can be planned ahead of time, as any intervention depends entirely on outside funders, with no continuity, guiding principle or guarantee that things will be done in due course. The risk here is greater disorganization in the long run.

Urban planning for African cities must be completely rethought. The key point – and one that is all too often neglected – is starting with a participative diagnosis in which the city's actual situation is examined in its various dimensions – demographically, spatially and infrastructurally, economically, socially and environmentally – thereby allowing all actors to take a position. This cartographic, documentary and anthropological information will serve to create a computerized database that can be added to in real time, thus facilitating the monitoring of "urban development" and concerted, up-to-date decision-making.

At the same time emerges the question of priorities in terms of projects as well as standards, rules and plans adapted to the context in view of the needs identified by specialists, requests from various social actors and the resources available locally and from outside sources. These are the three foundations of any diagnosis. Two principles must guide this initial phase. The first is urban investments, which contribute directly or indirectly to the fight against poverty. The second is overall coherence, which must govern specific actions in the short, medium and long term.

These precepts can only be applied if framework conditions are respected: local governments must have the human skills and financial resources that will allow them to take action. This is not impossible if political ambitions are clear and target gaining legitimacy among the population. This inevitably involves consultative processes that will fuel the dialogue between representatives of the population, the public administration, the political authorities, professionals and other special interest groups (private sector, social/religious/political groups, NGOs, etc.). Training plays a vital role, as does communication and dialogue. It is these same directives that will guide planning's implementation.

This reinvention of urban planning in Africa opens the field to innovation based on completely informal social practices at the local level. While relying on the technical know-how of urban and corporate experts (who are all too absent) is crucial, it is also important to recognize that inhabitants have not waited for them to build their homes, community facilities and neighborhoods (Fig. 4.24). This vital, dynamic force of the population must not be neglected or cast aside, for it comprises the core of a participatory process that includes not only consultation but conception and action as well. This force must be integrated into the planning process and, as such, concretely participate in the implementation of collective decisions.

Fig. 4.24 An outlying neighborhood in Koudougou that faces economic and environmental issues on a daily basis in 2014. (Reproduced with permission from Bolay)

Communication is also a key issue. How to learn from other cities in the age of internet and increasingly frequent exchanges on urbanity at the planetary scale. Think of the plethora of UN summits on such issues, or the intercontinental visits of municipal delegations. If, as Campbell (2012) points out, we learn from both near and far, and that learning no longer occurs unilaterally from North to South, but from South to South and South to North (like the bus rapid transport experiment in the 70s in Curitiba that has since been replicated on every continent). Nevertheless, there are three reservations to be made in this regard. The first is that urban technological innovations, even those from emerging countries, are often the work of the largest, wealthiest agglomerations; however, small and medium-sized cities continue to be marginalized by these innovative processes and rarely have the chance to apply them due to a lack of resources. The issue of informal housing and urban poverty is generally considered inevitable, thus ignoring the lessons to be learned from similar contexts. To conclude, it is clear that African cities are rarely cited as examples in their approach to and handling of urban issues.

Two recommendations emerged from these reflections: the first is to put intermediate cities back on the urban agenda in African countries and developing countries by extension, given their demographic importance and expansion dynamics. The second is to share information regarding the progress being made in terms of territorial management and future planning in many African cities, to serve as examples for other cities.

This is not to purport that all the problems will magically be solved, but rather that we are emerging from a vicious circle in which urban planning does not play its role and is totally disconnected from the complex, changing reality. Instead, we must develop an innovative, realistic, pragmatic vision based on what exists for the gradual improvement of the well-being of all, especially the urban poor. More inclusive urban planning in line with anti-poverty policies would form a winning combination.

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Chapter 5
An Intermediate City in Brazil: Between Inequalities and Growth

The Case of Montes Claros

Abstract According to international statistics, nearly 50% of the world's urban population now lives in cities of less than 500,000 inhabitants. These small and medium-sized cities act as intermediaries between rural regions, the local economy and more extensive urban networks and have three spheres of influence: regional, national and international. In many of these "intermediate cities", the main problem is a lack of financial and human resources for them in a comprehensive way in order to tackle the demographic and spatial sprawl of these urban settlements and avoid an increase in social segregation and territorial fragmentation.

The example of Montes Claros in the State of Minas Gerais, Brazil, illustrates how a city of nearly 400,000 inhabitants at the centre of an economically prosperous region is tackling these issues through its current process of urban planning by striving to take into account its historical, social and spatial context.

Like most Brazilian and Latin American cities, Montes Claros – which serves as a transit hub at the State and national levels – is a rapidly growing intermediary city whose economic growth over the past two decades has been exponential. However, this growth, which is mainly commercial and industrial, has not resulted in a more inclusive distribution of the urban population. When one considers the growth that has resulted from rural migration and new urban residents, the urban area of Montes Claros remains territorially fragmented, with neighbourhoods that are more or less equipped with various public facilities (hospitals, schools, etc.) and served by public transport depending on the socio-economic status of their inhabitants.

The current planning process is raising many issues. Among them, three crucial elements which must be rethought in order to develop an adapted planning approach and appropriate planning tools that can guide decision makers in shaping the city and region's future. The first is a medium and long-term vision for Montes Claros, its hinterland and northern Minas Gerais; the second is the current (biased) perception of Montes Claros wherein only the dense downtown areas are considered and suburban areas remain disconnected from the rest of the city (and hence poorly integrated); the last is a participatory urban planning process that involves all stakeholders and the entire population, from the diagnostic phase up through the definition of priorities in terms of urban policies, strategies and investments.

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5.1 From the Medium-Sized City to the Intermediate City, or How to Rethink Urban Dynamics

The concept of "intermediary city" was, until recently, seldom used to talk about the changes taking place in less known medium-sized cities all over the world. As they are still largely unexplored, their advantages and disadvantages relative to big cities – which are inherently connected with the global urban networks and dominant both economically and politically at the national level – remain largely unknown (Sassen 2001; Taylor et al. 2007). Cities are mainly defined by spatial and demographic criteria, with medium-sized cities being emblematic of the so-called "intermediary city." According to international statistics, nearly 50% of the world's urban population now live in cities of less than 500,000 inhabitants. Such cities are home to two-thirds of the urban population in Europe, half of the urban population in Africa, and a slightly smaller percentage in Latin America and Asia (United Nations 2014).

Taking the example of Europe, Adam (2006) highlights the fact that small and medium-sized cities of 20,000 to 100,000 inhabitants are the pillars of polycentric urban areas. Residentially speaking, their attractiveness seems obvious, notably due to lower land and real estate prices compared to larger agglomerations. Depending on the intercity communication networks, these small and medium-sized cities can also be more advantageous for new businesses. Other features, such as the quality of the natural environment, less traffic, a sense of safety and feeling of community belonging, may also work in their favour. However, these suppositions must be investigated on a case by case basis. In another European study of Baltic cities of 20,000–200,000 residents, Kunzmann (2010:5) rightly states that some small and medium-sized cities benefit from belonging to regions, which, along with larger cities, form metropolitan regions: "Mediums -sized towns within metropolitan regions are the most likely winners of ongoing territorial development trends. They offer a combination of the advantages of living in the metropolitan core and in the countryside. Usually, such towns have a long history, an own identity and a high degree of liveability, which is reflected by deeply rooted local traditions, good schools and public services, a high degree of security accessibility to nature and leisure grounds" and, last but not least, affordable real estate."

More generally, based on a comparative study on economic productivity in 114 countries between 1960 and 2010, Frick and Rodriguez-Pose (2016) show that the larger a city becomes, the more poverty and instability increases. This is true both in industrialized countries and in emerging ones. With this growth also come negative externalities such as pollution, traffic congestion, higher rents and longer commutes. Hence, there is a critical threshold at which big cities cease to be economically productive. While this appears to be true for industrialized countries, it is less so in South

countries. For the latter, economic productivity instead depends on the national context and the available infrastructure in each type of city. There is no evidence that larger cities in South countries are inherently more productive. As the authors state, "A more nuanced view of how urban policies impinge on overall economic growth, especially in the developing world, is required," (Frick and Rodriguez-Pose 2016:315).

In developing countries, these small and medium-sized cities face specific issues, namely less efficient public administrations, insufficient public funds to meet social needs and a lack of skilled professionals to manage large projects. In more industrially and technologically advanced countries, intermediary cities long suffered the primacy of larger cities. The UCLG (the Global Network of Cities, Local and Regional Governments 2013, 2016) made the same observation. The association of local and regional decision-makers underlines the shortcoming these cities suffer. "These cities will require greater attention in the coming years, given that local governments must prepare for rapid urban growth and major challenges in the future: namely, political and financial dependence, limited capacity and scarce financial resources[1]". Drawing on our previous studies on this question, (Bolay and Rabinovich 2004; Bolay et al. 2004), intermediary cities are defined based on a certain number of characteristics, with three spheres of influence: micro-regional, national and international. More specifically, we can identify "affected" intermediary cities (with a strong territorial position), "satellite" intermediary cities (close to larger cities), and "remote" intermediary cities (more closed vis-à-vis their surroundings due to their remote location (Nadou 2010).

In South countries, national governments have largely allocated service provision and fundraising to the lower tiers of the government, but without the necessary financial and human resources. As such, residents of smaller cities suffer a marked disadvantage in terms of drinking water supply, waste disposal, electricity and schools compared to those of larger cities (Cohen 2006). Notably, levels of infant and child mortality are proportional to city size and higher in larger cities (National Research Council 2003). Moreover, urban poverty is clearly lower than in larger cities (Ferré et al. 2012). Small and medium-sized cities thus have time to address basic infrastructure and service needs before the gap becomes too great. In other words, being small has some advantages.

To analyse this further, it is important to move away from a two-dimensional representation of "average cities" based on surface area and population size to a multidimensional understanding that incorporates economic, environmental, urbanistic, infrastructural, community, political-institutional, social and cultural aspects as well; as the case of Montes Claros will demonstrate later (Fig. 5.1).

Three criteria seem decisive when it comes to defining intermediate cities:

The first is population size, with variations according to the country and/or region and which helps to determine a "critical size" after which organizing the urban area becomes more complex and, by necessity, more dependent on external relations. Depending on the country, the national population and its geographical distribution,

[1] http://www.uclg.org/en/media/news/intermediary-cities-new-urban-agenda (Accessed 20 May 2019).

Fig. 5.1 Centre and outskirts of Montes Claros, Brazil in 2014. (Reproduced with permission from Bolay)

the demographic size of what we call a "city" (and hence a small or medium-sized city) varies. At the international level, the United Nations considers medium-sized cities as having up to 500,000 inhabitants. For smaller populations, it is political and administrative norms that determine what a city is. Thus, in Switzerland for instance, a small country of some eight million inhabitants in the centre of Europe, any agglomeration of more than 10,000 inhabitants is considered as a city. In Bolivia, a huge country in Latin America with a relatively small population (depending on the region), any municipality with more than 2000 inhabitants is a "city." Brazil (which will serve as our example in this chapter), whose total population is 207 million inhabitants, making it the most populous country in Latin America and fifth largest in the world,[2] has more than 10,000 agglomerations[3] of over 1000 inhabitants, which it considers as urban centres. The country's urban population, which represents 86.17% of the national population, is defined based on this criterion.[4]

[2] https://braises.hypotheses.org/1338 (Accessed 20 May 2019).

[3] http://www.villes.co/bresil/ (Accessed 20 May 2019).

[4] http://perspective.usherbrooke.ca/bilan/tend/BRA/fr/SP.URB.TOTL.IN.ZS.html (Accessed 20 May 2019).

The second criterion is the supply of services and amenities to the community, which must meet residents' demands as well as provide inhabitants of the surrounding area with the necessary commodities for economic, social and cultural growth. This urban-rural interaction and the resulting regional dynamics are essential for the city's functionality and, practically speaking, characterize it as intermediary based on the links it generates between the city and its immediate and more distant environment at various levels.

The geographical location of the city is the third identification criterion. This dimension determines the latter's functions in its region as well as its involvement at different territorial scales in complementarity to other agglomerations in the urban network. We will consider this point later in the text.

This first approach to urban intermediation involves three scales of intervention. Indeed, the combinations of different identification criteria of the intermediate city result in interactions with "variable spatial geometry," touching the suburban and rural periphery (the hinterland, which one thinks of immediately) in a very direct way, and more spatially distant areas (which are in a virtual or physical proximity via new information and communication technologies) in a less direct way. We identify the three scales as:

The local and micro-regional scale. It is at this level that relationships between cities and their direct environments are addressed, both in urban-rural relations (hinterland) and in micro-networks of cities of different sizes and with distinct functions (Bolay and Rabinovich 2004):

- At the social level, by the complex links between rural and urban areas forged by individuals and families
- At the economic level, as a sector of agricultural production and marketing, small industry and services relating to the rural and urban economy
- At the environmental level, by the ebb and flow of natural resources (e.g. the urban water supply and wastewater discharge outside of urban boundaries, or industrial air contamination, the impact of which is also felt by nearby rural populations)
- At the territorial and infrastructural levels, as extension of land use to increase the social and economic activities of a growing population
- At the political and institutional levels, as an urban and regional sphere of decision-making relative to all the direct aspects of life in society.

It is at the national level that all the questions linking the city and its actors to the reference territory and its institutions play out. This occurs through:

- Its more or less harmonious integration with urban networks
- Relationships with other regions of the country
- Also by the links of mutual dependence between the local government and the various administrative departments of the federal government.

At the international level, the relations between the city and its extra-national environment at the global level are dealt with due to the specific role the city plays in a given sector (import/export, tourism, transport, etc.):

- Organized independently and proactively by the city and its actors
- As part of a higher strategy developed at the level of national or supervisory authorities
- Through an international role specified directly through the globalization of exchanges, promoting or affecting the city's present and the future.

Based on studies conducted in different Latin American countries, we distinguished different types of cities whose functions could be combined.

The ten main configurations are as follows in Table 5.1.

To interpret this urban typology, we will explore how cities interact with the outside world based on the main features that characterize intermediation. They can be described in these eight terms in Table 5.2.

Table 5.1 Main configurations of cities in different Latin American countries

1.	Regional market	The city is a driving force and plays a key role in the production and exchange of goods and services for the benefit of local and regional trade
2	Service center	The city provides a range of public (health centres, schoolsetc.) and private services (banks, shops, recreation centres, information centres, etc.) for the urban community and neighbouring populations
3	Regional capital	The city is home to the various political and administrative institutions at the provincial and/or national level for its territory of which it is the centre
4	Economic hub	The city develops a concerted strategy for industrial production and large-scale commerce, investing in critical infrastructure and facilitating economic agents
5.	Tourist center	The city benefits from its comparative advantages (location, natural resources, historical heritage, culture, etc.) to promote activities directly related to national and/or international tourism
6.	Communication node	Through its strategic geographical location and through the development of infrastructures created to this effect, the city acts as a platform for exchanges between people and of goods and of information
7.	Metropolitan periphery	The city's growth and development are part of a dynamic that depends directly on its integration in the metropolitan area and the national/international dynamics that underpin it
8.	Nationale/ internationale interface	The city's geographical location (border, coastal, city-state, etc.) and development strategy (free zone, assembly plants, international tourism) give it a role that is driven largely by the rationale of internationalization of its trade
9.	City member of a conurbation	The development of the city depends on its integration in a multi-unitary agglomeration comprised of urban communes that are linked to the other levels of the urban framework
10.	Association consisting of a group of cities	Creation of a group of small cities spread out in a region with little urbanization and that develop joint projects

Table 5.2 Terms of intermediation

1.	Demographic	A city's population dynamics include both internal development due to the natural growth of the population and migration from rural areas or other cities to other domestic and foreign cities
2.	Economic	The urban economy is relative to production and the exchange of goods and services available to the local/regional populations as well as national/international markets, by private and/or public economic agents acting within a formalized regulatory framework or outside this framework through informal relationships of production and marketing
3.	Environmental	The environmental dimension concerns the supply, use and safeguarding of natural and energy resources i.e. policies, management and impact (environmental, social and economic) both in the areas of supply and in the urban territory, as well as through their impact at the supra-urban level
4.	Social	This refers to the human dynamics that underpin and explain individual behaviour, giving meaning to the many relationships residents have with the outside and justifying the specific forms of these exchanges
5.	Politico-institutional	This encompasses the political, administrative and technical structures required by various public authorities at local, regional and/or national levels; the production of the norms, rules and laws promulgated by these bodies and the consequences of this legal framework in terms of relationships between political and institutional bodies, individuals and organized groups from civil society
6.	Territorial	On the formal level, it is the application of norms and rules for the use of space by the various social and institutional actors in a predefined framework in a reference territory (the city, metropolitan area, urban and peri-urban region, etc.). This territorial appropriation also extends to the "informal" social practice of occupying portions of the urban and peri-urban territory and the conflicts that may arise between a technical logic and community dynamics
7.	Services and infrastructure	The infrastructures and facilities designed, built and managed by the competent authorities or by delegation to private/community urban actors and made available to a community in the form of services whose conditions are to be determined are identified (from public and free to commercial conditions of use)
8.	Cultural	The cultural dimension identifies the forms of expression that characterize a city and its population in the past and current history of settlement and exchanges based on endogenous and exogenous influences

This nomenclature, whose choices are debatable in terms of the multiplicity of its variables and different geographical scales of identification, is advantageous in that it provides precise, measurable criteria (which very few authors have done to date, and rather simply using the term "intermediate city" to describe medium-sized towns or secondary cities, without attempting to distinguish them from each other or define them in a functional typology). And yet, it is this work that is lacking, particularly given that cities of less than half a million inhabitants are those with the highest population growth rates (Birkmann et al. 2016; Keiner et al. 2004).

Given their demographic growth and economic potential, intermediate cities are critical for their regions, governing the economic flows that innervate and

circumscribe migration from rural areas and serving as connection points within the urban network at the regional, national and even international levels.

As urban centres of rural regions, intermediary cities like Montes Claros play a key role in the rural-urban relationship balance, both as service providers for the entire population, from producers to consumers (Satterthwaite and Tacoli 2003). This trend is not unique to Brazil, but rather can be observed in all emerging and developing countries, as Klaufus (2010) shows taking the examples of Guatemala and El Salvador. Thus, if public policies are well adapted to the context, these cities can play a critical role in the fight against poverty (Fig. 5.2). Moreover, these cities are often overlooked for the potential host role they play for rural migrants, who rarely migrate directly from their birthplace to major cities, which explains their statistically higher demographic growth (Aguayo-Te'llez et al. 2010; Romanos and Auffrey 2002).

Planning and governance of small and medium-sized cities must tailor regulations, planning and decisions to fit the specificity of the context (advantages, potential, weaknesses, risks, etc.). In many of these cities, the main problem is lack of financial and human resources for managing the city in a comprehensive way, not as a fragmented entity comprised of specific social, economic and political interests, which result in social and spatial inequalities. Through decentralization and increasing autonomy, global cities can now play a more decisive role at three different levels of territory: as regional decision-making centres, as a friendlier, safer alternative to larger cities and as affordable areas of economic development at national and international levels offering new opportunities for people and businesses (Bolay and Kern 2019).

The emblematic example of Montes Claros in the State of Minas Gerais in Brazil helps us understand how a city of nearly 400,000 inhabitants at the centre of an economically prosperous region, tackles problems of demographic growth through public policy, in order to resolve growing social, economic and planning disparities through an urban planning process adapted to historical, social and spatial context.

Fig. 5.2 New urban settlements in Montes Claros in 2014, a public policy alleviating poverty. (Reproduced with permission from Bolay)

5.2 Montes Claros: A Growing Hub

Brazil is now one of the most urbanized countries in the world. According to Soares (2006), this urbanization is relatively recent, starting in the early 1940s. In 1950, it was estimated that the rural population represented 64% of the national population. Starting in the 1970s, this trend reversed, with the majority of the population becoming urban. In 2010, 84.4% of the country's population (160.0 million people) lived in cities.[5] The country has 106 cities with more than 200,000 inhabitants (not including state capitals), representing 20.4% of the national population and accounting for 27.7% of Brazil's GDP (Veja 2011).

Originally founded in 1831 (ACI 2012), Montes Claros is located between the 16° 04′ 57″ southern latitude and 43° 41′ 56″ and 44° 13′ 01″ longitude west of Greenwich in the northern part of the State of Minas Gerais, which has 89 municipalities (IBGE 2010) (Figs. 5.3, 5.4 and 5.5). According to the IBGE, it has a surface area of 3569 km^2, including 97 km^2 of urban territory corresponding to the urban perimeter (Wikipedia 2019) and an average altitude of 638 m. The average annual temperature is 24.2 °C, with two seasons: a hot, rainy season and a long, dry season (Gomez and Lamberts 2009). The average high temperature is 29.3° and average low is 16.7°. The maximum temperature exceeds 40° at times. The munici-

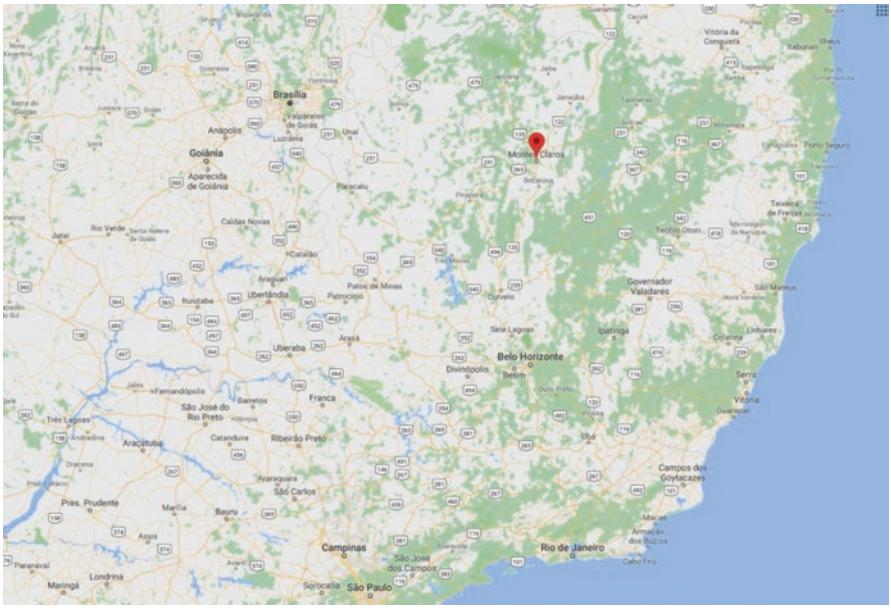

Fig. 5.3 Geo-spatial location of Montes Claros. (Reproduced from Google Maps 2017)

[5] IBGE: (Instituto Brasileiro de Geografia e Estatística). 2010 census. Available at: www.ibge.gov.br/. Accessed 26 May 2019.

Fig. 5.4 Map of Brazil and State of Minas Gerais. (Reproduced from http://www.minas-gerais.info/mapas/mapas.htm. Accessed 26 May 2019)

pality of Montes Claros has existed since 1831, obtaining city status in 1857. The IBGE estimated the city's population at 361,915 in 2010 and 390,212 in 2014, with a population of 20.7 million in the State of Minas Gerais and 202.8 million in Brazil. Today, it is an urban hub for a region of roughly two million people (Prefeitura de Montes Claros 2015).

Demographic growth for the municipal population is strong, with the overall population becoming increasingly urban in the past 50 years. In 1970, the municipal population totalled 116,486; 73% was urban (Figs. 5.6 and 5.7). In 1990, it numbered 250,002, 90.8% of which was urban. In 2000, of the 306,947 inhabitants, 94.2% were urban (Soares de França et al. no date). With 10 districts and 134 neighbour-

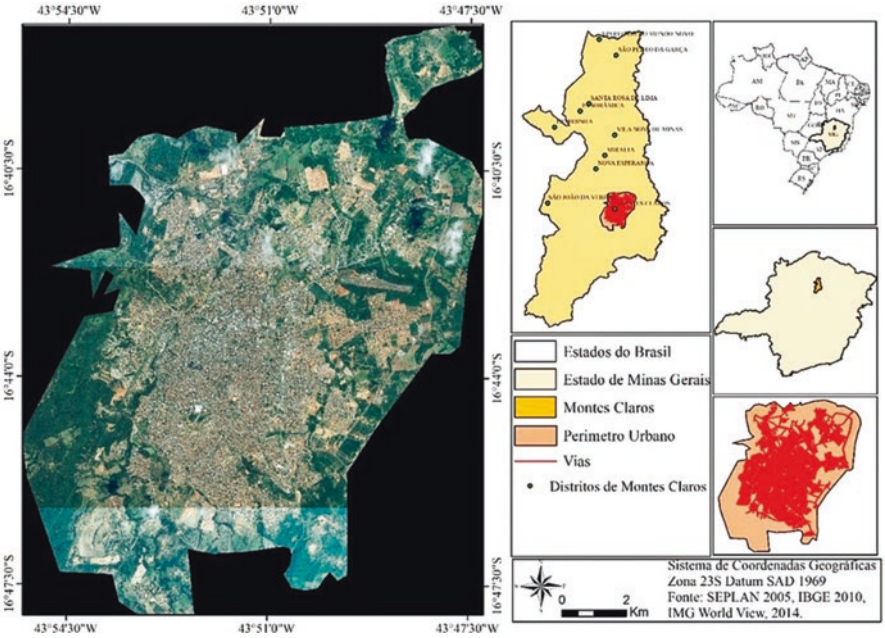

Fig. 5.5 The spatial organisation of Montes Claros. (Reproduced from Gonçalves Silva 2015)

hoods, 94% of Montes Claros's population now lives in urban areas.[6] This attraction to urban areas, linked in recent decades to the city's industrialization, has resulted in the arrival of masses of rural immigrants who settle – often informally – on the urban fringes.

For Soares de França and Ribeiro Soares (2007a), Montes Claros meets the criteria of an intermediate city. The authors emphasize, however, that "this consideration should not only be based on demographic criteria or the role the city plays at the regional level but should also take into account its economic infrastructure and services". Sixty three percent are working age (15–59), and 7% are aged over 60. In 1963, Montes Claros became the first northern municipality in the State to found an institution of higher education. Today, it has two public universities and 17 private higher education institutions, as well as several technical training schools (ACI 2012), that serve a total of 30,000 students. Montes Claros also has a top-rate offering when it comes to the health and medical field, with eight hospitals, three polyclinics, 15 urban health centres and 20 rural centres. Most of these are public institutions, though several are managed privately.[7]

It is likewise useful to consider the complexity of the division of labour relative, among other things, to Montes Claros's geographical location and transportation/

[6] IBGE CITIES (2015). http://cidades.ibge.gov.br/painel/historico.php?lang=&codmun=314330&search=minas-gerais|montes-claros|infograficos:-historico (Accessed 26 May 2019).

[7] http://www.montesclaros.mg.gov.br/cidade/aspectosgerais/saude.htm (Accessed 26 May 2019).

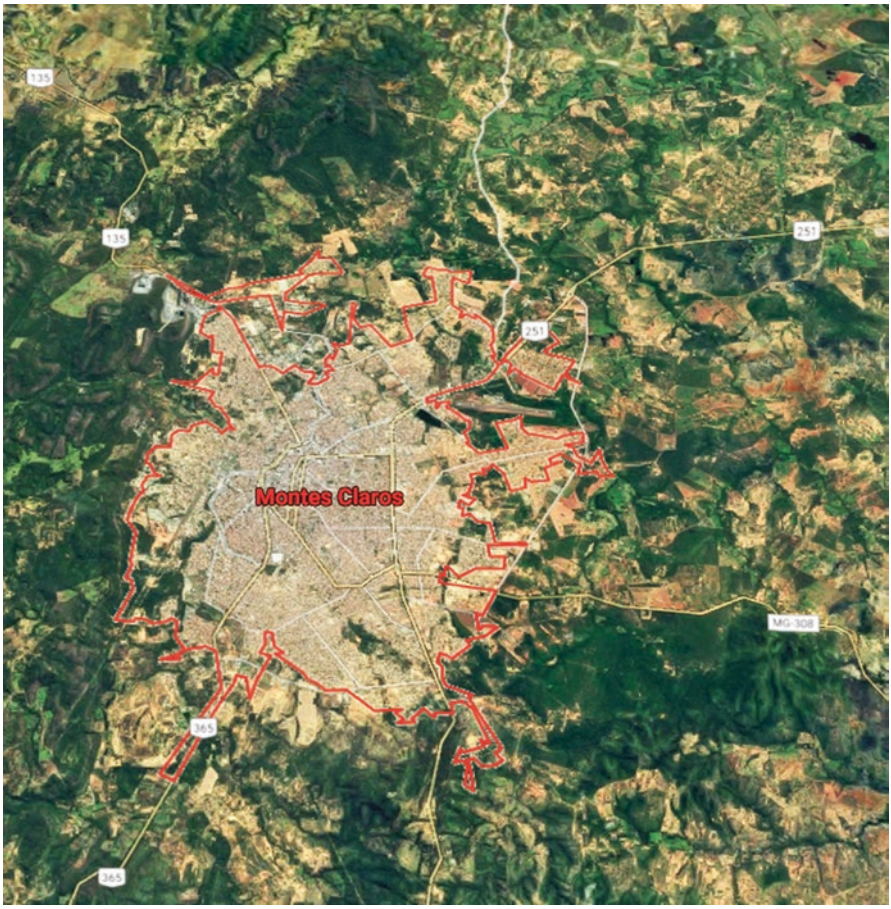

Fig. 5.6 Montes Claros in its region. (Google Maps 2017)

Fig. 5.7 Montes Claros from the hills in 2015. (Reproduced with permission from Bolay)

communication networks. Citing Sposito (2001), the authors add that this division of labour is not a strictly intra-urban dynamic but rather is interurban. To this we would add the importance of taking into account the urban-rural relationship (which, in Montes Claros's case, is an agricultural and residential hinterland that abuts Montes Claros), shopping centres and other services that are used by the entire

urban and rural region, thus offering a privileged destination for rural migrant populations. However, as Esdras Leita (2010) points out, medium-sized cities with strong economic and demographic growth are increasingly facing housing supply issues.

Montes Claros's economy has, since the city's founding in the nineteenth century, been based on export of basic commodities, agriculture and breeding. However, industry has gradually succeeded in replacing these cornerstones (Soares Costa da Silveira 2005). The service sector has also boomed, representing 66% of the city's GDP in 1999 and 72% in 2008, followed by the industry sector (25%) and the primary sector (3%) (Soares de França 2012). The city's location – far from major cities like Belo Horizonte and Sao Paolo – and infrastructure have helped make it an important hub for the northern part of the State of Minas Gerais. This, in turn, has attracted numerous investments (undoubtedly facilitated by tax incentives) and funding for urban programs from both the state and federal governments (Soares de França 2015). In 2015, the Prefect of Montes Claros cited the city as among the 20 medium-sized Brazilian cities whose economic growth surpassed 30% in the past decade. This would explain why the current economic crisis Brazil is facing, with a decrease of 3% in the national economy in 2015,[8] has affected Montes Claros less than other intermediary cities.[9] The GDP was R$ 7,844,307,000 in 2014, with an annual per capital GDP of 20,102.[10] This same year, Belo Horizonte, the State capital, had a GDP of R$ 87,656,760,000 and an annual per capita GDP of R$ 35,187.[11] As such, Montes Claros has become Minas Gerais's 10th wealthiest city,[12] with strong growth in recent years Municipal government revenues and annual growth of nearly 15%.[13]

Montes Claros's consumption is equivalent to 25% of the State's entire northern region. The monthly per capita income is R$ 647.92, 48.23% higher than the average income in the northern part of the State. Montes Claros is home to 10,862 companies, which, in 2010,[14] provided jobs for 69,045 people.

Until the late 1980s, Montes Claros was considered above all an industrial city. In the 1990s, however, investments in the industry sector declined, causing many companies to close or relocate to other cities. Investments were largely redirected toward the service sector (trade, real estate, health and education, to name the key

[8] http://www1.folha.uol.com.br/mercado/2015/10/1690728-brasil-sofre-pior-corte-em-projecao-de-crescimento-do-fmi.shtml (Accessed 26 May 2019).

[9] http://www.montesclaros.mg.gov.br/agencia_noticias/2015/ago-15/not_04_08_15_4106.php (Accessed 26 May 2019).

[10] https://minasgeraismg.net/cidades/montes-claros#economia-de-montes-claros-mg 1 US = 3.72 reales. February 2019 (Accessed 26 May 2019).

[11] IBGE – Instituto Brasileiro de Geografia e Estatística 2015. https://minasgeraismg.net/cidades/montes-claros (Accessed 26 May 2019).

[12] http://www.deepask.com/goes?page=Confira-o-PIB%2D%2D-Produto-Interno-Bruto%2D%2D-no-seu-municipio (Accessed 26 May 2019).

[13] Roughly 142 million dollars.

[14] For 2012, the Instituto Brasileiro de Geografia e Estatistica statistics give slightly different figures: 10,859 companies and 95,593 employees, with an average monthly salary of 2.1 times the minimum wage (set at 788 R$ a month (537/256 US$).

ones), changing Montes Claros's face forever (Silva Gomes 2007). A new dynamic was born, reinforcing its status as a medium-sized city in a dynamic of strong regional/interurban interplay, and strengthening its position as an intermediary city and the centre of a key region in the State of Minas Gerais. Following to Soares de França's analysis (2012), this could explain why Montes Claros's GDP rose significantly in recent years, with growth of 177% between 1999 and 2008, falling just short of the national rate (185% for the same period, and 225% for Minas Gerais). This trend has continued, with a gain of 40% between 2009 and 2012.[15] Nevertheless, the GDP per inhabitant is still below the national average, with 14,410 R$ per inhabitant in Montes Claros versus 22,642[16] for nationally in 2015.

5.3 Verticalization of the Central Business District and Spatial Changes

As the fruit of a national strategy, the economic boom of the 1970s resulted in major territorial and social changes and a restructuring of urban functions and the role of secondary cities in Brazil's urban network, creating new poles of attraction for national and foreign investment (Oliveira and Ribeiro Soarez 2014; Oliveira 2009).

From the second economic and social national development plan was born the national support program for capitals and medium-sized cities, designed to financially support urban infrastructure, transport and economic revitalization projects. According to Amorim and Serras's definition (2001), medium-sized cities are urbanized areas with an urban population of between 100,000 and 500,000 inhabitants. França et al. (article cited) add to this strictly demographic definition other criteria relative to infrastructure, economic diversity, cities' relationship with their rural hinterland and their role in Brazil's urban network.

This dynamic comes with an urban reform that dates back to the enactment of the new federal constitution in 1988, which includes a chapter on urban policy in Brazil and recognizes the autonomy of local governments legally, politically and financially. It also sets out guidelines for popular participation in decision-making processes.[17] This was followed by the creation of the "city" status at the national level, which explicitly recognizes the (social) right to the city, in 2001. This status requires all cities of more than 20,000 inhabitants to develop a 5-year master plan, and to follow certain mechanisms to guarantee the effective participation of citizens and associations in urban planning and management procedures.

[15] http://www.deepask.com/goes?page=montes-claros/MG-Confira-o-PIB%2D%2D-Produto-Interno-Bruto%2D%2D-no-seu-municipio (Accessed 26 May 2019).

[16] The equivalent of $4683 and $7358 for 2016.

[17] This constitutional reform encourages a number of cities (in Porto Allegre, Recife and, closer to Montes Claros, Belo Horizonte for instance) to set up "urban conferences" and participatory budgetary processes via municipal laws (Fernandes 2007).

The new legislation likewise imposes also aims to regularize consolidated informal settlements in private and public areas. The Ministry of Cities, created in 2003 under President Lula's mandate, founded two important initiatives which were still effective until the recent federal government change in 2019: a program to support sustainable urban land regularization and a national campaign for participatory municipal master plans.

In the early 1970s and 1980s, Montes Claros experienced spectacular spatial and demographic growth, notably through the development of new housing estates, often outside the framework of formal planning and more as a result of private investments than government planning. During this period, downtown Montes Claros grew vertically (Fig. 5.8), with new service infrastructure appearing in addition to the renovation of public spaces, while other sectors fell into decline. With this came mobility issues, as the public transport supply did not provide service to all neighbourhoods. This process intensified during the 1990–2000 period, especially in the city centre along avenues with strong commercial and economic "potential" linked to a sharp rise in land prices and the restructuring of city streets into major traffic thoroughfares.

Today one easily distinguishes those housing estates inhabited by populations with high buying power in poor neighbourhoods (mainly in the east and north of the city). The same period saw the construction of many ten-story-plus buildings. In

Fig. 5.8 Central Business District of Montes Claros in 2015. (Reproduced with permission from Bolay)

2011, changes to the law on socially vulnerable areas relaxed regulations for buildings with more than five floors. The same year, the municipality ratified a law allowing for the expansion of Montes Claros's urban perimeter, further facilitating the verticalization of the built fabric. This extension carried over into the city centre and northern part of the city with commercial buildings and rental units in co-owned condominiums (Soares de França et al. 2014).

This trend continues today and has become hard-wired in legal terms. Starting in 2002, the municipal authorities of Montes Claros produced several laws on land use in the municipality (Municipio Montes Claros, 2009, 2011, 2015). As one sees on the map produced by Soares de França et al. (2014), the verticalization of the city – initially for residential purposes – gradually expanded to include commercial real estate in the more central areas of Montes Claros. Today, this trend continues in all those areas with high land value, to the benefit of families with strong buying power and businesses with high added value (Soares de França 2015) (Fig. 5.9). For the authors, this trend negative could have an impact on the environment and quality of urban life. It also clearly marks the links between the public and private sectors (between the city government, on one hand, and large regional and national construction companies and investors, on the other).

Analysing the same process in other Brazilian cities, Cohn (2012) concludes that the verticalization of the real-estate supply also affects access, socially speaking. As purchase and rental prices climb, only the rich can afford to buy or rent apartments; small business owners cannot afford to rent commercial space, which, according to him, negatively affects job creation among small businesses and industries with large, low-wage workforces. Many other Brazilian cities, intermediary and large ones alike, are also witnessing the verticalization of their housing supply. This phenomenon goes hand in hand with their territorial expansion and social and cultural segregation that economically benefits the wealthier social classes[18] and the commodification of city centres and residential areas with high land values, resulting in pronounced territorial segregation.

The verticalization debate, however, also has its roots in a planning model come down from the modernist movement that highlights such "constructive" solutions as a way of addressing issues of housing, infrastructure efficiency and economic vitality (Soares Gonçalves 2004). For the author, promoters of this planning solution have, since World War II, highlighted synergies with business by a proximity effect, a more rational use of urban infrastructure (thanks to higher population densities) and the image of modernity and attractiveness these buildings represent (Fig. 5.10). Meanwhile, its critics highlight energy overconsumption in a small portion of the territory, overexploitation of urban infrastructure and services due to a highly concentrated population at particular points in the city and a negative environmental impact in terms of shade and wind turbulence.

Technical solutions exist for making high buildings efficient in terms of energy and use of natural resources such as water, solar heat, etc. However, this requires significant investments in their design – which impacts production costs and com-

[18] This is the case cited by Polidoro et al. (2012) for the city of Londrina, in Parana.

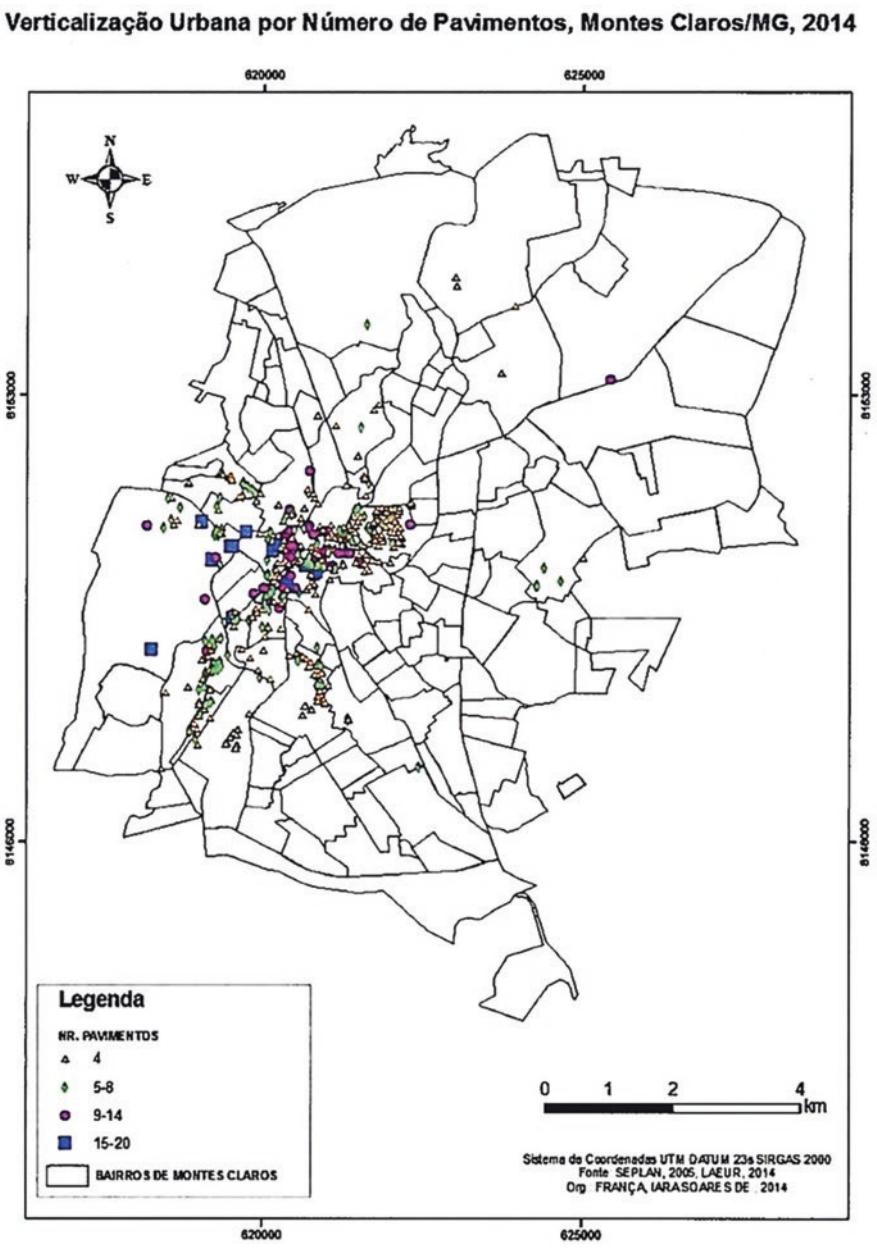

Fig. 5.9 Urban verticalization in Montes Claros. (Reproduced from Soares de França et al. 2014)

Fig. 5.10 New residential buildings in the suburbs of Montes Claros in 2014. (Reproduced with permission from Bolay)

mercial value – and flawless integration of these buildings in masterplans environmentally, demographically and infrastructurally. Such cases, however, are exceptional. Taking the example of London (UK), Appert (2008) points out that the high-rise buildings popping up in countries all around the world (old, new, industrialized or emerging ones such as Brazil) are a sign of potential conflict between preservation and promotion of historic urban heritage and the shaking up of the urban form symbolically (what image of city do we want in a global and comparative perspective?). At the same time, such a context promotes economic growth, job creation and social well-being. These tensions need to be managed carefully, given that the image of the city is, today, a real concern and tool of power, politics and collectiveness.

In light of these characteristics, Montes Claros may be considered the regional capital of northern Minas Gerais. And like many other medium-sized cities in Brazil, Montes Claros's development was reflected in a shift in rural migration – to its benefit, but to the detriment of larger Brazilian cities – and increased regional commuter traffic.

Parallel to these changes, however, a growing number of recent arrivals to the city are finding themselves in precarious housing conditions characterized by an impoverished population, insecure land tenure and a lack of urban facilities and services (Figs. 5.11 and 5.12). Montes Claros reproduces the process of territorial and social division found in other similar cities in Brazil. Favelas can be found in 80% of medium-sized Brazilian cities, versus 40% in smaller cities of 20,000–100,000 inhabitants (Esdras Leita 2010). Ce même auteur et son collègue Santos Martins précisent que pour Montes Claros, selon une analyse cartographique GIS, le nombre de favelas a augmenté de 9,6% entre 2005 et 2011. Et que cet habitat précaire correspond désormais à 52,5% des nouveaux édifices de la ville. Ce qui est impression-

Fig. 5.11 New self-built home in the close suburbs of Montes Claros in 2014. (Reproduced with permission from Bolay)

nant et dénote à la fois de la pression migratoire, du manque de logements pour les familles à faibles revenus et du manque d'application des règles d'urbanisme existant à Montes Claros (Santos Martins and Esdras Leite 2015).

The two graphs (Figs. 5.13 and 5.14) produced by the municipality of Montes Claros and analysed by geographers from UNIMONTES University show how urban land is used, with an ever-increasing extension of residential areas into the natural areas bordering the city, with low-income populations in the industrial north, east and south-eastern fringes of commune.

More generally, following the analysis of Esdras Leita and Pereira (2005), the poverty level – 74.7% in 1970 and 55.45% in 1991 – has dropped considerably in recent decades in Montes Claros (versus 33.17% in 2001). The wealthiest 20% of the population controlled 66% of the wealth. A good indicator of the spatial distribution of poverty is reflected in the price of land that, in 2004, ranged from 1251 R$ downtown to 28–89 R$ in the suburbs. In wealthy neighbourhoods, monthly incomes ranged from 400 to 1200 R$ on average, while those in poor neighbourhoods ranged from 30 to 80 R$. Urban infrastructure and services also point to socioeconomic disparities. While water supply and sewage drainage systems exist across the entire territory (though not all homes are necessarily connected to them), public transport, street lighting and tree planting are grossly lacking in poor neighbourhoods.

Echoing the analyses of different authors, Feitosa et al. (2011) point out that several factors contribute to urban spatial segregation, including the job market and its socio-economic impact (salary level, job insecurity, etc.) and increasing poverty among poor workers and sub-standard living conditions. Conversely, the expansion

Fig. 5.12 Self-built house in a suburb of Montes Claros in 2018. (Reproduced with permission from Bolay)

of the private property market may result in a concentrating of investment in neighbourhoods of high standing, thus benefitting areas reserved for the privileged, at the expense of the poor. Finally, the lack of government action and failure to implement inclusive social urban policies hider the creation of social housing subdivisions. In summary, Gonçalves Silva (2015) defines Montes Claros based on its main social and urban management issues, which include: the lack of housing, segregation in

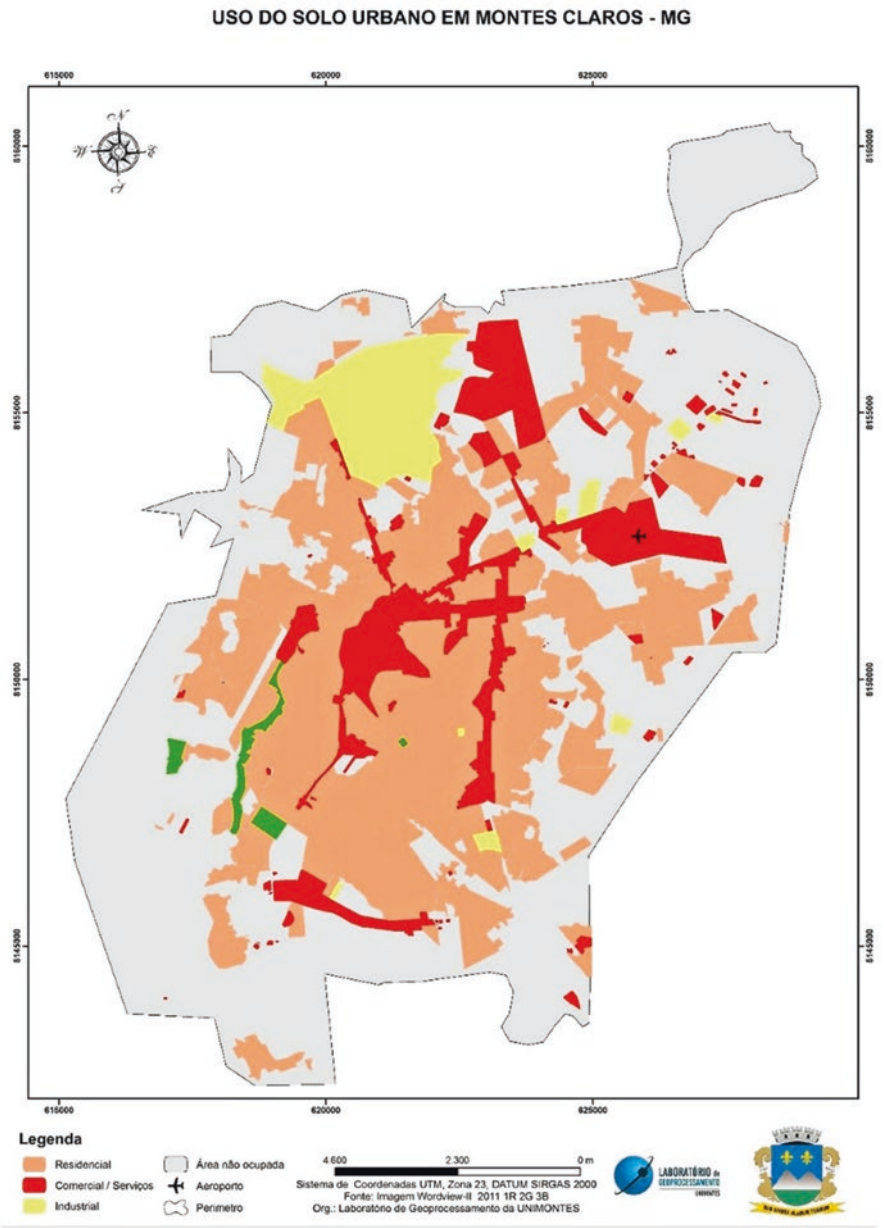

Fig. 5.13 Urban land use in Montes Claros in 2015. (Reproduced from Gonçalves Silva et al. 2015)

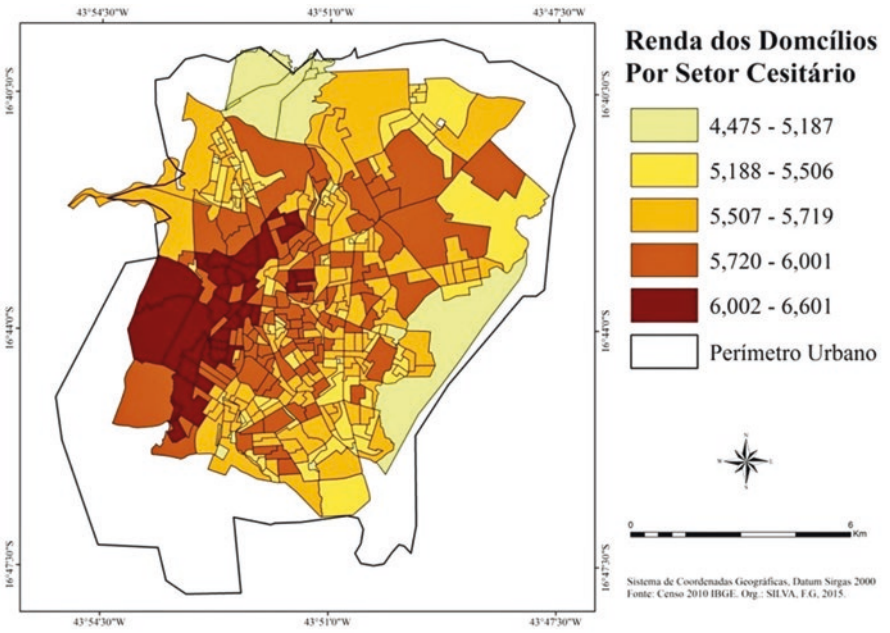

Fig. 5.14 Subdivision of Montes Claros by income per household. (Reproduced from Gonçalves Silva 2015)

terms of access to housing, which leads to precarious housing, real estate speculation, traffic congestion, violence and crime, making the city an urban hub characterized by accelerated economic growth and stunted structural development. However, such segregation is unique neither to Montes Claros nor to Brazil.

Some authors, such as Smets and Salman (2008), show that spatial segregation is a multi-faceted phenomenon that is not only the matter of a divide between rich and poor neighbourhoods (between "gated communities" and "slums", in its extremes), but also concerns migration, ethnic divisions, social exclusion and economic precarity. In the Global South, as in the Global North, the prevailing economic globalization and neo-liberalism tend to minimize the role of the State and urban communities. Tensions arise from both the pressure of budgetary allocations between public authorities (national, regional and municipal) and the fierce competition among cities worldwide. Cities – both large and intermediary – are increasingly influenced by the impact of global networks (financial, physical, demographic and intellectual) which, in turn, determine the speed and extent of political, social, economic and cultural changes at the local, urban and regional levels (Castañeda et al. 2011; McCann 2008; Rossi et al. 2007; Roberts 2005; Robinson 2002).

Like most Brazilian and Latin American cities, Montes Claros – which acts as a transit hub at the State and national levels – is a rapidly growing intermediary city that has seen continued economic growth over the past two decades and, according

Fig. 5.15 New social housing in the outskirts of Montes Claros in 2018. (Reproduced with permission from Bolay)

to statistics, a gradual decrease in poverty. However, this development has not resulted in a more balanced or homogeneous distribution of the urban population in spatial and planning terms. Considering the resulting growth from rural migration and new urban residents, the urban area of Montes Claros remains fragmented territorially, with neighbourhoods more or less well equipped and served by public transport depending on the socio-economic status of their inhabitants (Fig. 5.15). Soares de França and Soares (2007b) cite Montes Claros as emblematic of a medium-size city acting as a regional capital for the northern part of the state of Minas Gerais.

We would add that it is an intermediary city, as this centrality operates at several spatial scales (i.e. at local and micro-regional levels (flows of agricultural products and the marketing/processing of these products, health and educational facilities for the urban population as well as urban and rural populations from the rest of the state). This centrality also has national and international dimensions, primarily through economic dynamics that promote the creation of production companies of Brazilian and foreign firms (Alpargatas, Clairmont, Cotenor and Coteminas, to name a few Brazilian companies active in Montes Claros. Nestlé, RPC, Fiat, Novonordisk, Ciments Lafargue and many other foreign firms also operate in the

industrial zone, with production for the domestic market and for continental and global export, as in the case of Nestlé's Dolce Gusto capsules[19]).

5.4 Urban Planning in Montes Claros: A Participatory Process?

Since the 2000s, Montes Claros has adopted a new, two-part masterplan: an urban development masterplan and a municipal housing plan, as part of the Habitar Brasil program (since 2002), with funding from the Inter-American Development Bank. The program aims to improve poor housing conditions in metropolitan and urban areas in Brazil, with the goal of supporting those who earn less than three times the minimum wage living in poor neighbourhoods. Major investments in Montes Claros have attempted to mitigate infrastructural deficiencies in these new residential areas, aiming to reorganize land, social and urban planning issues in a coordinated manner, notably through involvement in sanitation, energy, transport and school facilities (Soares de Souza and Soares de França 2011).

A fieldwork was organized in May 2015 and May 2016, in cooperation with Professor Iara Soares de França[20] from the Universidade Estadual of Montes Claros (UNIMONTES[21]) and her colleagues and co-workers. We met with 30 individuals representing different local sectors in order to get their views on current key urban issues, the different players involved, the urban planning process and its objectives and implementation.

This work gave us an updated portrait of Montes Claros environmentally, spatially, economically and socially, which we will now explore in light of the current planning process being implemented by the urban authorities.

A second study was conducted at Montes Claros in 2016, along with the same academic partners from Montes Claros and professors and students from UNIMONTES, among residents of four neighbourhoods that were considered representative of various socio-spatial categories. The goal was to gather their opinions on the city's urban development and gauge their knowledge of the authorities' actions to develop new urban planning in the medium and long terms.

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[19] http://g1.globo.com/mg/grande-minas/noticia/2013/10/fabrica-da-alpargatas-e-inaugurada-em-montes-claros.html (Accessed 26 May 2016), http://www.istoedinheiro.com.br/noticias/economia/20041006/coteminas-melhor-empresa-brasil/16658 (Accessed 26 May 2016), http://www.em.com.br/app/noticia/economia/2015/12/17/internas_economia,718415/nestle-inaugura-fabrica-de-capsulas-de-cafe-em-montes-claros.shtml (Accessed 26 May 2016), http://areaguas.com/rpc-vai-construir-fabrica-em-minas-gerais/ (Accessed 26 May 2016), http://exame.abril.com.br/negocios/noticias/fiat-industrial-construra-de-fabrica-em-montes-claros (Accessed 26 May 2016), http://www.novonordisk.com.br/fale-conosco.html (Accessed 26 May 2016).

[20] http://www.ppgeo.unimontes.br/laeur.php (Accessed 26 May 2019), http://buscatextual.cnpq.br/buscatextual/visualizacv.do?id=K4756289U7 (Accessed 26 May 2019).

[21] http://unimontes.br/ (Accessed 26 May 2019).

5.4.1 *Heterogeneity and Priority Issues to Resolve*

Urban planning and development issues are inevitably dealt with by representatives of various administrative and organizational institutions. Their heterogeneity highlights the multidimensional nature of regional organization and urban planning, which decision-makers and operators tend to reduce to their material aspects. While the latter are imminently important, the fact that they are the result of ad hoc political decisions, and that changes made are not sustainable unless they are developed as part of a long-term vision via an inter-actor process, is too often overlooked. We will start by looking at the spatial aspects of urban planning, facilities and services, in order to then address the opinions of our respondents, irrespective of their identities.

Montes Claros is an intermediary Brazilian city according to demographic and spatial criteria, and based on its connection with its hinterland and the national economy. The municipal authorities consider it an urban agglomeration, but do not truly consider all facets of its regional influence. Within municipal limits, what matters to the authorities is not the rural areas – which are considered primarily as a source of labour supply for urban businesses and not part of a rural-urban entity – but rather the urban space. As the population of this heavily urbanized area grows, neighbouring rural areas depopulate due to urban immigration. Policy makers and professionals do not veritably address this issue often raised by scientists. Rather, only social service agents and NGO representatives point out this dichotomy by showing how people in rural areas lack services of all kinds.

At the urban level several shortcomings were observed, notably the regulation of the water issues (Fig. 5.16). Given the climate, Montes Claros requires not only a drinking water supply – which can today be found in almost all urbanized areas – but also technical measures for controlling floods during the high rainy season. Rain and flooding obviously have a negative environmental impact. However, periodic water shortages in certain areas stem not only from problems in the existing networks, but are also the result of accelerated deforestation due to "more or less" legal construction of new habitats in the surrounding hills.

The sprawling homes of the landed class and luxury housing developments (Fig. 5.17) are gradually threatening the region's ecological balance (Fig. 5.18), as water struggles to find its way to the water table and instead runs off into the lower parts of the city.

Other technical questions relate mainly to: the electric power supply (inadequate in certain suburbs), harvesting, recycling and solid waste treatment[22] (while landfills exist, they do not comply with environmental protection standards and have a negative impact), land use (which is poorly regulated), seismic monitoring and protection measures (in the event of earthquakes), and transport systems (Fig. 5.19).

[22] According to SERENCO (2015), there is no garbage collection in neighbourhoods outside the city centre. Families dispose of their trash themselves, either by burning it or throwing it in vacant lots. Recycling and organic composting do not exist.

Fig. 5.16 Contaminated urban river in 2015. (Reproduced with permission from Bolay)

All of this is the indirect result of the rapid growth of new social housing developments funded by national and state programs (Fig. 5.20) and luxury housing for the city's elite. An urban mobility master plan exists, but has not been fully implemented. Moreover, Montes Claros, as a regional hub, faces transport issues that challenge both regional mobility and the infrastructure and services that link the city and surrounding countryside. Montes Claros is a hub for the storing and redistribution of agricultural products, which generates considerable lorry traffic. It is also a commercial and industrial centre, where many individuals live in rural areas and commute to the city to work.

During our social housing development visits, we observed that public transport service was scarce and sporadic at best. To our knowledge, there is no recent and comprehensive study on the topic. Homeowners with modest incomes must simply accept the reality of this sub-standard transport service and "make do" with costly solutions such as shared taxis, motorbikes, etc., as they often work at some distance. Public amenities are also rare in these new developments. Schools, playgrounds, social and health centres are not systematically planned or built in these new suburbs. The small, identical houses are all lined in rows, sometimes with a small yard, but no shared or common space. Simply put, the poor benefit from programs that marginalize them spatially. While affordable housing is still of paramount importance, it should not in itself be the objective of urban planning.

Fig. 5.17 New gated private luxury estate under construction in the suburbs in 2015. (Reproduced with permission from Bolay)

Fig. 5.18 Luxury home in the hills of Montes Claros in 2015. (Reproduced with permission from Bolay)

At a higher level of urban development, several respondents pointed out the fact that the land registry, if it exists, is not made public, thus enabling the political authorities and certain power elites to interpret it without consulting the public and the fact that, in many neighbourhoods, the urban master plan is simply not applied. However, in the words of another respondent, the problem is more general, and therefore more serious when one considers that more than 140 of Montes Claros's neighbourhoods are still unzoned, rendering coherent and appropriate organization of public and private initiatives in these areas impossible. These essentially parcelling-type projects all have but without any strategic place in the medium or long-term development of the city. Most of the issues addressed by Montes Claros's master plan in the medium and long terms have regional impact. Hence, a city plan

Fig. 5.19 Recent constructions in the hills near Montes Claros in 2015. (Reproduced with permission from Bolay)

should likewise (and always) be a regional plan that takes into account both migration flows, in some cases definitive, as the population of the urbanized area increases, and in other cases in the form of daily commuting between downtown Montes Claros and the surrounding rural areas.

A number of societal issues also help shed light on Montes Claros's functioning. Notably, what emerged from the interviews is that Montes Claros no longer has any civic culture to create social cohesion and identity. For some interviewees, Montes Claros and its region are no longer a collective reference, both in terms of its historic and built heritage (which is largely neglected and enthusiastically destroyed to make room for an avatar of "modernity") and in terms of its natural environment (which is little developed and threatened by continued deterioration of its forest-covered hills and its rivers). What prevails are personal and political interests that couple political action and financial advantages to benefit the local elite.

Such first fruits generate biases in the very creation of participatory processes because the political authorities, in creating a new urban development plan, limit participation to a select elite that includes economic operators, academics and professional associations. In other words, the many collective interest groups, NGOs and other associations are left out.

Fig. 5.20 Social housing in construction in Montes Claros in 2015. (Reproduced with permission from Bolay)

5.4.2 *Who Are the Actors of Urban Development at the Neighbourhood Level?*

In addition to our interviews with experts and specialists, we felt it was pertinent to question inhabitants regarding their feelings about life in Montes Claros, their expectations of public and private decision-makers and their opinion of what local authorities were doing to improve urban living conditions.

For this, we interviewed approximately 20 families in each of the four neighbourhoods (Fig. 5.21), which represent the different waves of migration to Montes Claros in the past decades. The main idea was to compare the professionals' analyses with the perception of users in a non-exhaustive manner.

These four neighbourhoods can be described in the following way: Major Prates and Santos Reis are old, densely – populated, working-class neighbourhoods located in a central area of Montes Carlos; Todos os Santos is a more affluent residential area with high land and real estate values, and; Residencial Sul is a recently built social housing complex that borders the Montes Claros agglomeration. These socio-spatial distinctions can be confirmed at the educational level; Major Prates and Santos Reis are the areas with the lowest educational levels (40% on average had not completed elementary schooling. It is likewise in these two neighbourhoods that we find the highest rate of unemployment (roughly 20%) whereas all of the residents of the other two neighbourhoods are employed. Santos Reies and Major Prates also have more poor families, 20–30% of which have a monthly income of less than 1200 reales. This is not the case for the Todos os Santos and Residencial Sul neighbourhoods, whose residents all live in single-family homes on 100–200 m^2 parcels (for Residencial Sul), which is larger than in the three older neighbourhoods. There was, on the other hand, unanimity in terms of the type of occupancy: 82% of inhabitants on average owned their home.

Given these varied characteristics, it is interesting to consider the perception of city's residents. When asked who was responsible for improving things in their respective neighbourhoods, the City Council was cited by an average of 50% of respondents. Equally interesting is the fact that, for 30% of respondents, it was the community that was primarily responsible for managing the neighbourhood (Fig. 5.22). This could provide a potential basis for effective collaboration between the local administration and inhabitants, particularly as this perspective was much more marginal with regard to the urban management of the communal entity (2.6–19.4% depending on the neighbourhood). More formally, urban management capacities were attributed to the City Council first and foremost, and to the State of Minas Gerais and the Federal government to a lesser extent.

In addition, while – officially speaking – a "participatory" planning process had been ongoing for over a year at the time of the survey, none of the 70 interviewees had been consulted personally or invited to a public meeting on urban planning. This leads us to deduce that the process was not systematically based on involving inhabitants from every neighbourhood. According to other informants consulted during the study, informational meetings were indeed organized but were, at best,

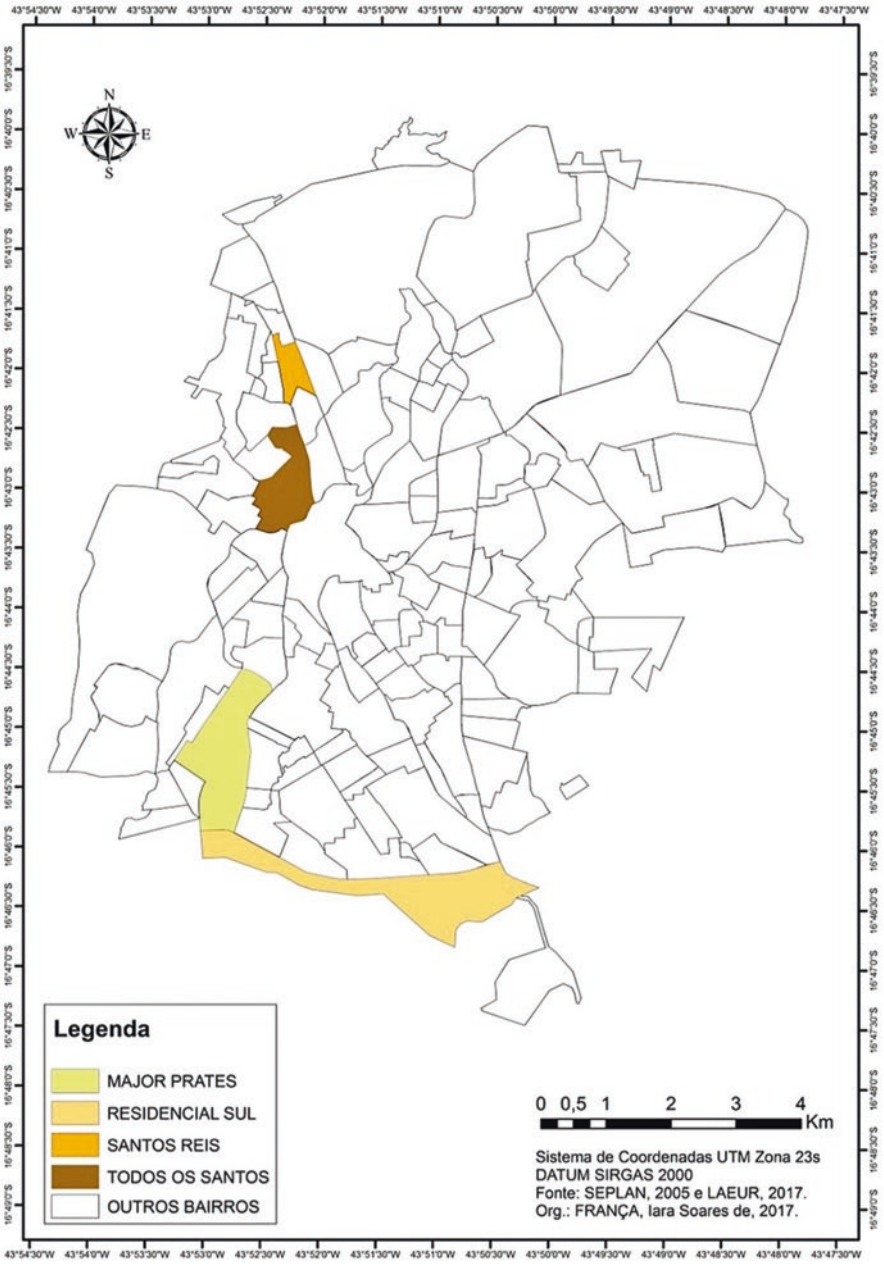

Fig. 5.21 Household survey of four neighbourhoods of Montes Claros organized by UNIMONTES and CODEV/EPFL in 2017. (Reproduced with permission from UNIMONTES)

Fig. 5.22 Inhabitants in one of the neighborhoods where the survey was done in 2016. (Reproduced with permission from Bolay)

advisory campaigns and, at worst, pure partisan propaganda. Here we find an example of top-down management, a far cry from participatory, bottom-up governance based on social involvement and the identification of shared priorities between the population and political representatives.

All those interviewed, specialists as dwellers, felt that urban planning should target the welfare of people from all walks of life, with an emphasis on alleviating the challenges faced by the poor and destitute, whose numbers are increasing and whose living conditions are gradually deteriorating (Fig. 5.23). A symptomatic

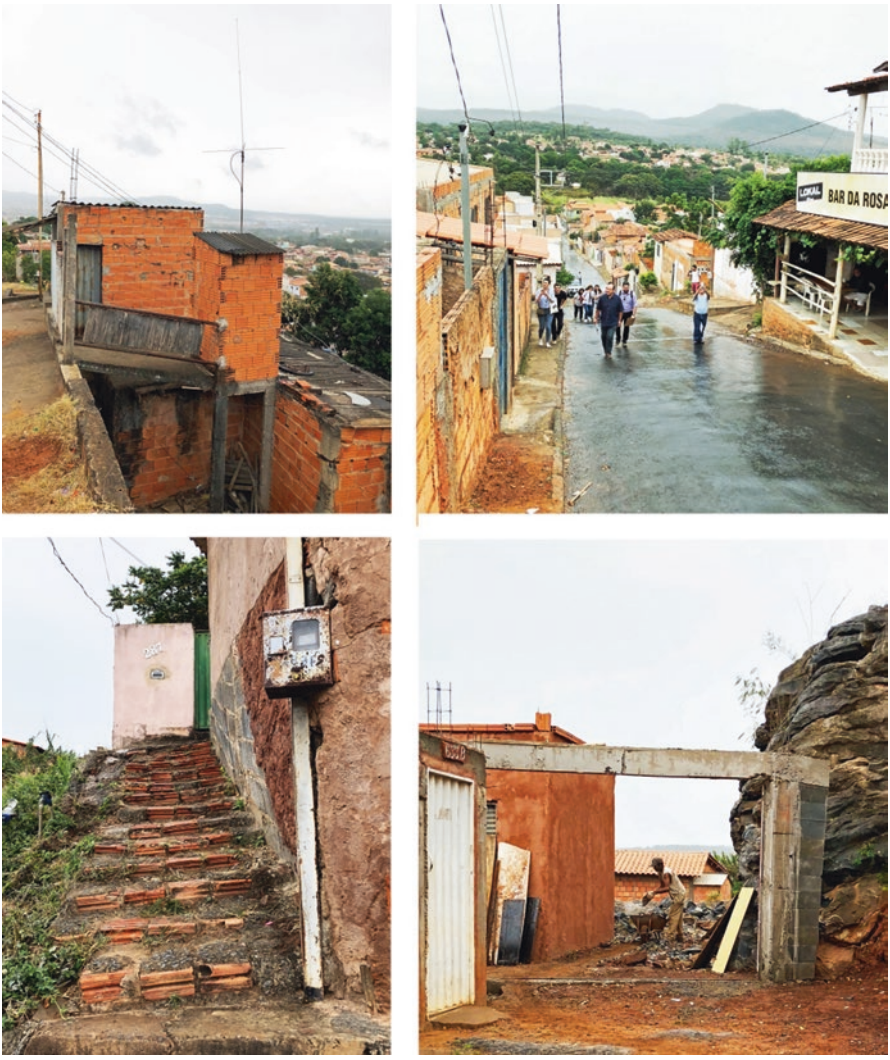

Fig. 5.23 Field visit on the occasion of the international seminar on intermediate cities organized by UNIMONTES and CODEV-EPFL in 2018. (Reproduced with permission from Bolay)

example of this is "street people." We counted nearly 300 homeless people "living" in public areas in downtown Montes Claros. No municipal policy has been put in place for this highly vulnerable population (i.e. shelters, food banks, health services or care for mothers and children). The only initiatives designed on their behalf exist thanks to volunteers (religious groups in most cases). The same holds true for the 750–800 junk "recyclers," who are among Montes Claros's poorest and who manage to find enough to survive on in the 600 tons of waste the city produces each week.

Social issues are also part of the dichotomy between Montes Claros and its rural hinterland. For a total population of nearly 400,000 inhabitants, Montes Claros has 11 *Centros de Referencia de Assistência Social (CRAS),* which assist roughly 5000 individuals per year. The respondents felt this was insufficient, especially in the municipality's rural areas where there is only one CRAS for a population of some 20,000 inhabitants across 176 rural communities and over an area of nearly 3370 km^2 (versus the 97 km^2 of urban area). This flagrant proportion questions the organization of public services across the municipality.

Other societal aspects have mainly to do with the existing political system and modes of governance.

As in any democratic country, the alternation of power has repercussions both at the policy level and in the organization of administrative and technical services. The fact that the entire administrative framework changes with each change of Prefect negatively impacts Montes Claros's ability to function; instead of taking into account previous projections, the overwhelming tendency is to start from scratch in order for the new leadership to leave its mark. Moreover, in a short-sighted vision of profitability, collusion between political authorities, local elites and big industry offers no prospect for social, urban or environmental sustainability.

These comments and critiques reveal an urban society in crisis, faced with the changes taking place at the demographic, infrastructural, environmental and cultural levels. Respondents expressed some disappointment with regard to the inconsistencies in the regional planning process and their negative impact on the urban structure and social organization of the population, highlighting among other things the problem of mismanagement.

5.4.3 Long Live Planning: Players in Motion

Montes Claros's urban planning process offers an excellent opportunity to identify the key players in this dynamic and explore how governance is organized in the city and surrounding region.

Before reviewing our respondents' comments, we will briefly summarize how Montes Claros's government is organized as, according to the law, the entity responsible for urban planning but nonetheless answerable to official bodies, both at the state and at federal levels.

As mentioned earlier, the official birth of the city dates back to 1831, with its 2000 inhabitants. The name "Montes Claros" was that of one of the haciendas in the region. Until 1760, the land belonged to indigenous groups, but was later conquered by gemstone searchers and subsequently cleared by farm owners.

A municipal government divided between a legislative power (a chamber of 23 councillors elected for a period of 4 years[23]) and an executive power (led by a prefect). In 2010, Montes Claros had 238,405 voters, a figure that has sharply increased

[23] No details on the political division in the House

in recent years.[24] According to respondents, the city council consists of a planning council, an environmental council and a land issues council, to which outside experts are invited to voice their opinions in an advisory capacity.

The critiques lean in two directions:

First, the implementing of decisions made by the council falls on technical teams and administration members who have neither a guaranteed job in the long term, as in many cities (and thus are more dependent on the political leaders in power), nor attractive salaries. This can lead to conflicts between individuals and departments, which does little to foster continuity in the implementing of decisions.

Secondly, political changes in the city's administration have direct political repercussions on the continuity of urban alternatives, with each new mayoral team seeking to set itself apart from its predecessors and to "leave its mark".

As in all democracies, elected city council members are chosen largely on a partisan basis, without necessarily having any proven policy experience or technical skills in the area in question. As such, council members often find themselves in situations of dependence, both in terms of their party and with respect to executive power.

The result is a lack of autonomy for the local legislation relative to the city government and a lack of transparency in the choices made by the latter. To remedy this situation it is imperative to clarify the rules, state the prerogatives of the council versus those of the city government more clearly, and make decisions involving the city's future more explicit and public.

Montes Claros's current master plan dates from 2001 but is, in fact, a copy of that of Belo Horizonte, the capital of Minas Gerais. As such, no real consideration made for the specificities of Montes Claros. In reality, what still determines urban planning in Montes Claros is the master plan implemented in 1970, which itself was preceded by a plan developed in 1954. Brazilian law requires that every city have a master plan and sector plans for roads, accessibility, drainage and sanitation. For respondents, the main issue here is that these plans should not serve as simple models simply to be replicated without discernment. Rather, they should address the specific challenges of each city by reflecting the views and needs of their users. This explains why the process is extremely important. It was developed by the Prefecture (the local government) since 2014, in cooperation with three regional academic institutions (FIP, UNIMONTES and FUNORTE[25]). The collaboration took the form of weekly meetings on the topics addressed by the plans, in conjunction with all the municipal secretariats. These meetings have led to proposals on future land tenure law and an updating of the city's zoning. Based on these documents, an online debate[26] was launched and open meetings held with the public to gather critiques and suggestions. From these exchanges should emerge a set of guidelines that will

[24] According to the Tribunal Eleitoral Regional (http://www.tre-mg.jus.br/eleicoes/eleicoes-anteriores/eleicoes-2010/informacoes-para-a-imprensa/eleitorado, accessed 28 May 2019).

[25] Faculdades Integradas Pitágoras – FIPMoc, Universidade Estadual de Montes Claros, e Faculdades Unidas do Norte de Minas.

[26] There is no clear evidence of this online debate on the City of Montes Claros's official website.

be revisited by the municipality and its academic partners. A conference attended by numerous professionals and academics based on this collaboration was held in May 2015. The main theme: "Urban planning, renewable energy and shared implementation: sustainable cities."

In September 2015, the municipal council of Montes Claros studied the updated master plan, which included 13 guidelines: health, social protection, social development, land use, environment, solid waste management and cleanliness, economic development, education, culture, sports and leisure, urban mobility, infrastructure and sanitation, roads and public lighting[27] – an impressive list indeed. Once the document is finalized, potential crossover and complementarity among the topics will be identified and overall coherence ascertained. Certain issues raised during the discussions, such as taxes and taxation, public security, energy and historical heritage, were eliminated from the list.

According to information from UNIMONTES, this preliminary plan, designed by Montes Claros technicians, was to be submitted for public review during the course of three public hearings, which took place in October 2015, in the central districts covered by the plan. The first hearing, opened by the *prefect*, provided a very descriptive overview of the plan, without topical hierarchy. The second focused on social and health issues, and the third on land and urban land uses. However, there is no indication of the number of people who attended these sessions. The documents posted online by the Municipality still lack a reference text that introduces the 13 sector chapters and lays out the authorities' vision for the coming years in terms of outlook, objectives, priorities, implementation schedule and expected results. Article 1 of the 2921 Act of August 27, 2001[28] (currently in effect) offers several key elements in its design and objectives: the plan is considered the basic tool for the physical, social, economic and administrative aspects of urban development policy that targets sustainable development and the community's aspirations through government action and private initiatives.

It is therefore not a participatory process with regard to the master plan, but rather served to validate the decisions already made by the authorities as reflected in the provisional plan. However, the process raises many issues. To begin, it is impossible to discern the authorities' medium- and long-term vision, which would be helpful in streamlining the urban planning. Furthermore, the authorities' perception of Montes Claros is biased as it only takes into account the dense areas in the city centre. The rapidly growing outskirts and suburban areas are still disconnected from the rest of the city and are poorly integrated in this prospective exercise. In the future, Montes Claros must be seen as an urban hub for northern Minas Gerais, in a kind of urban/rural/interurban interplay that involves environmental, social, educational and housing issues. All neighbourhoods and people cannot be dealt with in the same way; specific needs and priorities must be taken into account.

[27] http://www.montesclaros.mg.gov.br/planodiretor/planodiretor2015.htm (Accessed 26 May 2019).

[28] Also on the municipality's web page.

While there is undeniably cooperation with national and regional authorities in the implementation of the new plan, many respondents felt planning does not really consider residents' opinions or seek ways to understand their wishes and viewpoints. Instead of a top-down process involving outside experts – in itself is not a reprimandable approach – the new plan would start from the needs and concerns of neighbourhoods and their inhabitants, which urban priorities would then reflect. It would also be beneficial for academic partners to be seen as producers of scientific works whose results may contribute to the debate and influence planners and policy makers.

The lack of integration and democratic participation are indirectly reflected in the "assistance-oriented" political culture: many programs assist vulnerable populations (*bolsa familiar*, FIES – Fomento ao programa de governo do ensino superior) but are inherently designed as emergency safeguards and therefore do not resolve long term funding problems.

A final, yet critical, considering in the current process is that, once completed, the master plan should be supported by enabling legislation. Without it, the plan cannot be fully functional.

5.5 Regional Integration. Towards True Urban Planning

With a population of nearly 400,000 inhabitants and a municipal budget of 368 million dollars in 2016 Montes Claros is a perfect example of an intermediary Brazilian city. While it would be incorrect to describe it as a poor city, the urban population is highly segregated; one third of the city's population is poor, and the wealthy – who represent 20% of the population – control 66% of the local wealth. This fragmentation of the social fabric is also reflected in the more than 140 unregulated neighbourhoods and 50,000 people living in makeshift housing conditions, again resulting in extreme differences in income (400–1200 R$ per month in the city centre to 30–80 in poor neighbourhoods).

As Estrad Leita and Soares Silva de Melo (2017:130) point out, "We understand that urban growth is heterogeneous. It has occurred in a disorderly, uneven way with socio-economic segregation in which privileged social groups enjoy urban areas with functioning infrastructures while another segment of the population has settled in the parts of the city with great shortages and social problems." In this respect, it should be added that Montes Claros continues to grow demographically, with 1.43% annual growth between 1991 and 2000, and 1.66% between 2001 and 2010, with a municipal urban population level of 95.17%.[29] And according to respondents, this trend continues, as reflected – as previously stated – by an explosion of new housing developments for all categories, from federally-funded social housing to exclusive "gated communities" and luxury villas on the slopes of neighbouring hills. This urban growth also goes hand in hand with the fragmentation of the territory. In the

[29] http://atlasbrasil.org.br/2013/pt/perfil_m/montes-claros_mg (Accessed 26 May 2019).

north of the city near the industrial zone one finds peripheral urban areas that are home to low-income families (Batista and Pereira 2017; Soares Santos Brandão and Toneli da Silva 2016). More recently – since the 2000s – poor families have been settling in social housing developments built by the federal government, and not merely social segregation as the aforementioned authors propose.

In addition to these socio-economic and territorial disparities, two other major problems exist. The first is the depletion of natural resources due to advanced deforestation and periodic flooding of central neighbourhoods, a problem that largely results from the construction of new housing developments (social and luxury), wherein the environmental impact of these forms of urbanization, which have become increasingly popular in the past 20 years, are not fully considered. The second is the lack of regional integration of the municipality's rural hinterlands. These areas, where services and telecommunications are still rudimentary, are gradually being abandoned in favour of the urban centre and new suburbs.

To address this situation, the local authorities are in the process of developing a new master plan. The Brazilian Constitution, updated in 2015, specifies in Articles 182 and 183[30] that "urban development policy led by the municipal government, according to the general guidelines established by the law, is designed to order the full development and social functions of the city, and to ensure the welfare of its people." A master plan approved by the City Council is mandatory for all cities with more than 20,000 inhabitants should serve as an instrument for enforcing federal law adapted to the local context in the form of municipal laws (following the precepts of the federal law) to resolve issues relative to taxes on land, real estate value, parcelling and expropriation.

In addition, there is also a constitutional instrument in the form of a law regulating the status of the city in Brazil (Senado Federal 2008). The first Article of this federal document states that public standards for social welfare will regulate the use of urban land for the good, security and well-being of citizens and environmental balance. As such, the plan aims to create a sustainable city, including a right to urban land, housing, infrastructure, services, transport and employment for everyone. This requires democratic management and the involvement of the people and associations in the formulating, implementing and supporting of plans, urban development programs and other projects.

The project of urban planning, launched in 2014, is extremely important considering the transformation Montes Claros has undergone in recent decades and the need rethink the municipal territory and surrounding region vis-à-vis population growth and economic change. Rural areas are depopulating as the urban population gradually increases. Furthermore, economically speaking, Montes Claros has arguably experienced its third revolution. Until mid-1900s it was primarily a centre for the agro-processing industry and agricultural trade before slowly becoming a centre for industry – which it is still today – and home to many companies. In the past 20 years, Montes Claros has come to be seen as a service hub for the surrounding

[30] Constituição da República Federativa do Brasil Atualizada até a Emenda Constitucional, No. 88, May 72,015 (http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm).

area, particularly as regards higher education institutions and pre-eminence in the health sector. Its many commercial enterprises also offer a wide range of services. However, as incomes rise, social segregation increases. Today, the municipality is facing the issue of social exclusion, with an increasing proportion of the urban population living in economic insecurity and relative marginalization, both geographically and socially. These are key issues for a comprehensive urban plan whose aim is to not only act spatially.

This ongoing process – which is nearing its completion – may be can be seen as an associative process, but not a veritably participatory one. City Hall has indeed teamed up with private agencies and representatives from different sectors (universities, representatives from the economic community, etc. and the ad hoc committees of the City Council), but without including the public in the initial phase of democratic debate. It is only now in the final phase that the provisional results, which will determine the guidelines for future planning, will be presented and discussed in the more urbanized areas of the city. This exclusive approach has received considerable criticism from "outsiders", particularly volunteer organizations and social groups, who were not invited to participate in the process from the beginning. For them, this denotes a certain authoritarianism on the part of the public authorities (especially the Mayor, who has close ties with business and industry circles), who have not seized the opportunity the new plan affords to engage in an open dialogue with the public to better understands its needs and desires. While some scepticism was noted among those interviewed, it is still too early to judge the impact. Rather, what counts is the impact these debates will have on the final product, which must be approved not only by the local authorities but by the State as well. It remains for the government to prove its willingness to change its course of action by acknowledging the reactions that arise from these neighbourhood forums, and develop proposals include outlying areas and their populations in economic growth and social redistribution dynamics.

In conclusion, though Montes Claros cannot be described as a "poor city", it can be described as a medium-sized city that, like many other cities in Brazil, is experiencing the kind of unbalanced growth that is typical of what one can see in many intermediate cities around the world. Brazil has become one of the most segregated countries in the world, an emblem of economic globalization in a growing struggle between global regions and cities (nationally and internationally) and strategies to improve social cohesion and cultural/economic integration politically and in terms of urban planning. Urban planning is not merely a technical or spatial endeavour; it must aim to help cities and regions adapt to larger context in order to respond to the needs of all of their people through projections over time.

Returning to our definition of the "intermediary city" (Bolay and Kern 2019; Bolay and Rabinovich 2004) and the objectives of urban and regional planning that is tailored to the context both spatially and socially, we concluded that the first goal must be eliminating poverty and insecurity among vulnerable segments of the society, through comprehensive planning that promotes the integration and inclusion of new urban residents and all social groups.

Urban planning of intermediary cities is particularly complex for the reasons outlined in our paper. As in the case of Montes Claros, these cities face issues that must resolve if they are to succeed in promoting the type of sustainable development targeted by Brazilian legislation.

The first key challenge is the extremely rapid population growth these cities are facing. In the case of Montes Claros, which serves as a multi-dimensional activities hub for the northern part of the state, the intense and continuous flow of rural migrants has led to the creation of new subdivisions on the city fringes. These subdivisions are poorly equipped and poorly integrated in the urban community. It is therefore imperative that local authorities endeavour to integrate this dimension in the current urban planning. Otherwise, spatial fragmentation and social segregation are likely to continue to grow.

The second issue Montes Claros must address – like most intermediary cities that act as employment/service centres for the surrounding rural area – is that of spatial organization, which must be designed in coherence with this rural-urban interface by understanding the various dimensions that impact both rural and urban populations, as well as the natural and built environments. The public authorities in Montes Claros must quickly address the environmental problems the city faces, be it water (supply and flooding), deforestation or contamination (particularly through a more streamlined management of household/industrial waste).

The third key element is that of citizen participation in decision-making processes, especially in defining and implementing new urban planning. We noted that the current process has tended to favour certain stakeholders in the designing of this new urban planning phase (economic representatives, professional associations, universities, etc.). This stems from the fact that the process was not designed using a bottom-up approach designed to promote the participation of all residents in all neighbourhoods, to identify problems and their desires in order to integrate them in the planning process. Analysis by experts would also help in determining priorities by considering the municipality's perspective from all areas: downtown, peri-urban and rural. Failing to do so is likely to both alienate people from political life and result in a spatial plan that is incoherent and non-inclusive.

Rapidly growing, intermediary cities in emerging countries like Brazil, or in developing countries, are once again on the agendas of national governments and internationals agencies. However, the challenge – beyond rhetoric and sweeping principles – is to better define what intermediation means exactly, in order to translate it into analytical tools for public action.

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Chapter 6
Urban Dynamics and Regional Development in Argentina

Nueve de Julio, A Modern Small City in the Pampa

Abstract With 92% of its population living in urban areas, Argentina is one of the most urbanized countries on the planet. The province of Buenos Aires, which is located on the outskirts of the national capital, is home to 16.65 million people, or 39% of the national population. Like in many South countries, the populations of the small and medium-sized cities, which serve as intermediate centers between the countryside and the urban network, are growing steadily. Such cities offer services and infrastructures to both urban and rural populations, as well as a residential alternative to the Greater Buenos Aires metropolitan area. However, these cities face specific problems that require appropriate responses.

In this respect, Nueve de Julio is emblematic of the challenges that confront these intermediate cities. One of the hundred cities created in the nineteenth century by the Argentinian government to colonize the country and turn it into a major agro-producer and exporter of cereals and meat, it is purely a product of top-down territorial planning. Today, with its 50,000 inhabitants, Nueve de Julio is a city whose population is increasing and whose territory is expanding. Yet, it that lacks any foresight to anticipate the next 20 or 30 years.

Following J. Robinson's concept, Nueve de Julio is an "ordinary" city founded on modernity and tradition, and which must be analyzed for what it really is: a mere reproduction of a European city model that is facing serious development problems, whose territory is disparate in terms of facilities and 20% of whose population is living in poverty.

The government seems helpless when it comes to dealing with these issues. Though aware of the issues – social inclusion, improving public services and more efficient land use – it seems unable to act. At a participatory planning training seminar in 1994, participants were already pointing to the many shortcomings in urban management. Twenty five years later, these same problems have only intensified. Unfortunately, political activism prevails over planning and varies from one election to the next depending on the party in power. Means are lacking, both financially and in terms of technical skills. For several decades now, it is the electricity and services Cooperative that has been meeting many of the population's needs (paving the streets, supplying electricity, developing the mobile phone network, etc.), but without any real dialogue with the local administration.

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Establishing an open system of urban planning is imperative. This begins with the collection of technical and social data, which is currently scattered between the local government services and the Cooperative, which must then be processed digitally and geospatially. Based on this, and with the collaboration of these two institutions (as well as citizen participation), a rational diagnosis can be established and priorities set. These goals should include social, economic and spatial integration, efforts to include the city's poor and more rational, less costly development of the suburban periphery. This will enable Nueve de Julio to better play its role as an intermediate city for the entire urban and regional population with regard to business, administration, education and health services.

Keywords Intermediate city · Ordinary city · Medium sized city · Urban growth · Urban planning · Urban poverty · Cooperative of services · Nueve de Julio · Province of Buenos Aires · Argentina

6.1 An Argentinian City Under Pressure

Nueve de Julio is undoubtedly a rather "ordinary" intermediate city, like hundreds of others throughout Argentina and Latin America. Located outside of the oppressive Buenos Aires conurbation, it is one of the hundred new towns built during the nineteenth century by the Government of Argentina to reinforce the country's colonization and encourage agriculture and export breeding. A medium-sized city in terms of its population size and surface area, it is also an intermediate city in that it creates a direct link between the rural economy and the public services required by the regional population. Nueve de Julio thus appears as a quiet city of 50,000 with no major issues, with its shopping area, health facilities and educational institutions.

Yet, in the past 30 years, its population has grown rapidly and its inhabited territory expanded exponentially, like other similar cities of the pampas region. This dynamic is specific to an emigration of inhabitants from the Buenos Aires metropolitan area to cites that, though more remote, are considered more hospitable. However, it is not without links to national and international strategies of a globalized economy that dictates the price of raw materials and consumers products. During a scientific assessment of the urban management headed by the local government of Nueve de Julio, we had the opportunity to reflect on the shortcomings in the city's urban planning and on possible solutions.

In what ways is Nueve de Julio an "ordinary" city whose characteristics are reproducible in other cities in South America? What can we learn from how it is actually governed and the fact that changing its management and planning organization appears impossible? The studies, analyses, exchanges, improvements as well as the shortcomings and failures all served as lessons and were extremely useful in terms defining an urban development strategy that targets both sustainability and

inclusiveness – like those promoted by international organizations. The concepts of "ordinary city" and "intermediate city" will help to shed light on an initial diagnosis of the urban planning and governance implemented in Nueve de Julio.

6.2 Argentina: One of the Most Urbanized Countries in the World

According to figures from the World Bank,[1] in 2017, the urban population of Argentina represented 92% of the country's 40.1 million people, or 6.8% of the population of Latin America, making it the fourth most populous country on the sub-continent after Brazil, Mexico and Colombia. In Argentina, any locality with more than 2000 inhabitants is considered an urban settlement (Pellegrini and Raposo 2014). According to Velásquez (2015) and the Ministry of Planning's population censuses (MPF 2011a), urban growth has continued uninterrupted since the late nineteenth century (1895: 37%, 1914: 53%; 1947: 62%, 1960: 72%, 1980: 83%, 1990: 86% and 2000: 90%). Hence, Argentina is one of the most urbanized countries in the world (Fig. 6.1), surpassing both European and United States averages.

At the national level, it is interesting to consider experts' analysis of the progress of urbanization in Argentina.

Buenos Aires's urban primacy can be traced back to the eighteenth century and can largely be explained by Argentina's position as a major agro-exporter, and as an industrial investment area starting in 1937, with Europe on the brink of armed conflict. Starting in the 1970s, this import-substitution model, which led to the spread of Buenos Aires's metropolitan area and the development of large agglomerations like Rosario and Cordoba, was challenged by the political changes imposed by the military dictatorship. "Greater Buenos Aires", the majority of whose population lives in the State of Buenos Aires that surrounds the national capital, still was home to 50% of the Argentine urban population at that time. As Ainstein (2012) explains, Argentina's urban expansion has been marked by the waning primacy of Buenos Aires and several other large Argentine cities. The Greater Buenos Aires's population thus totaled 37.2% in 2002. However, the unemployment rate has also increased, as has the rate of informal employment. The poor population increased from 5% in 1980 to 51.7% in 2002 (Portes and Roberts 2005).

In 1947, the urban configuration likewise reflected Buenos Aires and the *pampas* region's dominance, thus reflecting a concentration that is specific to the agro-export system chosen by the country. Moreover, most of the country's medium-sized cities were located there. According to the 2010 census, while this urban concentration continues and includes more than 50% of medium-sized cities, it is now more diffuse. Hence, cities are now scattered throughout the country's provinces (Manzano and Velazquez 2015).

[1] http://datos.bancomundial.org/indicador/SP.URB.TOTL.IN.ZS (Accessed 23 November 2015).

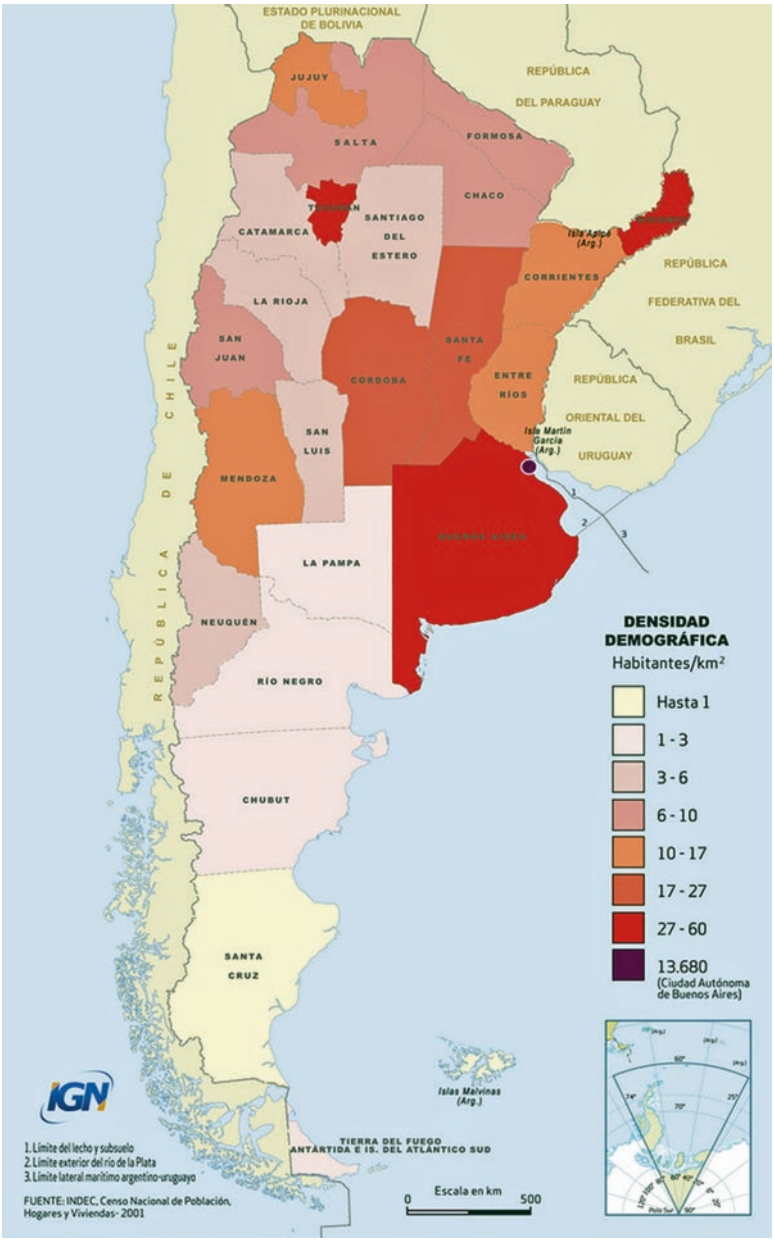

Fig. 6.1 Argentina – Population density (Reproduced from https://www.educ.ar/sitios/educar/recursos/ver?id=89787. Accessed 21 May 2019)

According to the 1970 census and those that followed (the most recent dating from 2010), demographically speaking, the traditional migratory process that gradually brought scattered rural inhabitants towards villages, and from villages towards small and medium towns, and finally to Argentina's largest metropolitan areas, is now being challenged. As Ainstein (2012) states, national urban expansion has been marked by a decrease in the primacy of Buenos Aires and several other large cities. The result has been a marked proportional increase in the number of agglomerations of more than 50,000 inhabitants at the expense of major Argentine cities (Velásquez 2015).

Lindemboim and Kennedy (2003) confirm this trend towards small and medium cities. They conclude that, from 1960 to 2000, Greater Buenos Aires and the Pampas region – the country's two most populated areas – were also those whose urban growth was the most moderate compared to the country's other regions. In addition, like the federal capital, slower growth can be observed in Argentinian cities with more than 500,000 inhabitants. According to these experts, it appears that, since the 1970s, the urban population of cities with 5000–500,000 inhabitants has grown faster than the national average. For them, from 1960 to 2000, the dynamics of the urban population saw a double decline: that of cities' population size and that of their geographical location. Regarding the first, municipalities on the outskirts of large agglomerations started seeing their population increase the most as early as 2000. For the second, medium-sized towns outside the pampas region are those that seem to be the most attractive and whose population are growing fastest.

Argentina's urbanization is thus marked by low population densities and the scattering of settlements relative to the pre-existing urban fabric. Thus, it is expected that, between 2000 and 2030, the urban population of cities of more than 100,000 inhabitants will increase by 72%, while the inhabited area will grow by 175%. With 862 cities of more than 2000 inhabitants, urban areas in Argentina can be divided into several categories: first, there is the international pole (to use the Federal Planning Ministry's expression) of Greater Buenos Aires and its 13 million inhabitants (40.3% of the urban population). This is followed by four large urban agglomerations that represent national nodes – Cordoba, Rosario, Mendoza and San Miguel de Tucuman (12.9% of the urban population). These are followed by regional nodes (18 cities with an average population of 280,000, representing 15.7% of the urban population), followed by sub-regional nodes (82 cities with a population of 52,000 inhabitants, representing 13.3% of the total urban population). Three additional categories of smaller-sized cities, which are active mainly at the regional level, can be added to this list (MPF 2011a).

The country's central region, of which the federal capital and the province of Buenos Aires are integral parts, is therefore the only one whose cities are represented at all levels of urban hierarchy. This is characterized by a high-density urban network and a clear distinction between the highest level (the Buenos Aires metropolitan area) and lower levels of the urban hierarchy, like La Plata (the capital of the Buenos Aires Province) as well as other agglomerations. These areas have a highly dense road and rail networks, active medium-sized towns and numerous small, generally well-equipped regional urban centers and are closely connected to one another (Fig. 6.2).

Fig. 6.2 Cities and transportation routes of the Buenos Aires province. (Reproduced from https://www.sitiosargentina.com.ar/notas/2011/enero/mapa-rutas-provincia-buenos-aires.htm. Accessed 21 May 2019)

Fig. 6.3 Satellite photo of the Greater Buenos Aires metropolitan area (Reproduced from https://www.esa.int/Our_Activities/Observing_the_Earth/Earth_from_Space_Buenos_Aires. Accessed 27 May 2019)

This population dynamic of medium-sized cities in Argentina brings new challenges in terms of development and investment in infrastructure and amenities. Since the 1990s, the infrastructure and public service supply no longer meet the needs of urban growth due to of the neo-liberal economic policies of successive governments. The state of the roads is deteriorating, as are the drinking water and wastewater evacuation networks. This is particularly obvious in the outskirts of large cities and the municipalities that comprise Greater Buenos Aires (Bolay et al. 2004a; Dubois Maury 1990). Corollary to this purely statistical analysis of urban areas in Argentina, a more sociological perspective shows us that this urban densification is also reflected in the increase in territorial fragmentation and social incongruence. Medium-sized cities are growing in size and in surface area, but speculation tends to "freeze" buildable areas in the urban periphery for future residential areas for high-income families. Few social measures exist to provide relief to the urban poor. Nueve de Julio's approach is emblematic of assistencialisme, wherein the goal is to "help the poor" rather than actually improve urban planning in the poorest areas of the city.

As seen in Fig. 6.3, this urban expansion is specific to Argentina and is particularly obvious in the Buenos Aires metropolitan area and province.

In terms of urban planning, Dubois Maury (1990) explain that, until the late 1990s, there was no national planning laws or building code. Everything depended on the provinces, with a multitude of delegations at the municipal level.

In practice, the overlapping of local and provincial regulations gives rise to situations that are open to numerous derogations. And the often one-off nature of urban development operations – regardless of the sector – carries with it the risk of a lack of coherent, more global vision, thus deviating from more long-term planning.

In 2004, the national government created the Secretariat for Territorial Planning within the Ministry of Federal Planning (MPF 2011a), which establishes the State's planning role and promotes territorial development as a capacity-building process to ensure sustainable social and economic well-being for the communities living there. This involves consultation with civil actors and the granting of federal funds. From this was born the "Urban Argentina" Program in 2008, and later the concept for the Territorial Strategic Plan (PET) in 2016. The supervisory ministry's aim was to orient public policies so that they would not focus only on large metropolitan areas, but on medium-sized cities as well. Effectively, we lack information regarding the risks and opportunities of the latter, though it is the populations of these cities that are growing the fastest.

Following this blueprint, each small or medium-sized city is now better placed in a web of communications with other cities, while maintaining a functional relationship with the surrounding rural environment. In reality, their future is increasingly dependent on decisions made by a multitude of actors at different scales (local, provincial and national). As such, their regional and national integration largely depends on the link between existing and future infrastructures (roads, transportation systems, telecommunications/computer networks, etc.). This must also be considered in a context of urban-rural and interurban interplay characterized by increasing geographical mobility and complex residential and professional situations (e.g. working in Buenos Aires and regularly commuting to cities outside the metropolitan area, or working remotely via ICT for companies in the capital, but making periodic face-to-face visits). Such compromises help make a "provincial quality of life" and urban economic integration compatible.

Given the emergence and establishment of new business sectors such as tourism and high-tech enterprises, these small and medium-sized Argentinian cities are being pulled into dynamics that are sometimes quite integrative at the regional and national levels, but that also must deal with processes of social and/or economic exclusion. Lan, et al. (2018) remind us that intermediate cities' dynamics are also the result of the strategies of major industrial groups who tend set up their production units in intermediate cities, where land and labor costs are cheaper and profits higher. Thus, going forward, the focus must be not only on the city but on the entire rural-urban territory more generally, in order to identify the economic changes, new forms of production and the needs of the populations in question (MPF 2011b).

Coming back to the question of urban dynamics in Argentina and the changes taking place in the small and medium-sized cities that serve as intermediaries between rural hinterlands and urban networks, it appears that Argentina's recent urbanization resembles that of Western industrialized countries. This is largely due

to the fact that residential choices are no longer made based exclusively on job location. Communication and transportation networks have also greatly facilitated commuting. It is in this way, and based on the example of Nueve de Julio and other Latin American cities, that we can observe how regional urban centers – though somewhat modest at the national level – nonetheless serve as intermediate centers for their hinterlands and provinces (Bolay et al. 2004b; Bolay and Rabinovich 2004a). Such cities emphasize the quality of life, safety and lower cost of living lower they offer. This also applies to the province of Buenos Aires, one of the most densely populated regions of one of the most urbanized countries in the world, and a world leader in terms of advanced agricultural techniques and exportation (Gorenstein et al. 2007).

6.3 The Province of Buenos Aires: A Dense Territory Under Influence

The Buenos Aires Province is an immense territory of some 300,000 km^2, the equivalent of 11% of the national territory – the surface area of Italy! This largely endless plain, which encompasses most of the Argentinian pampas[2] (Pesoa 2016), is the country's most populated region. Its estimated population of 16.65 million in 2015 was spread over 109 municipalities[3] and represented 39% of the national population. This, of course, includes much of Buenos Aires's metropolitan area, and 7.2% of the same national population within its administrative boundaries (INDEC 2012). The metropolitan area of Buenos Aires, often called Greater Buenos Aires, is comprised of the capital (2.89 million residents) and 24 peripheral municipalities located within the province of Buenos Aires. In 2010, this metropolitan area was home to an estimated 12.8 million people.[4] The Buenos Aires province was responsible for contributing 36% of Argentina's gross domestic product (GDP) (Ministerio de Economía 2012). The main economic sectors are industry (26.9% of national production), transportation (17.3%), real estate (13.3%), trade (12%), tourism (7.8%) and construction (5.8%). Though the agricultural sector, which is essentially comprised of export crops that largely depend on the financial fluctuations of raw materials on the international market (notably soybean), accounts for only 4.3% of the province's output, it has been steadily strengthening since the early 2000s. Growing areas grew by 34.8% between 2003 and 2011, from 22.5 million acres to 52.6 acres. Soybeans are the main crop, with close to 14.8 million acres, followed by wheat, maize and sunflower. The Buenos Aires Province's economy accounted for 33% of

[2] The Argentine pampas is a fertile, grass-covered, almost treeless plain and represents a fifth of the national territory (Wikipedia 2019).

[3] In Argentina, localities officially recognized as administrative are called *partidos*, and numbered 109 in the Buenos Aires Province.

[4] http://www.buenosaires.gob.ar/laciudad/ciudad (Accessed 21 May 2019).

Argentina's exports to the world in 2015; versus 49% in 1997.[5] There are 67 rural municipalities in the Buenos Aires Province with a population of approximately 1.3 million, representing 10% of the provincial population (27% excluding the metropolitan belt). The 42 urban municipalities are home to 3.5 million residents outside of the Buenos Aires metropolitan area. The fastest-growing municipalities in terms of population are those that are part of the Greater Buenos Aires metropolitan area and those along the coast.

According to the 2010 population census (INDEC 2012), the 109 municipalities in the Buenos Aires Province were comprised of: the capital (La Plata) with 649,613 residents, followed by 10 municipalities of more than 100,000 inhabitants, 17 municipalities of 50,000–99,999 inhabitants, 37 communes of 20,000–49,999 inhabitants, 30 communes of 10,000–19,999 inhabitants and the remainder comprised of smaller communes (Fig. 6.4).

Historically, the province's colonization has its roots in the quest to conquer the national territory in the early nineteenth century, with the aim of making the whole of Argentina developed and agriculturally cultivated. In keeping with Pesoa's analysis (2016), this strategy included numerous initiatives, ranging from the enactment of land ownership laws to regional immigration regulation, wars and peace treaties with indigenous populations, the founding of villages and cities, and even the creation of a national mapping institute (Fig. 6.5). For the leaders of the time, the objective was to "civilize" the country. What remains as a result of this process of territorial conquest are the more than 100 cities, most of which were founded between 1850 and 1916 in the Buenos Aires Province, making it quite exceptional at the global level for such a short historical period and over so vast a territory.

In keeping with an agrarian economy largely comprised of livestock and cereal crops, each new agglomeration's urban center was bordered by concentric growing areas[6] (Pesoa 2014). Each urban plan was geometrically and rationally organized around a town square (local government buildings, church, school, bank, theater, etc.) and its purlieu into "*manzanas*," (Pesoa 2012). The specific organization of these new cities concretely conveys the priorities of these new settlements, which were gradually linked to one another and the national capital by rail and road. The province's proactive urbanization policy clearly reflects the will of a landowning oligarchy that was not affected by regional conflicts in a country emerging as a major exporter of raw materials of rural origin on the world market. Thus, the goal was to be an actor in the construction of modern Argentina and its institutions in a larger process of conquering exploitable lands (Segura 2009). The region's first foreign residents at that time were immigrants of Italian, Spanish, Basque and French origin, coinciding with the massive wave of immigration in the nineteenth century linked to the agro-export model of meat, milk and grains to Europe (Aliandri 2015).

[5] https://www.lanacion.com.ar/1936345-exportaciones-poco-federales-las-companias-de-tres-provincias-explican-el-71-del-comercio-exterior. (Accessed 21 May 2019).

[6] These production areas consisted of chacras and quintas (small suburban vegetable farms).

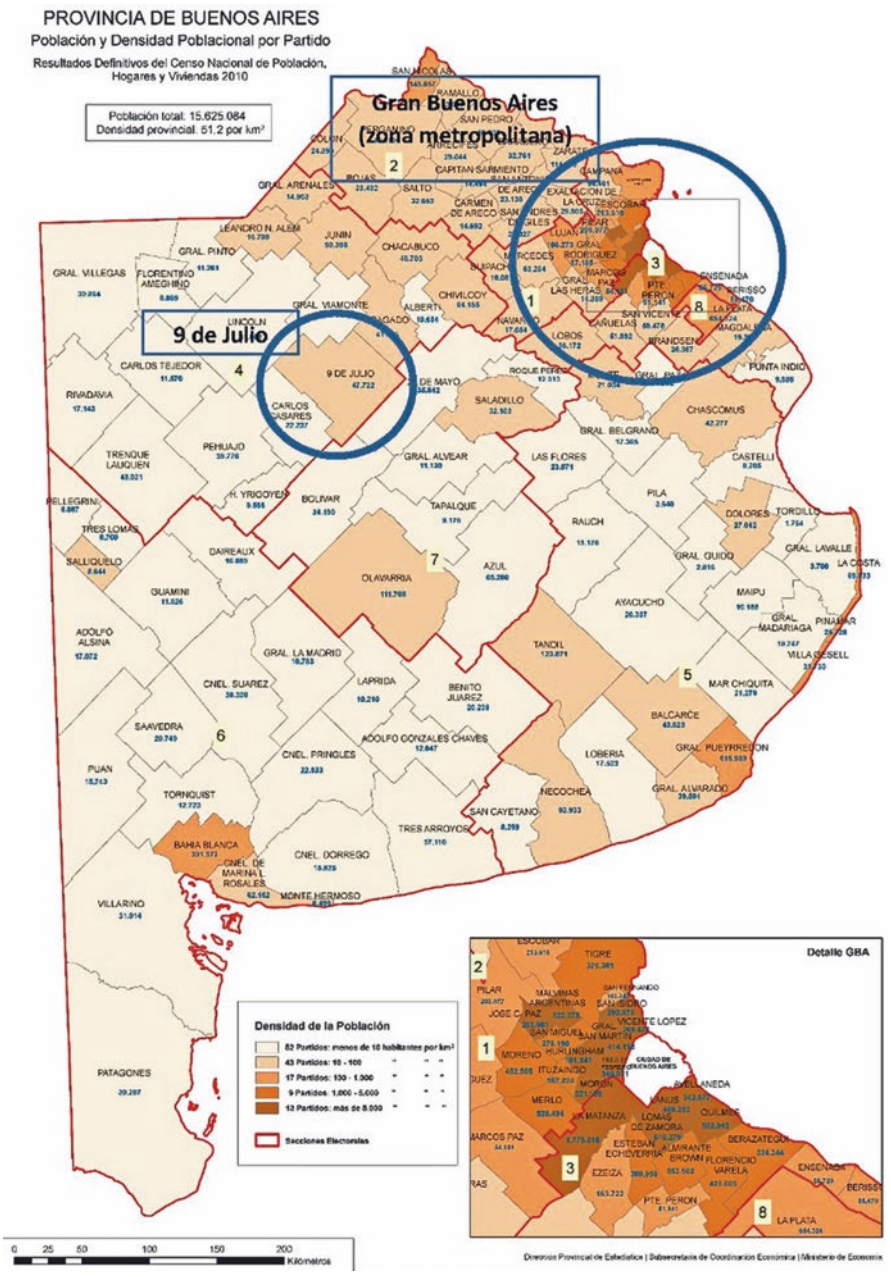

Fig. 6.4 Population density for the Buenos Aires Province, Argentina. (Reproduced from Provincia de Buenos Aires 2010. http://www.estadistica.ec.gba.gov.ar/dpe/index.php/territorio/mapas-tematicos. Accessed 27 May 2019)

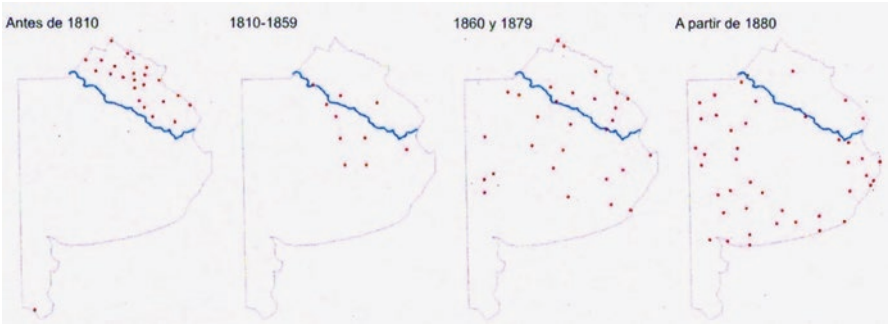

Fig. 6.5 Founding of cities in the Buenos Aires Province in the nineteenth century. (Reproduced from Pesoa 2012)

Closer to home historically, it appears that since the 1960s, the suburban municipalities of Greater Buenos Aires now represent the majority of the Province's population and is increasing. It accounted for 55.8% of the provincial population in 1960, and 63.5% in 2010, or two-thirds of the total population. Outside of this metropolitan area, medium-sized cities of more than 10,000 inhabitants have the fastest growing populations. Sixty nine such cities existed in 1991. In 2000, this figure rose to 76, including 21 cities of more than 50,000 inhabitants (Ministerio de Economía 2013).

According to the nomenclature developed by the Ministry of Federal Planning (2011b), regional and provincial urban agglomerations can be divided into three categories, which indicate the major economic trends of each city: a production function, an intermediation function and a reproduction function.

Differences in terms of infrastructure and services also set the cities of the Buenos Aires Province apart, as does local public transportation. According to the 2001 census (MPF 2011a), it appears that cities in the lower strata of the urban hierarchy do not have local public transport services, whereas urban nodes and agglomerations of more than 50,000 inhabitants all do.

The medium-sized cities of the Buenos Aires's Pampean province undoubtedly serve an intermediate function at the regional level as businesses and services centers directly related to the rural population and the province's agro-industrial production. They are also logistic hubs administratively and governmentally, as well as investment places for certain agricultural incomes (real estate, land, commercial, etc.), not to mention a labor market for the province. Linking the Buenos Aires Province's territorial organization to its economic development, Gorenstein et al. (2007) put forward the concept of *neo-rurality*, which is useful in going beyond the rural/urban dichotomy, especially through the multifunctional nature of jobs held by rural dwellers and based on the increasingly intermediary role the province's urban centers play relative to the surrounding countryside, as in most South countries (Bolay and Rabinovich 2004b).

6.4 Nueve de Julio: Modernity and Development Issues

Like many small and medium-sized cities in South America, Nueve de Julio faces a double issue of size and resources. Nueve de Julio lacks both human and financial resources, as well as institutional capacities that would enable it to anticipate the urban impact of its rapidly-growing population and manage its impact on territorial occupation and organization.

6.4.1 What Intermediate City for the Region?

Let us recall that, in our analysis, intermediate cities are characterized as much by their functions as by their dimensions, be they territorial or demographic (Bolay and Kern 2019). In order to refine our analysis of Nueve de Julio and its roughly 50,000 inhabitants, we will evaluate its development potential based on the interactions between the city and its environment.

The creation of the city of Nueve de Julio on the shores of three lakes dates back to 1863 and was part of politicians and military leaders' strategy to conquer the Argentinian territory. The city is located in the central northeastern part of the Buenos Aires Province, at 76 m above sea level (35°27′S latitude and 60°53′W longitude), 262 km from the federal capital. Its surface area is 1,045,256 acres, 963,711 of which are dedicated to agricultural production and livestock.[7] According to the most recent population census (2010), Nueve de Julio's population (the *partido*, meaning the municipality's urban center and the rural territory) reached 47,733 inhabitants in 2010, 36,494 of who lived in urban areas (Fig. 6.6). According to the municipal authorities (but with no official source of reference), the 2017 estimate was roughly 52,000. This indicates that the population has grown faster over the past decade, given that the city already had 45,998 residents in 2000 (with 34,350 in urban areas) and 44,021 in 1990 (with 30,356 in urban areas).

With a span of 20 years, between 1990 and 2010, the communal population grew by 8.43%. During this same period, Nuevo de Julio's urban population increased by 20.22%. If one gives credence to the local councilors' estimates regarding the current population, this decade has been marked by a demographic upsurge that started in 2010 and reached 52,000 in 2017 (8.9% population growth between 2010 and 2017!) (Fig. 6.7).

This remains to be confirmed in the coming years and will be verified (or not) in the 2020 census. However, local informants' comments lend credibility to the theory of an increase in the municipality's population.

Given this, municipal urban planning leaders have identified several priority issues. The first is controlling the city's territorial expansion as a result of its ever-

[7] https://www.taringa.net/posts/info/1958302/Ciudad-de-9-de-julio%2D%2D-buenos-aires%2D%2Dargentina.html (Accessed 23 May 2019).

Fig. 6.6 Aerial view of the city of Nueve de Julio. (Reproduced from Google Maps 2018)

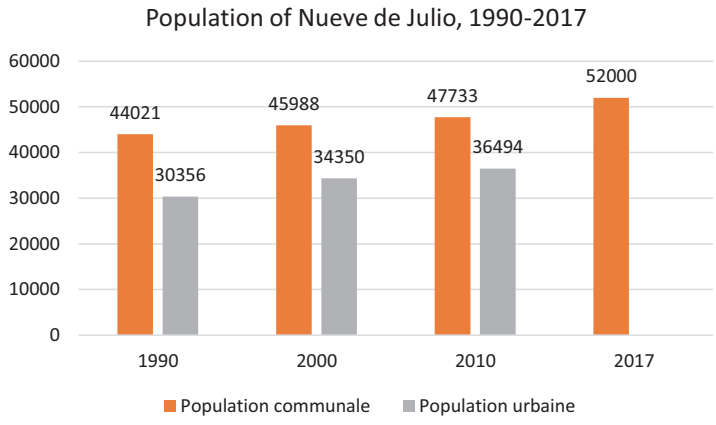

Fig. 6.7 Nueve de Julio (1990–2007), population censuses (INDEC) and estimations

growing population, with human settlements that are increasingly scattered and distant from the historical center. Doing so means reinforcing the urban network by creating areas that serve specific functions (housing, industry, nature reserves, etc.). The other is meeting the basic needs of the city's most destitute population. In this

case, the focus should be on the "Ciudad Nueva"[8] area, the city's most precarious neighborhood (12,000 inhabitants), and where infrastructures, housing, water supply and drainage networks (to fight against floods) must all be improved to avoid flooding.

6.4.2 An Ordinary, Modern City in a Rural Landscape

It is therefore less the idea of urban modernity confronted by the promotion of urban development – to use the words of Kern (2017) – that underpins our analysis of Nueve de Julio, than that of constitutive elements of urban identity. In many parts of the global South, urban economies are dominated by the informal sector. The example of Nueve de Julio puts us face to face with a completely different Argentinian reality, through planned cities built based on formal and legally-recognized systems of economic production whose prosperity largely depends on international connections of supply and the distribution of goods and raw materials. In this respect, urban sprawl in Argentina refers more specifically to the analysis of new cities created in the nineteenth century based on a European model and implemented in Latin American. Understood in terms of their similarities and differences, these "modern" cities are symptomatic of one just one kind of urbanization taking place in the Global South among others (Schuermans 2009; Robinson 2006). Understanding the role of an intermediate city like Nueve de Julio brings us back to Fraser's observations (2006). For him, the concept of *ordinary city* "…provides readers with an invigorated call to develop a post-colonial urbanism that is cosmopolitan in the sense of conceiving all cities as sites of modernity. This does not diminish the stark differences between places that are differentially connected to networks across the globe, and it does not ignore the differential challenges cities face as a result of uneven development patterns and unequal resources." (Fraser 2006:196). While it is certain that Nueve de Julio is not a global city by S. Sassen's definition (2001, 2002), with functions of monitoring and control over the internationalized economy, it is a mixture of modernity and tradition, and is likewise a part of this globalized market economy (Robinson 2002). Nueve de Julio is but one piece on an international chessboard of flows of raw materials and services, in service of Argentinian agro-export.

In light of this, and with the goal of better understanding Nueve de Julio's current situation, certain elements of "modernity" and "development" set this city apart while, at the same time, harmonizing its trajectory with that of the Buenos Aires Province's pampas region.

Like many other cities in the Buenos Aires province, Nueve de Julio is the result of the then-federal government's policy of territorial expansion in an effort to incorporate fertile lands (then occupied by indigenous dwellers) and increase livestock production (Ratto 2003). The strategy combined military incursions, peace treaties with indigenous populations and the creation of new towns.

[8] A city neighborhood recently renamed Barrios Unidos.

In its 150 years of existence, Nueve de Julio has been highly representative of the modern urban organisation that underpinned planning in the nineteenth and twentieth centuries, the fruit of the technological and social advances that have shaped both Europe and Latin America: human migration from Europe to Argentina, accelerated industrialization of primary and secondary production, financial gain from an export economy and human settlements that meet the most advanced standards of the times Velásquez (2015) confirms that, in the nineteenth century and more notably the twentieth, the Pampas region's medium-sized cities greatly benefited from this agro-export model (Europeanized urban society, generalized wages and social integration). Things started changing in the 1970s, with more marked socio-economic differences and social exclusion of large segments of the population. Nevertheless, Greater Buenos Aires and the Pampas region (and the province of Buenos Aires in particular) are still the areas where industry prevails, favoring urban growth. "Argentina is typical of a manufacturing country with a center in the metropolitan area of Buenos Aires, an inner belt formed by the most industrialized Pampas provinces and an outer belt with the rest of the country." (Platino and Pellegrini 2016:109).

6.4.3 Between Territorial Expansion and Social Inclusion

More recently, Nueve de Julio has faced problems similar to those found in most of the province's medium-sized cities. While its undeniable prosperity is reflected in the city's layout (e.g. the central square or General San Martin Park) (Fig. 6.8), its economic growth and stability are not guaranteed over time as its success largely depends on the vagaries of the agro-export sector and fluctuations in the global market for cereals and meat products. Moreover, given its continual population growth, many urban dwellers are becoming increasingly attracted to this type of medium-sized city, which many feel offers a viable alternative to the urban congestion of Greater Buenos Aires. These new residents have individual, family and social needs, be it in terms of professional integration, education or health. Yet, the government's response to the needs of Nueve de Julio's 50,000 or so inhabitants seem to fall short of the mark, or at least raise questions as to the priorities in terms of future urban projects.

Social and economic figures and data pertaining to Nueve de Julio are almost impossible to find either directly (in documents relative to these aspects of the city) or indirectly (via the Internet). It was for this reason that we chose to combine the information gathered from interviews and, later, a field study, surveys and the monitoring of public works.

What *is* accessible on the Municipality of Nueve de Julio's website is the municipal budget for recent years, with receipts and expenses, which provides an initial overview of local public action. The estimated budget for 2017 was 712.62 million

Fig. 6.8 General San Martin municipal park in 2018. (Reproduced with permission from Bolay)

pesos,[9] the equivalent of roughly 35 million U.S. dollars.[10] Over 323 million pesos were allocated to municipal staff, and 21 million to debt service. The main areas of expenditure were: core activities (supposedly related to municipal services) at 144 million; the maintenance of public roads at 127 million; the development of primary health care policies at 52 million; collaborative works with the CEYS cooperative at 45 million; the maintenance of municipal and provincial roads at 44 million and; urban and community hygiene services at 42 million. This was followed by budget allocations (20–30 million) for items such as education and youth services, safety, buildings and public spaces, reforestation, green spaces and insect control. In fact, according to municipal information provided in 2018, the actual budget was somewhat lower; according to them, national, provincial and communal funding totaled 570 million pesos.

Browsing Nueve de Julio's online press, several insights provide additional information regarding the region's economic situation, albeit in a piecemeal way. According to the head of the Chamber of Commerce, the local economy is stable but lacks real growth, and is entirely dependent the revenues from the 2016 to 2017 agricultural harvest. Inflation, which is still poorly controlled at the national level, weighs heavily on local entrepreneurs. To his mind, the often evoked idea of an industrial park would energize the city and region's economy.[11] According to another private source quoted by the same newspaper, new jobs in Nueve de Julio in 2017 increased by 30% relative to 2016, mainly in the areas of services, business, administration and sales, and mainly benefit higher education professionals.[12] And since 2018, the devaluation of the Argentinian peso can also felt (positively by large landowners, who sell their crops and livestock abroad in dollars, and negatively by employees and owners of small companies whose business charges are constantly increasing.

The picture would not be complete were we not to highlighting one of Nueve de Julio's particularities which, like other cities in the Buenos Aires Province, organizes community services in joint-management with the "Cooperativa Eléctrica y de Servicios Mariano Moreno Ltda." The latter currently has 21,000 partners for the distribution of electricity, 12,900 for natural gas and 8300 in mobile telephony and internet access. According to its manager,[13] all of Nueve de Julio's households are affiliated with the cooperative, thus giving him extremely detailed knowledge of the local population and its needs. The origins of the cooperative date back to the 1920s, when Nueve de Julio's inhabitants, faced with the poor quality and exorbitant cost of electricity, decided to produce their own energy. Hence, the first popular electric

[9] http://www.9julio.mun.gba.gov.ar/sit_eco_fin.php. (Accessed 22 May 2019).

[10] On April 23, 2018, when the webpage was consulted, $1 U.S. was equivalent to 20.18 Argentinian pesos.

[11] http://elregionaldigital.com.ar/desde-camara-de-comercio-sostienen-que-la-economia-9-de-julio-esta-estable-pero-no-crece/ (Accessed 22 May 2019).

[12] http://elregionaldigital.com.ar/en-9-de-julio-durante-el-2017-hubo-demanda-de-nuevos-puestos-de-trabajo-en-un-30-por-ciento-mas-que-el-2016/ (Accessed 23 May 2019).

[13] Two interviews were done with Federico Rainari, manager of the CEyS, in 2016 and 2018.

plant was built in 1949. With the years came other services to complete the offer: street paving in 1972, natural gas in 1989, running water in suburban localities, ambulance services, health insurance, funeral and burials, consumer loans (since 2007), and in 2010, Internet and mobile phone connections.

A collaborative agreement exists between the municipality of Nueve de Julio and the Cooperative. However, it goes without saying that relations have fluctuated over time and according to political affiliations. Over the past 3 years, the election of a new political majority and a new mayor (from the presidential majority party, the PRO, the Republican Proposal, and likewise the majority in the Buenos Aires province) has put strain on relations with the Cooperative, which traditionally has been radically obedient. In 2018, after 13 years of unopposed cooperative management, elections were held to renew the CEyS's board of directors. Victory went to the "democratic transparency" list,[14] making negotiations between the Cooperative and the municipality inevitable. Though unable to prove it for lack of access to information but based on the comments from the field, an unusual competition exists between the two institutions; the CEyS is generally seen as an historically-rooted organization that manages large swathes of urban development and works in service of the municipality's residents. It is recognized for its administrative and financial rigor, as well as its efficiency in the production of goods and services, but is criticized by some for its monopolistic tendency to manage all profitable utilities. Municipal services, on the other hand, are mentioned first and foremost for their poor management of civil servants, their material/logistical shortcomings as well as relative to political changes and their impact on priorities. What characterizes municipal action largely depends on the political affiliation of it leaders from one election to another. With neither the means to fulfill their ambitions nor a long-term vision for the city and region's future, the mayor and his team are primarily concerned with being re-elected, and thus focus on short-term investments that make them more visible and popular. One must, however, see this collaboration between the municipality and the Cooperative in its historical perspective, bearing in mind that cooperatives have had a strong presence in Argentina since the nineteenth century, and that the province of Buenos Aires is, by far, the region with the greatest number of them: according to Montes and Ressel (2003), in 2003, 4498 of the country's 16,000 existing cooperatives were active in the province. Of these, 624 were provided services to the community. According to "Centro Cultural de la Cooperación", at the national level, the cooperative sector generates 10% of the GDP and 500,000 jobs. In terms of services to the community, cooperatives supply water and gas, produce energy (often renewable), and distribute it to consumers in over 1500 municipalities of various sizes throughout the country.[15] Thus are we facing a recurring phenomenon that is relatively little studied in terms of its social and institutional impact. Through the case of Nueve de Julio, we discover that the association between the municipality and the Cooperative confers on the latter a crucial

[14] http://www.diarioel9dejulio.com.ar/noticia/88693. (Accessed 25 April 2018).

[15] http://www.centrocultural.coop/blogs/cooperativismo/2017/07/08/cooperativismo-argentino-incidencia-economica-y-social (Accessed 26 April 2018).

role in regional planning that falls outside the usual channels of public action. The CEyS is proving to be a dominant urban player, both technically and financially. It is therefore not surprising that this economic and planning primacy, which escapes the services of the local administration, generates power struggles and other conflicts of interest.

6.4.4 Daily Disturbances: How to Manage Better the Expansion?

During our interviews with the mayor and Nueve de Julio's director of urban planning, the big question was that of urban planning, or more specifically the lack thereof. What notably was missing was data that would allow for "status report," making it possible to trace the city's evolution in its various territorial and societal dimensions in order to develop a realistic, tangible masterplan. The question may seem surprising coming from the authorities of a medium-sized town that, at first glance, seems relatively well-organized and esteemed by its inhabitants. But facts have confirmed these shortcomings of the planning, leading us to make an initial diagnosis with regard to urban planning, and to define the various stages of a procedure to collect, archive and process useful data in an organized way in order to establish develop planning based on actual figures and the use of data in space via a Geographic Information System (GIS).

The first observation was that existing data are not shared between the CEyS Cooperative and the Municipality, even less so as the cooperative subcontracts the harvesting and processing of data to a private company that archives the information and produces summaries. Secondly, the Buenos Aires Province's administration, like the competent national departments, also manages statistical data relating to the city of Nueve de Julio as it does for all of the province's other municipalities. However, they are not available in open access. Moreover, the many requests made by the Municipality have remained unanswered! Here one can clearly appreciate the importance and utility of collaborative efforts to be made by the Municipality and the Cooperative. The Cooperative indeed has ample data on its customers. Moreover, its customer base, whose electricity, natural gas and other utilities it supplies, is close to that of the municipal population. If made available to the City, this information could provide a solid base for sound and dependable planning. But the risk that this alliance will never see the light of day is high, as the Cooperative does not really want to share its "business" with soon to be re-elected public bodies.

This does not mean that communal departments have no data, but rather that there is no coherent, organized way of sharing information internally among the different departments, or between the State administration and its outside partners, which are mainly cooperatives.

Fig. 6.9 An outlying neighborhood of Nueve de Julio (Reproduced from Vexina Wilkinson 2017)

What has been acquired and is managed by Nueve de Julio's Secretariat of Housing and Urbanism is the city code and the resulting zoning, which integrates parcels of land. In this way, it determines city's the lines of growth as well as priority actions depending on the neighbourhood, including the services and infrastructures the city wants to bring to the various districts. The top priority is the historical center and nearby residential area (R1), followed by the more recently-built concentric residential areas (R2). The second priority in terms of public intervention is the residential growth areas located southeast and northeast of the city (R3 and R4). In third position comes the rehabilitation of the "Barrios Unidos" neighborhood (formerly Ciudad Nueva) (R5), the poorest part of the city as mentioned earlier, and the less densely populated outlying areas (R6). Concretely, this means that solving the problems of the poorest 25% of the Municipality's population is not a priority in the city's social and spatial layout (Figs. 6.9 and 6.10).

The cadastral and special works department, which is part of the Secretariat of Urbanism, also has vital information regarding existing parcels of land, public properties, buildings and building permits. The problem is that this data still only exists in paper version. Much more data exists and would be highly useful for establishing a geo-referenced information system (clinics, hospitals, schools, public spaces, green areas, industrial zones, etc.). This data is collected and managed by various municipal administration departments that do not communicate with each other and rarely update the information in their possession. Other data relative to water networks, drainage, wastewater, gas and electricity (all managed by the CeyS) are inaccessible.

Fig. 6.10 Area map of Nueve de Julio. (Reproduced from Municipalidad de Nueve de Julio)

The information is scattered and completely disconnected from each other. Due to a lack of time and human and financial resources, the Municipality, though aware of its obligation at both the national and provincial levels to look more closely into the plight of the poor (Fig. 6.9), manages urban problems on a day to day basis, more in the reaction to events and to satisfy pressing social demands than to prevent and plan.

6.4.5 The Example of Ciudad Nueva, a Low-Income Housing Area

It is astonishing to think that, in 1996, in anticipation of the World Habitat Conference in Istanbul, we published a comparative book to recap the traveling seminars we had organized with our Latin American colleagues, with the support of the Leopold Foundation Mayer for Human Progress (Bolay et al. 1996), and in which David Kullock and his colleagues at the Faculty of Architecture and Urban Design of the University of Buenos Aires reported on the training urban actors in Nueve de Julio had participated in 2 years prior (Kullock et al. 1996) (Fig. 6.11). Of the three Argentinian cities investigated at that time – Resistencia, San Juan and Nueve de Julio – the latter had 30,000 inhabitants, and the study area, "Ciudad Nueva," was comprised of 371 acres in the southeastern part of the city, between the historic Sarmiento railway line and the national road No. 5.

Railway workers had originally settled on the site. The population grew in number, building on plots of available land along the urban-rural boundaries. One characteristic of the urban planning is that land use is disparate and sparse, combining housing and artisanal production units and isolating it from the historic city center due to the train tracks. Infrastructures and public facilities included water and electricity networks, natural gas in one of the zone's four areas, and a public school. The streets were unpaved and without sidewalks. The majority of the houses were small and rudimentarily equipped. The recommendations that came out of the 10-day seminar focused on six elements to improve the area's urban integration. These conclusions are still valid today, 25 years later. They included job creation, urban integration of neighborhoods, improving school and health services, rehabilitating existing housing, implementing building standards, and improving infrastructure and communication networks.

A diagnosis of the same part of Ciudad Nueva done in 2017 allows us to compare the nature of the problems and the solutions envisaged.

Now more commonly referred to as "Barrios Unidos," this area still hangs on the outskirts of the historic city, without the city having taken any real urban planning or management measures to reduce the physical breach created the railroad, which is still used for transporting goods (Figs. 6.12 and 6.13).

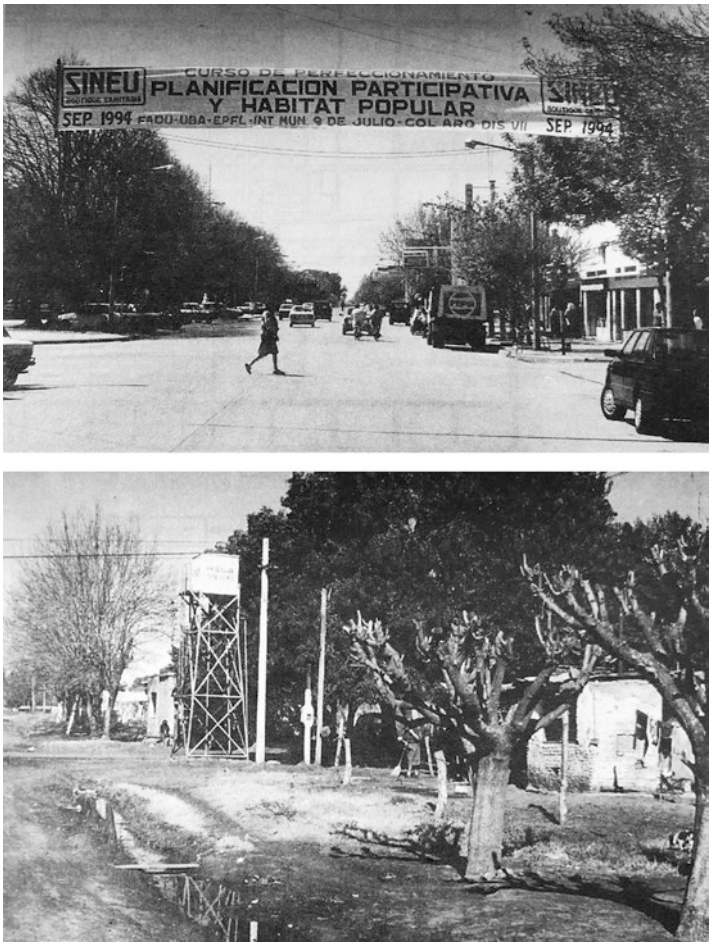

Fig. 6.11 Nueve de Julio 1994: workshop on participative planning and popular habitat. (Reproduced with permission from Bolay)

Surveys done in two of the area's neighborhoods in 2017 and interviews with public officials reveal two crucial points: as in 1994, the people interviewed spoke out against unemployment, underemployment and the difficulty of find a job. Many work sporadically, and usually undeclared. In terms of health, Nueve de Julio's existing services no longer sufficiently respond to social demands. The area lacks a health center as well as a 24-h, on-call pharmacy. In terms of education, the dropout rate had increased; children could be seen wandering the streets, although the area's only school functions normally (one public school for 10,000 inhabitants!). With regard to infrastructure and urban planning, respondents criticized the flooding and lack of wastewater drainage, the source of the former. At the residential level, respondents made mention of the makeshift nature of many houses in terms of their construction. In addition to all of this, there was a feeling of insecurity, as the area is notorious for the traffic and consumption of narcotics.

Fig. 6.12 Aerial view of the Barrios Unidos area. (Reproduced from Google Maps 2017)

This finding explains why the Community Development Secretariat has implemented a distribution plan for building materials for at-risk families. However, the demand is high, and the procedures long and complex.

More specifically, we conducted a building census in two blocks of houses, one a social housing estate with 28 family houses built in the 1990s, and the other with 50 private, self-built homes (Vexina Wilkinson 2017).

The social housing development had changed very little in terms of number of houses.[16] All of the homes had access to water, electricity and natural gas networks,[17] though only one street had a sewage system. The other houses were equipped with septic tanks that were emptied twice a month by a private company. The perceptible changes described by the owners depended on how the family's economic resources had changed, and mainly concerned extension of the living space, changes in the internal layout of the living space and the acquisition of household electrical appliances (Fig. 6.14). Given the poor quality of the construction and its age, the owners complained above all of the lack of insulation and resulting humidity.

[16] Each house has a kitchen that opens onto a living room, a bathroom and two bedrooms, all facing an outdoor patio.

[17] The natural gas connection is seldom used by the owners of the houses due to the out-of-pocket installation costs, which amount to roughly $2000 US, and thus prefer to use bottles of gas.

Fig. 6.13 Map of the Barrios Unidos, Nueve de Julio, Argentina. (Reproduced from Vexina Wilkinson 2017)

The changes in the other block were more substantial. In 20 years, the number of houses had increased from 5 to 50. The constructions were more heterogeneous, though several makeshift homes (made of low-quality materials and with minimal implementation) were observed. The walls were made of bare brick, the roofs of polystyrene and cardboard boxes, and unprotected electrical wires were seen in the bathrooms. The differences from one dwelling to another reflect the financial capacities of each family over the years, bearing in mind that, according to their statements, none had received building materials from the municipality. In addition to these self-built plots (Fig. 6.15), several vacant plots remained, along with a few plots with houses of significantly higher quality that were in excellent condition and supplied by the public gas network.

In most cases, the work done on the houses was done by the occupants themselves, without official authorization, which is formally granted by the public authorities after verification and application of norms.

Fig. 6.14 Barrios Unidos: rehabilitation of a house in a social housing development Argentina. (Reproduced from Vexina Wilkinson 2017)

Fig. 6.15 Barrios Unidos: informally-constructed, self-built home. (Reproduced from Vexina Wilkinson 2017)

The "Ciudad Nueva/Barrios Unidos" area has evolved in a very heterogeneous way over the years, according to the district and the occupants' means. In terms of housing, the changes that have taken place are the result of individual, private means, as few are eligible for loans. It seems that the municipal authorities' only contribution to date has been a construction materials allocation program whose scale, beneficiaries, selection criteria, funding and debt collection processes are impossible to know.

At the infrastructural level, the situation has been better handled as basic needs (water, electricity and gas) are covered by collective networks and in partially by public facilities (school). “Ciudad Nueva” is still a stigmatized area whose standards as well as the reputation of the neighborhoods and its inhabitants are well below those of Nueve de Julio. The changes in the past 25 years are imperceptible. Generally speaking, it is those who are most in need that suffer most from Nueve de Julio’s lack of public transportation system.

The issue remains understanding how a city, its population, authorities, pressure groups and professionals can be aware of this grim reality of urban poverty, acknowledge the fact that more than 20% of the city’s population live in conditions of material instability and create measures to rectify this...without any change taking place. There is no clear policy, strategy or master plan for the entire urban agglomeration. Nor is there an inclusive vision of the city – from a socio-economical o planning perspective – that focuses on the most disadvantaged populations and neighborhoods. This brings us to a final thought which concerns the uniqueness of Nueve de Julio as both exemplary of a contemporary intermediate Argentinian city and “ordinary” in its reproduction of nineteenth-century model of urban modernism. The challenge for it today is overcoming its inability to acquire the right urban management tools for understanding the urban reality today and projecting itself in a medium- and long-term future in order to decide on the priority actions to take, in dialogue with urban actors.

6.5 What Direction for Nueve de Julio’s Urban Planning?

Beyond Nueve de Julio’s specific characteristics, an issue raised in other research works reemerges (Bolay 2015, 2016): that of urban planning and the institutional and social practices upon which they are based.

The study of Nueve de Julio raises a fundamental question: does urban planning make sense for an “ordinary” nineteenth-century, intermediate city that is (1) more or less representative of the settlements of the pampas region built during the nineteenth century (2) whose development was based on agro-industrial and beef export production for exportation, and (3) that acts as a regional service and business center for rural and urban populations?

Looking back at the city’s history, two things appear to be at odds:

To begin, Nueve de Julio, like the hundred other medium-sized towns in the Buenos Aires Province, is a pure product of urban planning as conceived and executed at the highest levels of Argentinian power in the nineteenth century, as part of the strategy to conquer the national territory (or at least the pampas region) and turn to it into agrarian growing areas. To do so, it was necessary to eliminate the indigenous populations and create cities able to accommodate an immigrant population, mainly of European origin. These new cities were reproduced at a calculated distance to serve as local and regional hubs, to facilitate communication between the national capital and major urban centers (like La Plata, the provincial capital) via

modern transportation modes (road and rail). This opened up to the exportation of agricultural products and importation of manufactured goods, making Argentina the country so-called "the breadbasket of the world" (Pesoa and Sabaté 2016).

Secondly, and much more recently, this "top down" territorial development strategy and its materialization in terms of urban planning seem to have disappeared. Urban planning seems to have given way to local activism, partisan struggles and the domination of economic forces. That is why the failure of urban planning in Nueve de Julio was as easily recognized by successive municipal governments and professionals in 1994 as it is today. Lacking a future vision, the aimlessness of the medium- and long-term programming of works has had an adverse effect on the authorities' control over the urban and regional territory (environmental degradation, sprawl and increased cost of infrastructure, among others). Attempts to organize urban and peri-urban areas in a more coherent way are occasionally initiated but without bringing about any real change in the way of things are perceived or undertaken.

That is why, as early as 1995, after an initial training seminar on participatory habitat planning for professionals working in the urban sector in Nueve de Julio,[18] the Faculty of Architecture and Urban Design of the University of Buenos Aires was mandated by the city's mayor to develop a master plan with the local authorities and their partners that ultimately had no real impact. In 2015, during a field visit to Nueve de Julio, the mayor proposed a collaborative agreement between the Municipality of the City and the EPFL's Center for Cooperation and Development. Today, in 2019, with a new city government majority, the agreement is still in effect and an exchange seminar between medium-sized cities of the Buenos Aires' Province's pampas region was organized. Although an initial diagnosis was made and practical problems were detected, the procedure for establishing an ad hoc geographical information system for urban planning is still pending within the local administration. And no one, it seems, can explain these delays. Some hypothetically propose that it simply "is not a priority for the current mayor!"

How to explain this decline in action, this discrepancy between "good" intentions and their actual implementation? To answer this in a systematical way and draw all possible lessons, using the example of Nueve de Julio, we will attempt to highlight that which is a consequence of its own historical trajectory and current dynamics versus that which has resulted due to more global phenomena. At the very least, this concerns such cities in Argentina, and even Latin America more widely, and perhaps holds true for all medium-sized and intermediate cities in the Global South.

The reference to Robinson's (2006) concept of the ordinary city to discuss South cities without comparing them to Western-type models, in this iteration between modernity and tradition, allows us to question things in a context totally different from that of southern Africa (Robinson's privileged study field for explaining this concept). Indeed, Argentina is emblematic of a "tradition of modernity" strongly

[18] The training workshop included representatives of the local administration, private enterprises, as banks and architectural studios, NGOs etc.

linked to the Western city as conceived in the nineteenth century, in the light of changes in society, now resolutely industrial and increasingly urban. This school of thought considers that the occupation of space is for the common good, and that it is up to the State to organize and monitor "realistic applied urbanism" that considers the constraints of a resolutely industrial, capitalist society (Chaline 1985). The idea of cities in the countryside and a checkerboard layout (Menétrey 2013) were undoubtedly sources of inspiration specific to Europe at that time that we see reproduced simultaneously across the "new continent." However, what makes the organized settlement of Argentina's pampas region so unique and exceptional is the combination of an extremely orderly urban planning doctrine for the new city and the desire to conquer new territory, to extend the boundaries of "(Western) civilization" and to control them (Cacopardo 2007).

In the case of Argentina, it is not a question of opening up the urban concept to "other" realities forged on economic informality and illegal land use, as we have done on other occasions (Bolay 2012). Rather, we are simply retracing the process of global Westernization (to not say Europeanization) that, in the 19th and early twentieth century, made Argentina one of the world's economic powers. A city like Nueve de Julio, a modernist artifact of urbanity transposed to South America, is but one cog in this vast machinery that served to create a country and an international power.

The "harsh reality of the South city" is much more recent. According to the information collected orally, the "Ciudad Nueva" neighborhoods date back to the late 1980s and early 1990s, and are symptomatic of this deviation from the historical planning by unregulated, largely individualistic, unplanned social practices in the municipality's less valued areas. The urban model that has been in place for more than a century no longer works for three reasons: the major economic recession of a country competing in terms of agro-industrial exports, a sharp rise in poverty and migration from Buenos Aires and other major cities to regional urban centers like Nueve de Julio that are less affected by the crisis. The lack of a coherent response from the local government to this deteriorating situation raises questions about the city's governance.

Can we speak of governance when looking critically at the city of Nueve de Julio? We can begin by recognizing that it is a difficult time to judge the urban policy led by the current authorities. Like Argentina itself, with the election of President Mauricio Maccri (supported by the PRO, Propuesta Republicana, a new partisan support group that is now part of a majority coalition in both houses of Congress) in November 2015, Nueve de Julio is also keeping up with the changes with its new political majority (also elected in 2015 and reelected by majority in 2017) and at the provincial level. In other words, at both the Municipality and the municipal administration levels, the political and technical leaders are essentially novices. So what can be said of these past 2.5 years?

Mariano Barroso, the current *intendente*,[19] took the helm after his predecessor's 10-year reign. His main goal is making this new political majority (which is in power in the city for the first time) popular. Urban planning, as such, is not suffi-

[19] In Argentina, intendente is the title held by the mayor.

ciently convincing to enthuse the electorate, as it is a lengthy process, all the more so as it is a question of creating it almost from scratch. Which brings us to the second issue; the local government is still poorly equipped in terms of human resources, both in terms of the number of personnel and their skills in urban fields). Only recently did the Planning Secretariat's staff increase and declare urban planning and the development of a GIS its priorities (though nothing has been implemented to date). Another obstacle to participatory urban governance (Devas et al. 2004) is the fact that relations between the current municipality and its partner, the Cooperativa de Electricidad y Servicios (CEyS), the community's main service provider, remain distant, and are built more on mistrust and competition than on complementarity and collaboration. Even if things were to progress with the new political direction of the cooperative's leaders, the competition between two major forces in the local urban dynamic is counterproductive. Their active collaboration in shared urban governance would be the catalyst for spatial planning that takes into account the population's expectations, and hence a foundation for effective, rational planning (Brown 2015). The autumn 2019 elections will in one way or another sanction urban management as it is carried out in the city.

This lack of true urban governance in Nueve de Julio has repercussions on the capacity to integrate the poor. As is obvious from the analysis in this chapter, the "Ciudad Nueva/Barrios Unidos" area is emblematic of the government's inability to grasp the meaning of an inclusive city, the benefits of identifying the problems and of making their resolution the priority of public action. In the conclusion of *From Unstainable to Inclusive Cities* (2004), Westendorff rightly states that inclusion is both economic (through work, sociability and participation in community life) and urbanistic (through access to basic networks such as water and electricity). It is also political, in a more subtle way, and thus links urban governance and the inclusive city. It is true that the term "inclusive city" is a catch-all concept that was widely used by international organizations in the late-twentieth century. However, it remains intelligible as exclusion's virtuous counterpart (Clément and Valegeas 2017). Aiming to address various but universally-recognized problems such as poverty, unemployment, the segmenting of labor markets, gender inequalities, the democratization of public life and social participation, the "inclusive city" should translate into public policy, as well as values and ethics.

The inclusive city concept attempts to "incorporate inhabitants in the public sphere, where collective decisions are made to ensure that all preferences and interests are taken into account, and that public services are accessible to all "(Van der Wusten 2016). Accessibility (and thus the "right to the city") and participation – hence the need for methods and tools that foster this social and political integration. And that's the rub, because nothing substantial has really been done in Nueve de Julio to improve the development of the famous "Ciudad Nueva" area, almost as though any excuse were a good excuse to not do things seriously…for 25 years. This is somewhat incredible given the needs expressed by inhabitants.

But the situation is even more serious and, in this regard, denotes a lack of decision on the part municipal authorities, both past and present, on this subject. Once again, we come back to the foundations of participatory planning (Bolay et al. 2016).

Not diagnosing the reality that existed in the early 1990s, much like that which prevails today, thus frees the political authorities from any liability, be it in Nueve de Julio or any other medium-sized Argentinian city. More than 20% of Nueve de Julio's population lives below the norms adopted by the city itself. Sporadic popular demonstrations remind us that improving development in these neighborhoods is a necessity. Faced with this pressure, the rare initiatives that the city *does* undertake do not take into account the full scope of the problems. The main excuse for this is physical and material; this largely informal residential area has expanded in a completely illegal way, and is cut off from the historic center by the train tracks. As though it were the only city in the world with train tracks running through it and development were technically unfeasible!

More fundamentally, there is a denial of the reality in Nueve de Julio, as in many cities around the globe facing similar issues of poverty and informality (Bolay et al. 2016). For many local governments, it is easier to neglect urban instability, or even deny it, than to actually face it due to the complexity of its causes and multi-faceted consequences, which require a long-term approach, substantial investments and technical, social and economic skills. All this for short-term, random political gain.

It is likely that Nueve de Julio's municipal authorities are of this mind. Yet, they forget that the fight against poverty and slum upgrading have integrative effects on neighborhoods and families, as well as a unifying effect on the entire community, as the Cities Alliance recalls through its "Cities without slums" program.[20] For people – who, let us not forget, are citizens – living in unstable conditions, expecting to live in decent conditions is first and foremost a question of dignity. The spread of slums is conducive to environmental contamination, the spread of disease and increased violence and insecurity. Slum upgrading is more affordable because it costs less and is more effective than relocation to public housing. Developing land with basic services costs even less.

At a more global level, it is also an advantage economically and fiscally. Reintegration through jobs allows people to invest in their land and homes. It is also recognized that the more secure the habitat is, the more families will become integrated in their neighborhoods and cities. Studies show that the poor can and are willing to pay for improved services and homes. This increases safety and security for the community as well as tax revenues for the city.

Like many medium-sized cities in Argentina and Latin America faced with growing populations, expanding peripheries and ever-increasing social disparities, Nueve de Julio is facing major challenges. Understanding such a city and other medium-sized cities that act as intermediate hubs affords us the opportunity to rethink the city and its dynamics at different scales, and to integrate urban and regional planning that takes into account its strengths and weaknesses in order to increase the

[20] http://www.citiesalliance.org/About-slum-upgrading (Accessed 20 May 2019).

city's attractiveness and combat social inequalities and territorial fragmentation. Given its geographical location and population size, Nueve de Julio has a strong influence on the territory, maintaining trade relations with comparable or smaller urban hubs but in obvious connection with the upper echelons of the urban framework, which we think of as being in La Plata, the province's capital, and Buenos Aires, the national capital (roughly 4 h away by public transport).

Though we know that most planning is done within municipal boundaries in order to better control the communal space, strategic economic and financial interests extend beyond these borders and can affect other municipalities. Urban planning therefore cannot ignore these regional issues, which implies arrangements between communes and the provincial government.

Nueve de Julio is an ordinary city. Historically speaking, it is part of a group of cities that was created to ensure Argentina's "productivity" in the global economy. Like the others, it was built on simple and functional urban principles in one of the country's most dynamic provinces. Nueve de Julio plays an intermediate role as a regional pole both residentially and commercially, is perfectly integrated politically at the provincial and national levels as part of the governing national majority and maintains links with the network near and far. Yet, in the past 20 years, it is its marked territory fragmentation due to the scattering individual habitats and the extension of a spatially marginalized and socially stigmatized low-income housing area that has brought it notoriety. This is due to its inability (as yet) to develop a system of territorial planning that can to solve these problems in partnership with local stakeholders, and namely the cooperative. The lack of tools and/or their application in spatial planning clearly shows that planning issues in Nueve de Julio are not only of a technical nature, but are likewise a political and social challenge driven by power struggles and local democracy.

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Chapter 7
Conclusion

Towards Real Urban Planning: Revisiting the City, Citizens and Development

Abstract The book concludes with a synthesized analysis of urban planning in Southern cities, with a particular focus on medium sized cities that play a role of intermediation between their suburban and rural environments and the whole urban network. Starting from the literature on the topic, as presented mainly in Chaps. 2 and 3, we will compare the conceptual advances, as well as the statistical and global data, with the results of the fieldwork carried out in three cities chosen to tackle this theme in specific local and regional contexts.

This brings us to highlight the similarities and differences between each urban situation, in order to draw the main lessons that emerge from the analysis. We are able to decrypt the constraints that cities – their authorities, their administrations and their populations – face. And whether or not these restrictions hinder the implementation of a coherent urban planning system. It is on this basis that we will be able to identify the key elements that represent the pillars of an alternative version of urban planning to that which exists (when it exists!), in terms of foundations and guiding principles, objectives and methods used to achieve them, content and instructions. Planning can thus become a real instrument to guide and to manage the city and its region. We recall that urban planning, as we envisage it, is not only a technical exercise dealing with the territory, in the spatial and geographical sense of the definition, but truly an approach aimed at integrating societal issues into a planning process. Planning thus clearly contributes to moving towards a city that is not only socially and economically inclusive, but also sustainable, in which social and economic factors are rooted in the preservation of natural resources, within the framework of participatory and democratic public policies.

Keywords Urban planning · Sustainable urban development · Intermediate cities · Urban complexity · Interdisciplinarity and transdisciplinarity

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7.1 Between Poverty and Urban Development

I started from the disarming observation (which I was able to verify both in the field and in my research) that many innovative urban development experiments are being conducted in many Asian, African and Latin American cities. These experiments are often considered successful, and even as best practices to replicate. One hopes that they presage new and improved forms urban management that takes into account inhabitants' concerns. And yet, United Nations statistics, televised reports and field research all confirm the same thing: the number of slums, poor people and disparities between rich and poor are increasing. It is not impossible to imagine that something is actually wrong, and that a gap exists between this local effervescence and the harsh reality at the global level.

While we mustn't despair, strong arguments do favor a critical analysis of reality: overall, the structure of cities is improving. Yet, more and more urban dwellers are living precariously.

This seeming contradiction is, in fact, an illusion, and merely reflects the enormous challenges that cities face, especially in South countries: the extremely rapid increase in the number of city dwellers is leading to endless sprawl of the inhabited territory. The main characteristic of South cities is that this growth - both demographic and spatial – is also taking place at record speed. It is therefore not surprising that spatial planning and the organization of human activities confront many obstacles; social demands and needs far surpass both service and infrastructure supply, as well as urban actors' capacity to meet them.

In such extreme conditions, solving the technical, material and human problems these agglomerations face requires (1) identifying pressing needs and social demands in order to define the priorities of public and private investments and (2) that the authorities take important measures. All this while handling emergencies and everyday life as best as possible. It is in this risky, sometimes hazardous context that planning must reinvent itself, torn between rigor and flexibility, standards and creativity. The specificities of each site (what makes each city and urban society special), its history and geography combine with these overarching principles.

This urbanization can appear perfectly coherent and organized or, on the contrary, disordered and chaotic, as is often the case in South cities. This partial or total disorganization is the result of varied and variable factors that were addressed in the preceding chapters. One notable reason is both individuals' and the public authorities' inability to handle and solve problems as they arise. The latter tend to follow learned precepts and apply classic urban planning recipes. Be it procrastination or political choice, the result is the same: a thousand and one other (individual, social and institutional) ways of problem solving creep in, sometimes in a formalized way, but often outside the law based on informal arrangements, social struggles, political patronage and corruption. It's anything goes. We have synthesized this situation in the following formula: *territorial fragmentation = social segregation*. Thus do we witness the reproduction of the great sociological patterns of urban organization

comprised of power struggles, conflicts, negotiations, socio-economic inequalities and political issues.

Urban precariousness in all its forms bears witness to this. Be it slums, the environmental risks associated with deforestation, flooding in neighborhoods without adequate drainage, or the insecurity of informal work, all are signs of the fundamental incompatibility between social demands and the needs of the population on one hand, and public/private financial investment capacity (based on choice criteria that are not always transparent) on the other. Poor populations react to this via do-it-yourself survival solutions, resourcefulness and spontaneous or collective actions. Because the poor must act fast (and act together) in order to not lose the game. And this game is crucial for them because it is their urban integration that is at stake. That, and the lives and futures of their children. It cannot wait. Conversely, for those on the other team (i.e. speculators, capitalists and politicians with power), playing for time, procrastinating and palavering may be a bit risky but can have big pay offs. So for them, sometimes it is worth waiting, or even bending the rules a bit. This also takes the form of speculation on future lots in informal neighborhoods (while pocketing value-added land, or, as politicians would say, "beautifying" them in return for votes in the next election).

7.2 Planning for Sustainable Urban Development

Fundamentally speaking, urban planning is a decision-making instrument of major importance, whose mastery and wise use could help us think about the future and organize activities in a rational, functional way. But urban planning must be based on a future vision and idea of the city of tomorrow, with goals that actually become policies, strategies, programs and actions.

As the three case studies demonstrate, urban planning too often serves as a technical display, a technocratic, simplistic way to hide the lack of a solid urban project behind procedures, with utopian expectations that rarely have true outcomes. To put it another way, planning "instrumentalizes" poverty. Or worse, it merely serves as a dramatization, a fool's game designed to make ordinary city dwellers believe in a "bright future" and dream of another life to obscure the harsh reality of their existence. The takes place through the exploitation of individuals and resources at the expense of the majority and for the benefit of a rich minority.

But nothing means anything if the urban planning process is not part of a more global vision founded on sustainable urban development. The words "sustainable urban development" describe this integrative environment, which acts as a framework wherein one can reflect on the complexity of the city and its urbanity in the present and future. Taking "sustainable urban development" as a horizon promotes the sharing of ideas and experiences in an open way based on explicit criteria to provide alternatives to classic models that have not had the expected outcomes.

The chapters on urban data and criticism of urban planning brought us back to this notion of sustainable development. In these final considerations, we can draw a parallel with another concept used in this work: that of the inclusive city. What is this sustainable, inclusive city, for which urban planning would serve as a decision-making tool?

Starting from three dimensions – environmental, social and economic – sustainability aims to balance the protection of natural resources, social equity and economic prosperity, while safeguarding against the latter dimension's negative impact on the first two. This commendable perspective seems to be more wishful thinking than an actual conceptual analysis. In fact, since the 1980s, the impact of globalization of economic exchanges and the challenging of national protectionist measures – the very antithesis of the precepts of sustainable development – have been felt worldwide. The main consequence of this economic "revolution" is the imposing of the same economic model on all countries, economic producers and policy makers. This has unquestionably boosted the productivity of more dynamic emerging countries like China and Vietnam, with whom we have collaborated scientifically, in international markets. But it has also put enormous pressure on workers and working conditions, and relegated the poorest countries, which are unable to keep up with this global transition, to the margins. This is clearly the case in Burkina Faso, another country we have collaborated with, whose cotton exports have been hard hit by international market laws. Such countries have no means to defend their small rural producers against Asian and North American industrial giants.

The balance that sustainable development seeks is far from being achieved. Tensions between economic growth – which has been positive the world over for many years – and the social distribution of the wealth accumulated as such have steadily worsened. Overall, and in the three countries where we conducted our studies, the rich have become richer and the poor more numerous and even poorer[1] over the last three decades.

Moving away from this economic and social confrontation for a moment, we can nonetheless concede that progress has been made on the environmental front. Environmental criteria have had a positive impact on production methods, administrative organization and spatial planning. Considering environmental criteria in the organization of cities and the community activities that take place in them is in keeping with the concerns of the sustainable development model. A territorial dimension designed to spread human settlements out evenly over a given territory can be added to the environmental, social and economic dimensions, in the effort to avoid urban clustering and rural flight.

But (because there is a "but"), while these improvements are notable in many European cities, they have only recently appeared on the agendas of major Latin American cities (mainly in the form of pedestrian zones, green spaces and public

[1] For instance, in January 2019 Oxfam declared that "0.8% of the world's population have net worth in excess of $1 million and controls 44.8% of the world's wealth. The bottom half's wealth fell by 11%, whereas a few thousand billionaires saw their wealth increase by 12%" (See https://www.vox.com/future-perfect/2019/1/22/18192774/oxfam-inequality-report-2019-davos-wealth).

transport lanes), and are virtually inexistent in African cities (except for the first Bus Rapid Transit initiatives in cities like Dakar and Lagos). In the medium-sized cities studied in this book and in the Global South more generally, crucial issues such as wastewater and solid waste treatment are largely ignored due to a lack of resources and the absence of political will, at the risk of individuals' health.

7.3 Intermediate Cities: Between Urbanity and Regional Integration

The desire to question urban planning based on small and medium-sized intermediate cities illustrates the often poorly-understood issues of urban typology and the role these intermediate cities can play in evenly distributing individuals over an urban territory. As such, intermediate cities act as an interface between the rural and urban worlds and serve as service and amenity hubs for their regions. The three case studies demonstrate these cities' potential for sustainable development throughout the regional and national territory. They also show that these cities are not only little known and rarely studied, but that, beyond their differences, they also face great difficulties in establishing reliable, helpful urban planning tools.

Several authors quoted in this book question planning as it is practiced in South cities. They consider it inappropriate, as it is based on Western models and is unsuited to the characteristics of developing countries. These errors in urban planning notably affect small and medium-sized cities, which lack the human and financial resources to address important issues. In fact, it is now internationally recognized that urban agglomerations of less than 500,000 inhabitants have the highest population growth rates – in other words, higher than those of bigger cities. They are also those that suffer the most from a lack of administrative services (computer and internet communication, for example) and reliable, qualified staff. Moreover, they often have budgets that are insufficient for their needs, thus making them highly dependent on the central government and lenders.

Focusing on intermediate cities has shown their important in the fight for sustainable development, as a viable, attractive alternative to large urban areas. Easily assimilated to "ordinary cities" as defined by J. Robinson (2006), many indeed require appropriate management and better planning to organize their territories and the human activities there more effectively. All of this within the cities limits of city, but with an important impact on the regional environment as well.

Because they are smaller, one might think that the problems these intermediate cities face are less serious and more easily resolvable. This is a fallacy. As they are rarely known outside their provincial or national borders, they have difficulty attracting talent and funding, and must manage their problems locally, without consistent, structured outside support or recognition of their efforts.

At the crossroads of rural and urban, these small and medium-sized cities, which act as intermediaries between a varied, abundant supply and social demands, are in

desperate need of effective urban planning. And as we have seen, in those cases where urban planning does exist, it has not really served as a guide for reasoned, reasonable urban management.

7.4 An Alternative Based on Interdisciplinarity and Social Dialogue

In Chap. 3, we reversed the logic by proposing a framework indicating the different dimensions and phases of alternative planning (Table 3.1) and have attempted to explain it.

Rather than focusing on space and materials as too many urban planners and engineers tend to do, we suggest a conceptual and methodological approach based on listening to inhabitants and social dialogues in order to identify needs and priorities. This must take place well before designing plans and reproducing patterns that have no proven foundations. There is no contempt for technology or engineering here. On the contrary, we know that engineers, urban planners and architects are the backbone of urban planning. Data management and mapping tools, like open access to geospatial data, are revolutionary in that they favors exchanges between urban actors and facilitate the fundamental questioning of political and technical powers.

But my 30 years of career experience and the three studies discussed in this book show that understanding urban complexity can only be accomplished through an interdisciplinary approach involving the social and technical sciences, and transdisciplinarity between researchers, service providers and inhabitants. Opening ourselves up to innovative ways of doing things is not scientific coquetry; it is an ethical, social obligation that allows us to deal with the all too often catastrophic living conditions of poor urban families. As urban researchers, it is also our job to not accept such social inequalities and obstacles in terms of access to urban services and amenities.

Although we wrote this some time ago, this is unfortunately still the case: the poor pay for their right to the city at a higher cost than other city dwellers. This is true not only in terms of human energy but financially as well, as access to public utility networks is rare when not altogether inexistent for the most destitute. Yet, as we know, the city is a privileged space of sociability and individual and collective creativity.

Some final recommendations could serve as a guideline for promoting planning alternatives.

Again, taking up the four references in terms of sustainable urban development – the environmental, social, economic and territorial dimensions – we must first analyze the factors that challenge the sustainability of the urban actions that have been carried out so far, before envisaging any technical planning action.

This diagnostic work is based on sustainable urban development. Urban development is an “ideal”, and sustainability is its “time horizon”. Urban sustainability criteria are thus “the angle” from which urban complexity will be analyzed. Urban planning should serve as “instrumentation” to organize action and measure its effects.

On this basis, taking into account the research conducted at the beginning of the book on the evolution of the "urban world" and the shortcomings in the application of exogenous urban planning models in South cities, we have concluded that two paths can guide urban planning towards sustainable, shared development.

The first guides development through the "inclusive city" concept, a city whose main concern is integrating people in a society that promotes well-being and personal, family and social growth. This ultimate goal, which is a long-term ambition, is the counterpart of the individual and collective exclusion, marginalization and segregation we see today. By its mere existence, inclusion denounces the one billion poor urban dwellers living in precarious conditions and criticizes this disastrous reality as not being a "fatality", nor a "natural phenomenon", nor an "inevitable consequence" of growth. On the contrary, it is "a fact of society", the result of a social construction, a logic of social and economic exploitation that characterizes contemporary society and leaves its mark on South cities.

The inclusive city includes the four dimensions of sustainable urban development because it fashions a living environment that is conducive to individual emancipation and social solidarity. It contributes greatly to the fight against poverty, as the urban analysis and political action that emanate from its focus on margins, gaps, shortcomings and risks, as well as on the conflicts born of these tensions. This shift in our perspective highlights the many expressions of the segregation process. It seeks ways to integrate the poor based on their real needs because those left behind are symptomatic of an overall logic: that of the hard, brutal, violent, contemporary South city and its unfair growth dynamic.

I remember what my Cameroonian director said when I was working as a young head of the liaison service and land affairs for the Nylon zone management agency, in Douala, Cameroon, in the 1980s: "It's not the 90% success that matters. What counts are the 10% who are left behind. The most complicated thing is finding the right solutions for getting that marginalized 10% out of where they are." I reinterpret Pierre Elong Mbassi's sayings as best I can remember them, knowing how much they have guided me and still serve as a yardstick in assessing the work done. We can be proud of what we do well for the vast majority of urban dwellers, but must remain vigilant (and creative) about supporting the urban poor in their initiatives. They know the city is their future. They are entitled to it, like all of us. And all the more so as they represent the majority of urban dwellers in developing countries, albeit one that does not interest the wealthy and of which the authorities are wary.

To my mind, urban development should first and foremost focus on urban poverty in order to understand its origin – be it residential, land-wise or infrastructural. This precariousness translates into a lack of access to urban services and networks. This collaboration between researchers, professionals and poor citizens is not neutral; it stems from scientists' desire to enter the public arena and position themselves. The right to the city and social justice are not just moral values. They are also goals of well-thought out sustainable urban development. This means that social justice and the right to the city force us to understand this "state of facts". For if we do not understand urban dynamics in their very foundations and orientations, there is no way to transform the city as a whole.

The second path concerns the methods to be followed.

Knowledge that is not shared is not true knowledge. Co-creation provides an opportunity for debate, comparing ideas and visions, and brainstorming on the design and application of acceptable, appropriate solutions. This implies political will and an institutional framework that allows for it.

Urban settings are highly conducive to such prospects. The urban reality is complex in terms of its ever-increasing technological components, but also in terms of its social, economic and cultural interactions. The interactions between society, the built environment and natural resources add to the complexity. Analyzing a complex phenomenon like South cities requires the bringing together of a host of diverse skills. An interdisciplinary approach is essential to establishing a thorough diagnosis of the urban reality. Urban planners, architects and engineers must pool their knowledge with the know-how of social scientists, environmentalists, geographers, financial specialists and public managers. But the approach goes beyond research between scientific disciplines. Really making things happen on the ground means working with representatives of urban society such as resident associations, neighborhood groups, business associations, political parties, religious groups, etc.). Consultancy must no longer be merely technical or scientific. A transdisciplinary approach that allowing for a comparison of the "needs identified" and "social demands" is imperative. Analyzing urbanity through a shared diagnosis with urban actors at a precise moment in a given situation is essential for developing urban planning founded on rigorous, realistic, solid bases.

7.5 A Few Simple Rules for Dealing with Urban Complexity

These conclusions and recommendations may seem obvious…on paper, at least. But we know that applying such a methodology can be difficult, as it challenges the established powers, hierarchies and power relationships between urban actors.

At different times during our urban research and consultancy to urban stakeholders (local governments, etc.), we followed these steps:

1. a reference framework based on sustainable urban development goals;
2. an inclusive city position;
3. a poverty alleviation focus;
4. an interdisciplinary and transdisciplinary urban diagnosis.

These are the necessary premises for an effective urban planning approach.

The city must be considered and transformed based on the existing reality and the actions carried out by different actors at different scales. This "reality principle" is the best way to safeguard against pharaonic megaprojects (new cities and other top down absurdities). The iteration between inhabitants, professionals, researchers and decision-makers is the most failsafe technique for incorporating the many innovative processes, which can be tested in full scale.

That is why planning the city and its surrounding environment must respect certain fundamental criteria, among them:

- the development of an urban plan, which is a participatory process involving the population in both the analysis and decision-making phases;
- the proposed investments are based on
  - (a) the available budget and
  - (b) outside grants;
- priority actions and investments help in the fight against poverty and promoting the individual and collective integration of urban dwellers without discrimination;
- a shared database with open, transparent access and easy-to-use technical tools;
- the government, local administration and decision-makers are accountable to city-dwellers so as to make planning a tool of communication and exchange between the local authorities, the population and stakeholders, and to ensure that the impact of public action in general is measured, especially in urban projects.

An in-depth diagnosis and participatory planning are key elements for providing sustainable urban development planning alternatives.

Given the number of urban dwellers on the planet, the extent of urban poverty and the living conditions of the poor, the stakes are high and must be taken seriously. For they are the basis of real and profound changes in South cities and the best way both to promote sustainability and to fight against various forms of urban exploitation and segregation.

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