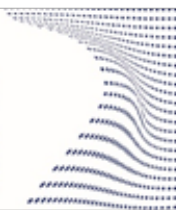




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Doctoral Dissertation  
Doctoral Program in Urban and Regional Development (32<sup>th</sup> Cycle)

# **The Enriched Field**

## **Urbanising the Central Plains of China**

**Leonardo Ramondetti**

\* \* \* \* \*

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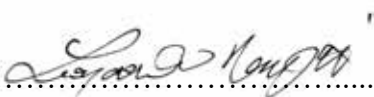
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I hereby declare that, the contents and organisation of this dissertation constitute my own original work and does not compromise in any way the rights of third parties, including those relating to the security of personal data.

A handwritten signature in dark ink, appearing to read 'Leonardo Ramondetti', is written over a horizontal dotted line.

Leonardo Ramondetti  
Turin, May 15<sup>th</sup>, 2020



# Summary

This dissertation focuses on the spatial transformations occurring in the Central Plains of China, Henan Province. Like most of the territory of inland China, the Central Plains used to be largely characterized by minor agglomerations built over a long period of time and made of small-scale infrastructures that supported a diffuse urbanisation. In the last three decades this has changed radically: the Central Plains have become the new frontier of Chinese urbanisation, a test-bed for new policies and spatial development such as the ones recently enacted by central and local governments, to promote more co-ordinated urban development. As a result, the Central Plains is now a regional-level urban agglomeration, the so-called Zhongyuan City Group, made up of nine prefecture-level cities, 23 cities and 413 townships, that produces 3.06 percent of China's GDP and is home to 45.5 million inhabitants (3.39 percent of the population of China) of which 30 percent (13.7 million) are considered 'urban population'. In this area of 58,400 square kilometres, the current policies aim to urbanize 4,902 square kilometres to host new inhabitants, new economies and to promote new ways of living and social constructions.

In spite of this expansion, the Central Plains are still a little studied field for research, and only in recent years have they come to the attention of scholars. As with most of the research on the Chinese city, these recent studies commonly attempt to fit the specificities observed into the extensive and generic framework of Chinese urbanisation. This framework is generally based on research that focuses on non-spatial features, and it mostly concerns socio-economic and urban policies related to demographic trends. The physical space is given little importance in the main debate and, if taken into consideration, is treated merely in quantitative terms (since it is considered by many as a banal space: the product of developers blueprinting the transnational models of a globalized society). On the contrary, the hypothesis of this research is that it is not possible to consider Chinese urbanisation as an 'above groundness' phenomenon, which only affects the socio-economic sphere because of quantities and ready-made imaginaries. The emerging physical space matters: it is a reflection of socio-economic trends, political ambitions and cultural values that are shaping new modes of living, constructing, occupying and consuming the land. Therefore, as a means of gaining greater insight into the process of urbanisation in China, this dissertation provides an interpretation based on detailed descriptions



that explain the relationship between the current policies, economies and societies, and the transformations affecting the physical space. As with all interpretations, it cannot be considered neutral. It accentuates some topics and themes, and requires further understandings and investigations. In spite of this, it seeks to set out an argument to open up further reflections on what Chinese urbanisation entails for the contemporary city, and more in general, for our way of constructing, living and perceiving it.

The research is organized into three sections. In the first, I set out a theoretical framework for examining the urban transformations in the Central Plains of China. This theoretical framework is based on narrative descriptions and territorial interpretations that have been developed by scholars to elucidate the relations between physical spaces and urbanisation processes occurring worldwide over the last fifty years. In particular, I focus on how three specific processes of urbanisation have been interpreted: the suburbanisation that characterised the middle landscape in North America, urban diffusion in the European setting, and the contemporary logistic and infrastructural spaces worldwide. In the second section, I investigate the urban transformations of the Central Plains of China by inquiring into the past urban conditions, their current state and the ongoing transformations. The purpose is to understand how policies, socio-economic trends, plans and projects of the last century have affected the space observed. Finally, in the third section, I examine the current configuration of the Central Plains; this is based on an empirical study carried out during three periods of field research in China. During these periods, I investigated several areas of the Central Plains and I provide critical re-interpretations of the phenomena observed as representations that provide valuable information about ways of living, using and modifying spaces.

Based on the above investigations, I conclude that the Central Plains of China may be read as an enriched field, where the term enrichment refers to an attempt to improve and enhance spaces not only in terms of their performances but also by associating them with tales. In this way, the Central Plains of China can be seen as a space in which infrastructures operate not only to organize and to equip the land, but also to promote the story of ‘a good environment’ to come; where most of the artefacts not only fulfill their basic functions, but also brand the space and ensure the quality of everyday life through the continuous recall of the past and tradition; finally, a place in which productive sites enrich the land with symbols, meanings and happy endings. Within this framework, I argue that the ongoing transformations are guided by a project, which, rather than exalting the disruptions, is an instrument through which discontinuity and disconnections are concealed and interiorized in an ordinary tale subsuming the past and promoting the future while enhancing the idea of a continuous present redacted of any conflict and violence.

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Through my doctoral career I had the opportunity to spend much time abroad, to conduct fieldwork in China, to study in research centres and libraries (above all the Tsinghua University in Beijing), and to discuss the provisional outcomes of my research in workshops, seminars and conferences. I would like especially to thank for all this Umberto Janin Rivolin, the coordinator of the Ph.D. program in Urban and Regional Development at Politecnico di Torino, and professor Zhong Ge, my handler at Tsinghua University.

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Finally, this thesis is dedicated to my parents, with great admiration, profound gratitude and much love.

As final point, this research had been carried out in more three years and it was submitted in February 2020, one week before the COVID-19 outbreak in Italy. Since that date the world has turned inside out, and still now it is not possible to tell how this tragic event will affect our life in the next months and years. In spite of this, I believe that the questions and hypothesis raised in this work are still today a matter of debate.

Turin, May 15<sup>th</sup> 2020,

Leonardo Ramondetti

*To my parents Marilena and Silvio*

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# INTRODUCTION



## **Hypothesis**

Since the economic reform of 1978, China has experienced a period of radical transformation with unprecedented economic development and population growth. In the last fifty years, the country's population has increased from less than one billion to one and a half billion, while GDP growth has annually ranged between 4 and 15 percent (National Bureau of Statistics of China, 2018). These conditions have led to an enormous urban development. In an extraordinarily short time, the urban population has exploded from 18 to 60 percent of the total population (Liang, 2014; Miller, 2012); 75 percent of this growth is accounted for by net migration and urban reclassification (Chan, 2013; Kirkby, 1985; Miller, 2012). At the same time, the Chinese territories have undergone a revolution in structure. The number of cities has increased from 190 to 674; infrastructures now reach every part of the country and land conversion to non-agricultural uses has reduced Chinese farmland to about only one-tenth of the country's total land surface (Fang & Yu, 2016; Hsing, 2010; National Bureau of Statistics of China, 2018). The first wave of urban development mainly affected the coastal regions, so, of late, new urban policies have been put in place to rebalance regional disparities; by means of these policies, the central government is planning to urbanize 25 percent of Chinese territory, that is, an area already inhabited by 63 percent of the Chinese population, accounting for 80 percent of China's GDP and home to 64 percent of Chinese cities (Fang & Yu, 2016). In other words, China is now urbanizing an area eight times the size of Italy, with a population three times that of the United States and a GDP twice that of Japan.

Within this framework, granting official status to those urban agglomerations located in the coastal region simply rubberstamps existing metropolitan areas such as the Yangtze River Delta or the Pearl River Delta. However, areas located in inland China, such as the Central Plains, represent the new frontier of Chinese urban development.<sup>1</sup> Compared to the massive, rapid urbanisation that affected the coastal regions soon after the economic reform, the Central Plains have experienced a different story that is also true for most of the territories in inland China. They are characterized by minor agglomerations, built over quite a long period of time and employing minor infrastructures to model the land. Some of the major centres, which over the centuries have performed chiefly administrative functions, are located in this enormous inland area, largely characterized by a diffuse urbanisation (Busquets & Yang, 2019; Lee, 2016a; Ren, 2013). In the last three decades, the situation has changed rapidly as these territories have become testing grounds for new policies, practices and forms of spatial development. Within this context, the Central Plains were firstly subjected to the urban entrepreneurship policies of the major municipalities; then, since mid-2005, this territory has experienced several initiatives undertaken by central and local government to promote a more comprehensive urban development (Shepard, 2015; F. Wu, 2015). As a result, nowadays the Central Plains are a regional-level urban agglomeration (the Zhongyuan City Group), made up of nine prefecture-level cities, 23 cities and 413 townships, which produces 3.06 percent of China's GDP and is home to 45.5 million inhabitants (3.39 percent of the population of China) of which 30 percent (13.7 million) is categorized as 'urban population' (Henan Province Bureau of Statistics, 2018). In this total area of 58,400 square kilometres, the current policies aim to urbanize 4,902 square kilometres to host new inhabitants, new economies, and to promote new ways of living and social constructions (Fang & Yu, 2016).

Consequently, nowadays from the window of a highspeed train, the Central Plains of China appear to be a flat, wide-open expanse in the throes of a revolution. The ancient pattern of urbanisation composed of scattered villages, small factories and farms connected by dense infrastructural networks of dirt roads and small canals is now overrun by new forms of urbanity. Construction sites have sprung up everywhere, and the number of blue roofs that identify workers' shacks is greater than the red roofs of farmers' houses. Bridges, highways and railways crisscross the entire area, while grids of four-lane roads subdivide the land into plots in preparation for the forthcoming urbanisation. In proximity to the major cities, the infrastructural network intensifies; industrial sites and compounds of high-rise buildings fill the landscape, while towers and skyscrapers appear on the horizon. That is how the Central Plains of China look today: a huge space for accumulating heterogeneous urban materials; a space in which factories, construction sites, fields, golf courses, ancient villages and new urbanised areas are all massed together.

In spite of this, the territory of the Central Plains is still a little-studied region, and only in recent years has it caught the attention of scholars.<sup>2</sup> As with most of the research into the Chinese city, these studies commonly attempt to fit the specific

features of the subject into the extensive and generic theoretical and interpretative framework of Chinese urbanisation. A framework that, however, is far from being definitive. In fact, this “city of exacerbated difference” (Koolhaas, Chung, Inaba, et al., 2001, p. 29) that stands “between the exceptional and the ordinary” (Bonino et al., 2019, p. 20) has given rise to a wide variety of opinions, often in contradiction with one another. For instance, it has been described as the outcome of peculiarly ‘Chinese characteristics’ (Huang, 2008; Jianfei Zhu, 2009), as well as one of multiple ‘materializations of globalization’ (Ren, 2011; F. Wu, 2006b), or even as a ‘third space’ or ‘hybrid space’: the result of a mix of specific place conditions and international trends (AlSayyad, 2001; M. Y. Wang et al., 2014; F. Wu, 2016a). The hypotheses regarding the future prospects for Chinese urbanisation are even more divergent. The wide variety of scenarios range from deeming the Chinese city to be the “fix to absorb capital [...], [that reproduces] the inequalities within the world system [...] into the urban realm, further shaping inter- and intra-urban inequalities as new forms of ‘uneven spatial development’” (F. Wu, 2007a, pp. 9–16) to considering it “a test bed for some of the new industries, research facilities, innovation themes, quality assurance processing or a way of working that will lay the foundation for that modernizing rebirth” (Williams, 2017, p. 203).

In spite of this wide spectrum of positions, most of the research conducted in recent years in the field of urban studies is based on non-spatial features. These investigations provide a general picture of the current state of Chinese urbanisation by questioning how economic and urban policies, social practices and demographic trends are affecting Chinese cities. The main approaches adopted are: to retrace Chinese history;<sup>3</sup> to analyse demographic trends, socio-economic conditions and urban policies;<sup>4</sup> to deconstruct the Chinese city into peculiar spaces or to identify specific issues;<sup>5</sup> and to investigate how globalization is affecting the urban realm.<sup>6</sup> Within this framework, the *physical space* is almost overlooked in discussing the main issues. By regarding Chinese cities as “theatres of accumulation, [...] centres from which are diffused the cultures and values of westernization” (Armstrong & McGee, 1985, p. 41), the *physical space* is merely considered a *banal space* carved out by developers and designers who are blueprinting distorted replicas of transnational models and iconic symbols of the global society (Bosker et al., 2013; Fiandanese, 2019; King, 2004; Sklair, 2006, 2006). Based on this assumption, most of the research looks at built-up spaces, cultural artefacts, territorial organisations and all the other physical characters of Chinese development as undeserving of attention or, at most, to be assessed only in quantitative terms.

As a consequence, despite the general consensus that China is “the largest construction site in the world today” (Jianfei Zhu, 2009, p. 169), just a few scholars are investigating what is currently under construction.<sup>7</sup> The *physical space* remains an elusive matter. This is due to the difficulty in grasping a phenomenon which is subject to continuous and abrupt change, and whose outcome is an ‘unstable ground’ constantly in evolution. Every time one goes there, the same thing looks different. In light of this, as sustained by Rem Koolhaas (2001), in the Chinese context

“the urban seems to be least understood at the very moment of its apotheosis” (p. 27). However, it would be a mistake to consider Chinese urbanisation merely an ‘above groundness’ phenomenon which is affecting the socio-economic sphere mostly because of quantities and ready-made imaginaries. On the contrary, the *physical space* matters: new economies are closely linked to the emerging territorial organisation (new infrastructures, logistic platforms, industrial areas as well as tourist sites), new practices and social constructions are related to changes in the everyday living environment (new housing, systems of mobility, leisure areas), and an increasing number of new policies address territorial issues (the need to preserve farmland, curb pollution, capitalize on specific sites). Hence, the emerging *physical space* is a reflection of socio-economic contingencies, political ambitions and cultural values that are shaping new modes of living, constructing, occupying and consuming the land.

Based on this background, the hypothesis of this research is that to gain greater insight into the process of urbanisation in China, it is necessary to set forth interpretations based on accurate descriptions which are able to relate the current policies, economy and society to the transformations affecting the *physical space*. To do so, the research adopts as its subject the territory of the Central Plains of China. By investigating this territory and its transformations, the research questions the grounds of these socio-economic and political phenomena, and how they are shaping the contemporary living environment. In order to answer these questions, the study provides a *synthetic interpretation* to clarify the relations between the *physical space* and the ecological, environmental, economic and infrastructural systems. To achieve this goal, the research is built around three courses of action.<sup>8</sup> The first is to set up a theoretical framework to investigate the urban transformations in Central Plains of China and to draw up a *synthetic interpretation*. This theoretical framework is built upon *narrative descriptions* and *territorial interpretations* that over the last fifty years have been developed by scholars to define the relations between *physical spaces* and urbanisation processes occurring worldwide. Moreover, to investigate these interpretations, it also provides a methodological overview on techniques and methods adopted by different scholars for investigating how urbanisation processes affected the land. The second step is to look at the urban transformations of the Central Plains of China by examining past urban conditions, the current situation and ongoing transformations. This investigation has been performed by examining official documents and data retrieved both in loco and digital archives,<sup>9</sup> as well as by reviewing the literature on Chinese urbanisation, and the specific literature on the urbanisation of the Central Plains.<sup>10</sup> This study seeks to understand how policies, socio-economic trends, plans and projects of the last century affected the Central Plains. The third procedure is to carry out fieldwork in loco, hence, to *experience places* by observing the ongoing territorial transformations, and critically re-work them into *synthetic representations*.<sup>11</sup> This empirical study was carried out during three periods of field research in China, and it has been preceded and supported by a para-empirical investigation based on the analysis of satellite images.<sup>12</sup> During the fieldwork I visited several areas of the Central Plains, and I critically developed

re-elaborations of the phenomena observed and the raw data collected in the forms of maps, datascares and schemes.<sup>13</sup> These *territorial representations* (together with pictures, movies and other visual materials) provide information on the current practices of living, occupying and modifying the *physical space* by combining qualitative and quantitative data.<sup>14</sup>

Based on the above, I finally provide a *synthetic interpretation* of the urbanisation occurring in the Central Plains of China by linking the outcomes of the three research activities. In particular, I seek to relate features and phenomena occurring in the Central Plains of China to those of the urbanisation processes examined in the first section. To link them does not mean to adopt a comparative approach given the impossibility of using traditional models and interpretative categories in investigating urban China (Bonino et al., 2019); nor does the research use the urbanisation occurring in China to prove, reject or revise specific urban theories. Furthermore, the research does not attempt to provide a coherent vision or put into perspective Chinese urbanisation and the other urbanisation processes taken into consideration. On the contrary, by linking the urbanisation of the Central Plains of China to other urbanisation processes the research attempts to establish an *interpretation* from which is possible to deduce *narrative figures* which operate in mutual relation both on a descriptive level and on a design and constructive level (Secchi & Viganò, 2014). As with all *interpretations*, while it is based on research activities, it cannot be considered neutral. It stresses some topics and themes, and requires further understanding and investigations. In spite of this, the *synthetic interpretation* of the Central Plains seeks to set out an argument from which it is possible to open up further reflections on what Chinese urbanisation entails for the contemporary city, and more in general, for our way of constructing, living and perceiving it.

## Structure

By adopting the research strategy mentioned above, in the first section of the thesis I establish a theoretical framework by recovering *synthetic interpretations* and *narrative figures* of urbanisation processes occurring worldwide. In doing this, I focus on studies that seek to understand how different territorial systems work in terms of relations between *physical spaces* and socio-economic and political conditions. In particular, I focus on discourses regarding three major urbanisation processes that have occurred worldwide over the last fifty years: the construction of the *middle landscape*, the process of *urban diffusion* and the organisation of the contemporary *logistic and infrastructures spaces*. As with the present urbanisation of the Central Plains of China, even the *city* resulting from these three processes appears to be elusive at first glance. In making a *middle landscape*, the north

American space is considered a “*mega* assemblage of urbanity [...] [where] the prefix *mega*- speaks to their scale, their incomprehensibility, and their resistance to be recognized as a stable or singular identity” (Thün et al., 2015, p. 2). In the same way, the process of *urban diffusions* produced territories that “appear to be a confused mix of heterogeneous fragments in which it is impossible to recognize any order whatsoever or any principle of rationality that may make it intelligible” (Secchi, 2000, p. 75). Finally, the “superimposed, contested and interconnecting infrastructural ‘landscape’” (Graham & Marvin, 2001, p. 8) makes the city “a set of constantly evolving systems or networks, machinic assemblages which intermix categories like the biological, technical, social, economic, and so on, with the boundaries of meaning and practice between the categories always shifting” (Amin & Thrift, 2002, p. 78).

Even though “the contemporary city opposes a stiff resistance to being described” (Secchi, 2000, p. 77), the scholars mentioned above, as well as many others, have provided *synthetic interpretations* in order to understand what kind of space is that of the contemporary city and how it relates to socio-economic and political conditions. In the north American context, the *middle landscape* appears to be a space between primitivism and civilization, characterized by a pastoral capitalism, and spatially organized using a grid layout as the representative form of democratic subdivision of land as well as individual freedom. This space has been defined as *megapolis* (Geddes, 1949; Gottmann, 1961; Hall, 1966), *pastoral city* (Machor, 1987; Marx, 1964; Mozingo, 2011), *edge city* (Garreau, 1992), *exploding metropolis* (Whyte, 1993), *dispersed city* (Chakrawarti, 1996), *boomburbs* (Lang & Simmons, 2001), *edgeless city* (Lang, 2003), *suburbia* (Duany et al., 2011; Keil, 2017), *sprawl* (Bruegmann, 2006; Morris, 2005), *drosscape* (Berger, 2007), *territorialism* (Viganò, 2014), *ladders* (Pope, 2015), *infra-eco-logi urbanism* (Thün et al., 2015), *sequel to suburbia* (Phelps, 2015), *landscape urbanism* (Waldheim, 2016). On the other hand, the *urban diffusion*, emerging from a molecular capitalism related to the self-entrepreneurialism of individuals shaping their own living environment, has been described as *campagna urbanizzata* (Samonà, 1976), *città diffusa* (Indovina et al., 1990), *de tapijtmetropool* (Neutelings, 1991), *desakota* (McGee et al., 1991), *città disfatta* (Sernini, 1994), *after-sprawl* (De Geyter, 2002), *zwischenstadt* (Sieverts, 2003), *città infinita* (A. Bonomi & Abruzzese, 2004), *grünmetropolere* (Ter & Diedrich, 2008), *arcipelago metropolitano* (Indovina, 2009), *post-suburban city* (Phelps et al., 2006), *urbanisation sans urbanisme* (Grosjean, 2010), *ville poreuse* (Secchi & Viganò, 2011), *anticittà* (Boeri, 2012), *shared territories* (Bianchetti, 2014c), *townization* (Rowe & Kan, 2016; D. Yang, 2014), *landscape of isotropy* (Viganò et al., 2016), and *horizontal metropolis* (Viganò et al., 2018). Finally, the urbanisation emerging from the contemporary pervasive network of infrastructure which grounds globalization by allowing international division of labour has been described as *ecumenopolis* (Doxiadis, 1968; Doxiadis & Papaioannou, 1974), *one-town world* (Fuller & Dil, 1983), *world cities/global cities* (Friedmann, 1986; Sassen, 2001), *networked city* (Dupuy & Tarr, 1988; Taylor & Derudder, 2003), *space of flows* (Castells, 1991, 1996), *generic city/junkspace* (Koolhaas et al.,



1995), *postmetropolis* (Soja, 2000), *splintering urbanism* (Graham & Marvin, 2001), *mechanosphere* (Amin & Thrift, 2002), *weak and diffuse modernity* (Branzi, 2006), *solaris* (Isozaki, 2012), *planetary urbanisation* (Brenner, 2014), *operational landscapes/systems* (Katsikis & Ibañez, 2014; Lyster, 2016; B. Rankin, 2016), *kinetic city* (Mehrotra, 2014), *soft city* (Bhatia & Sheppard, 2014), *extrastate craft* (Easterling, 2016), *ephemeral urbanism* (Mehrotra et al., 2017).

This broad variety of definitions highlights several *interpretative hypotheses* settled on by various scholars to understand how territorial systems work. This vast body of literature could be considered interesting for at least three reasons. First, it involves cross-disciplinary research that includes scholars and practitioners across multiple areas of expertise, such as architects, urbanists, geographers, sociologists, economists, landscape architects, and so on. They attempt to establish a shared language able to combine multiple methods and instruments employed by different disciplines. As a consequence, the resulting *interpretations* provide a common framework permitting discussion of current urban conditions across several field of studies. Second, the *interpretations* developed this way are not just descriptions of particular conditions localized in specific spaces and time periods. On the contrary, they go beyond the singularities of each case-study. By establishing a well-defined *interpretative hypothesis* concerning the contemporary urban transformations, studies such as *Mutations* (Koolhaas, Boeri, et al., 2001), *International Perspective on Suburbanisation* (Phelps & Wu, 2011), *Implosion/Explosion* (Brenner, 2014), *Ecological Urbanism* (Mostafavi & Doherty, 2016), *The Horizontal Metropolis Between Urbanism and Urbanisation* (Viganò et al., 2018) re-scale the observed phenomena, re-articulate specific subjects, and relate them to other cases, topics, and disciplinary discourses. Finally, the *synthetic interpretations* resulting from this research do not claim to be objective, nor so they provide solutions to specific issues. On the contrary, they are a useful introduction for a debate; thus, providing a starting point for articulating broader discussions and further investigations.

In the second section of the thesis I provide a diachronic narrative of the spatial transformations occurring in the Central Plains of China in the last century. In recording the urban transformations of this territory, I focus on the relationships between socio-demographic trends, economic and urban policies, and planning activities. The section is organized into three time periods: the urban transformation that affected the Central Plains from the 1920s to the 1990s, the urban entrepreneurialism that characterized the inland cities from the 1990s to the mid-2000s, and the new urbanisation trends of the last fifteen years. Each of these phases is representative of different ways of envisaging and designing the territory of the Central Plains.

The Central Plains have always held the attention of Chinese governments because of their importance as a food production area and their strategic geographical position. Moreover, this territory has always been one of the most densely populated in China (National Bureau of Statistics of China, 2018).<sup>15</sup> Since the beginning of

the twentieth century, several policies have been implemented in order to modernize this area of the country. During the republican period, the Central Plains have greatly benefited from the foundation of the Chinese infrastructural network, particularly from the establishing of the major railway lines (Song, 2007). This network was upgraded significantly in the post-revolutionary period, while policies such as the ‘third frontier initiative’ boosted the creation of large industrial sites in inland China to decentralize production (Hsu, 1996; F. Wu, 2015). The Central Plains have been greatly affected by these phenomena, and one of the most exemplary cases is the city of Zhengzhou, which experienced massive growth as one of the major railway junctions in inland China.<sup>16</sup> Before 1949, several projects were undertaken to promote Zhengzhou as one of the main inland trading ports; while after the Chinese revolution Zhengzhou was developed as one of the major centres of textile production in China. As a result, in just fifty years from 1920 to 1970, the city area grew from 5 to 65 square kilometres, while the population increased from 20,000 to 780,000 inhabitants (Hao, 2006; Yanpu Liu, 1988; Ying Liu et al., 2008; C. Zhang, 2007). The planning activities carried out by the Zhengzhou municipality during that period were greatly influenced by modern international theories on planning (in particular soviet urban planning) that sought to create a modern functionalist city focused on industrial activities.

Since the ‘open door’ policies in the eighties, the urbanisation of the Central Plains has entered a new phase. This has been characterized by increasing fiscal devolution coupled with the effects of the first wave of globalization (F. Wu, 2006b). These conditions have led the major cities to compete with one another in order to emerge onto the national and international scene, and this has defined the network of Chinese major cities (F. Wu, 2015). Under the impetus of urban entrepreneurialism, the construction of Economic and Technological Development Zones (ETDZs), new towns, and new districts was promoted (Hsing, 2010). Within this framework the most emblematic case in the Central Plains is the design and the construction of the Zhengdong New District: a new town for one and a half million people over an area of 150 square kilometres (K. Li et al., 2010b; Xue et al., 2011). Zhengdong New District is a symbol of a period in which the construction of new towns and emblematic spaces, such as Central Business Districts (CBDs), high-speed new railway stations and technological parks, was considered a way to empower vast regions by catalysing foreign and domestic investment. Thus, the new urbanisations were intended as tools to self-promote the city; ‘window displays’ prepared by important international architectural offices, reflecting the need to provide a precise global vision and imaginary (Ramondetti, 2019).

Although Zhengdong is still under construction, in 2005, national policies began to change, in turn, affecting the methods employed in urbanizing new areas. In particular, since the 11th five year plan (2005-2010), the re-emergence of regional planning activities and several policies enacted by the central government (such as the Central Rise Strategy and the New Socialist Countryside) have fostered the development of so-called ‘urban clusters’ or ‘urban agglomerations’ created by

coordinating urban centres of different sizes in order to generate regional polarities (Fang & Yu, 2016; Xuefeng Wang & Tomaney, 2019; Xu-sheng Wang, 2007; F. Wu, 2015). What ensued has been a substantial redesign of the city-network created in previous decades: the network intensifies, cities increase in number, and points become clots (Ramondetti, 2019).<sup>17</sup> In 2006, the establishment of the so-called Central Plains Urban Agglomeration heralded a shift from a *centripetal urbanisation* to a *centrifugal urbanisation* meaning the gradual regionalization of forms of economic competition (Xu-sheng Wang, 2007). As one of the most representative outcomes of these policies, in the same year, several intuitions promoted the creation of the Zhengbian New District in order to integrate and coordinate development between urban and rural areas; industrial, productive and cultural zones; and, in particular, logistic and infrastructural facilities (Zhengzhou Municipality, 2009). The Zhengbian New District is designed to urbanize 500 square kilometres located in 2,100 square kilometres between the cities of Zhengzhou and Kaifeng, a territory which also includes the Zhengdong New District and the Zhengzhou Airport City, and is currently inhabited by four and a half million people (ARUP Engineering Consulting Company et al., 2009, 2010). Nowadays Zhengbian represents a new rhizomatic and polymorphic form of urbanity, which is absorbing more and more territory. An urbanisation grounded on of a loose, deformable space capable of containing everything: industrial districts, eco-cities, central business districts, agricultural towns, large stretches of countryside, and vast infrastructure and logistic areas. This territory is representative for the investigation of the ongoing transformations occurring almost everywhere in the Central Plains.

Based on this, in the third section of the thesis I examine how the *physical space* of the Central Plains is currently being transformed, organised, constructed, and occupied. This does not simply focus on morphological constructions; on the contrary, it requires an ‘extreme effort of imagination’ to understand how the physical space reflects socio-economic conditions (Secchi, 2000). The investigation is structured into three phases. First, a para-empirical investigation based on satellite images and data collection (Parks, 2001; Warf, 2012). Second, a direct experience of “the grounded spaces of urban reality where people live their lives” (McGee, 2002, p. 20) performed in order to recast the visual by “grasping vision, touching the light” (Crang, 2009, p. 217). Third, an empirical investigation carried out by critically processing raw data into *territorial representations*, such as maps, datascares, schemes, and pictures. These representations are processed by adopting a “speculative urbanism [...] [able to] question of urban society in a time when its primary historical spatial unit, the city, no longer constitutes a construct possessing clear functions, boundaries, or distinctions from that which is not city” (Thün et al., 2015, p. 2). They present a “generative potential [...] [that] allows one to construct readings of the landscape that otherwise would remain hidden or too complex to be organized into any comprehensible form” (Berger, 2002, p. 109). At the same time, they open to further speculation by “set[ting] the conditions for a new eidetic and physical word to emerge” (Corner, 1999, p. 198).

In constructing *territorial representations*, the *ground* is not intended as something stable, and the *physical space* is not viewed only in terms of morphological construction. On the contrary, spatial configurations are considered as an ongoing process based on tension between forces which “oscillates between the static and the dynamic point of view, in any given configuration there is an inherent propensity for the unfolding events” (Fung, 1999, p. 144). The *physical space* is in this way affected by transformations brought about by actions leading to a cumulative selection of elements ‘structuring’ the ground (Corboz, 1985). This selective process reflects historical, cultural, economic and social values (Secchi, 2000). Hence, the territory is considered to be “an ongoing medium of exchange, a medium that is embedded and evolved within the imaginative and material practices of different societies at different times” (Corner, 1999, p. 5).

Based on these considerations, the investigation focuses on three phenomena which are currently changing the territorial configuration of the Central Plains of China: the overlapping of infrastructural networks, the juxtaposition of different types of settlement, and the reassembly of land-uses. These phenomena are considered as the most significant in understanding how the ongoing transformations are modelling the land. For instance, in the area of Zhengzhou municipality alone, the kilometres of road built per year increased from 230 in 1978 to 2,101 in 2017; consequently, the total area paved for infrastructure passed from 2,300 to 58,210 thousand square metre (Zhengzhou Municipal Statistics Bureau, 2018). In the same period, the total length of the water supply system increased from 306 to 4,420 kilometres (Zhengzhou Municipal Statistics Bureau, 2018). These data evidence how the construction of new infrastructure is a phenomenon which is gathering pace with the emergence of a new territorial organisation. Similarly, another increasingly significant phenomenon modifying the urbanisation pattern is the production of new housing, and the replacement of the old stock. Considering Zhengzhou municipality alone, in the last decade, investment in construction rose from 298,800 to 3,358,800 million CNY, 72 percent was invested in real estate (Zhengzhou Municipal Statistics Bureau, 2018). In the same period, the estimated revenue for new property development increased from 392,300 to 2,673,800 million CNY, 85 percent resulting from real estate revenue (Zhengzhou Municipal Statistics Bureau, 2018). Thus, the total area of new developments for sale doubled in the last two years reaching approximately 30,000,000 square metres of which only 12 percent (3,600,000 square metres) are for non-residential purposes (Zhengzhou Municipal Statistics Bureau, 2018). The real estate boom has been coupled with a radical territorial restructuring of provision of ‘land quotas’.<sup>18</sup> Due to this process, currently underway, in the area of the Zhengbian New District alone, in the last three years, about 380 villages have been demolished while about 100 new agricultural towns have been constructed for relocating villagers.<sup>19</sup> This phenomenon is just one of the many significant territorial restructuring operations in the Central Plains. For instance, since 1978, in the Zhengzhou municipality, 10,000 square kilometres of agricultural land has been converted to other uses (Zhengzhou Municipal Statistics Bureau, 2018). At present, in the area of Zhengbian alone,

about 140 square kilometres is currently ‘waiting land’, namely empty plots of lands bounded by infrastructure but not yet under construction.<sup>20</sup> The way in which land is currently used and modelled, together with the huge amount of ‘available space’ (Sampieri, 2019), is radically redefining relations between cultural artefacts as well as the way of living and practices in this territory. In conclusion, these three processes appear to be the most relevant in understanding how the emerging *physical space* of the Central Plains is transformed, occupied and lived. Hence, the outcomes of this investigation are used as a basis for understanding the logic, structures and features of this new *physical space*.

## Outcomes

Based on the observations described in these three sections, the thesis out to develop a *synthetic interpretation* of the Central Plains of China. This interpretation cannot be exhaustive; it is more than evident that it is not possible to find an unequivocal interpretation that resolves all the questions that this territory and its transformations raise. Instead, the aim is to provide an interpretative key from which to take a small step forward compared to the current literature, an almost imperceptible advance opening the way to future investigations. Bearing this in mind, the hypothesis of this thesis is that the Central Plains of China may be viewed as an *enriched field*, where the term *enriched* refers to the positions of Luc Boltanski and Arnaud Esquerre (2019) in *Enrichissement*; and it is used here to problematise some contemporary economic forms, similar to the ones inquired by the French scholars, into a non-European context and to engage in a reflection on the urbanisation process and the spatial transformations.<sup>21</sup>

A similar interpretation can be based on the findings reported in the third section of this thesis (chapters 7-9): regarding the new infrastructural supports, living spaces and the reconfigurations of the territory in the Central Plains of China. Here, the infrastructuralisation carried out by the local and national governments in recent years has uniformly taken over the land, and through homologation constitutes an *equipotential surface* levelling all discrepancies between different parts of the territory and wiping out any positional values. However, this new infrastructure does not stop there: the *equipotential surface* is composed of a variety of devices, not only infrastructure for mobility, but parks, leisure areas, and scenic spots. This assemblage of facilities does not just equip the area, but is an act of *environmental enrichment*, thus, becoming the vector for a new ecological comfort that “reflect[s] China’s newfound appreciation of quality over quantity” (Williams, 2017, p. 190). Within this *equipotential surface*, market forces may act freely. These fuse the land through the establishment of products that create added value. A value that is not solely a use-value, but, instead, based on their expressive charge and the

tales that accompany them. The first aspect is evident in the new agricultural towns where there is widespread use of global imaginary, completely out of keeping with traditional styles (Lee, 2016a; Ren, 2011). In addition to this expressive character, in residences built by the real estate developers, one finds the *branding* of the living spaces (Carota, 2019). In fact the real estate companies ascribe a story and a specific image to every product, involving both the maker, who becomes a symbol and a stable and recognisable reference, as much as the consumer, who uses the product and identifies with the typified image of the person to whom the article is targeted. The result is the *enrichment of the everyday*, which is created through the search for specific particularities and reciprocal differences between single urban artefacts.

However, it would be a mistake to imagine the territory of the Central Plains of China as a single vast space equipped and deregulated solely for the exclusive use of speculators. On the contrary, adding value to the territory is a process that is performed through well-built constructions that modify every portion of the land and confer liveability on every space. The result is a *syntrophic territory*: a territory that tends to be ever more orderly within its confines and differentiated in its components. A state that is not dictated only by the will to optimise the spatial performance. Instead, by acting this way, it is easier to *enrich with meaning* the territory through a spectacularisation of each and every part, that is, transforming coarse, raw places into places instilled with their own story (Boltanski & Esquerre, 2019). Thus, industry is no longer a place of production, but becomes a giant creative district that exhibits the achievements of hard-work in the place; celebrating the cultural and technological advances made in art, spectacle, and physical and economic living standards. Similarly, exploiting the “power of symbols” (Ren, 2011, p. 167), the CBDs of Zhengdong pay tribute to its financial power; the agricultural areas near the Yellow river are reminiscent of a kind of Chinese-style pastoral progressivism as ‘agricultural parks’; the railway stations, such as Zhengdong’s, are not simply infrastructural nodes, but have become Transit-Oriented Development areas (TOD); and the city of Kaifeng has become one huge theme park in praise of the ancestral past of the place. The explanation for this is that it is necessary for each one of these spaces to be instantly recognisable, clearly defined and easily legible. Here too, the constant action of (re)design, which the entire territory of the Central Plains of China is subject to, makes a fundamental contribution. A planning process that places more emphasis on the *event* than the *fact* (Boltanski & Esquerre, 2019). Hence, any urban plan is firstly spectacularised through competitions, international firms, which become the brand and, later, celebrated and institutionalised by the public press, government bulletins and exhibition halls. All because, at the end of the day, this is a form of wealth and value generation that refuses to freeze the present through the (re)construction and (re)invention of the past and tradition (Hobsbawm & Ranger, 1983); instead, it projects forcefully an idea of a spectacularised future that takes inspiration freely from any source that serves to strengthen it. In this sense, the territory of the Central Plains of China can be said to be enriched: not only in products, urban objects and physical spaces, but, above all, in stories, images and interpretations.

## Notes

- 1 Regarding coastal region and inland territories, reference is made to the ‘three lines’ policy which in the sixties and seventies divided China into three macro regions: the ‘coastal regions’ (Beijing, Fujian, Guangdong, Jiangsu, Liaoning, Shandong, Shanghai, Tianjin, Zhenjiang and the Guanxi Autonomous Region), the ‘border regions’ (Gansu, Qinghai, and the Mongolia, Ningxia, Tibet, Xinjiang autonomous regions), the ‘inland regions’ (Anhui, Guizhou, Henan, Heilongjiang, Hubei, Hunan, Jiangxi, Jilin, Shanxi, Sichuan, and Yunnan) (Kirkby, 1985). Nowadays the central government classify Chinese provinces in two different ways. According to the ‘economic regions’ Chinese provinces are organized in four areas: the ‘east coastal regions’ (Beijing, Fujian, Guangdong, Hainan, Hebei, Jiangsu, Shandong, Tianjin, and Zhejiang), the ‘central regions’ (Anhui, Henan, Hubei, Hunan, Jiangxi, and Shanxi), the ‘north-east regions’ (Heilongjiang, Jilin, Liaoning, and part of Inner Mongolia), and the ‘western regions’ (Chongqing, Guangxi, Gansu, Guizhou, Ningxia, Qinghai, Shaanxi, Sichuan, Tibet, Xinjiang, Yunnan, and part of Inner Mongolia). According to the ‘statistical regions’ Chinese provinces are organized in five areas: ‘north China’ (Beijing, Hebei, Tianjin, Shaanxi, and part of Inner Mongolia), ‘northeast China’ (Heilongjiang, Jilin, Liaoning, and part of Inner Mongolia), ‘east China’ (Anhui, Fujian, Jiangsu, Jiangxi, Shandong, Shanghai, and Zhejiang), ‘south central China’ (Guangdong, Guangxi, Hainan, Henan, Hubei, and Hunan), Southwest China (Chongqing, Guizhou, Sichuan, Tibet, and Yunnan), and ‘northwest China’ (Gansu, Ningxia, Qinghai, Shaanxi, and Xinjiang). This regional divisions are not only related to geographical conditions, but also to different distribution of funds and different policies carried on by the central government for developing each of them. For instance, ‘third frontier’ policy in the 1960s, the promotion of Special Economic Zones (SEZs) in the 1980s, the Central Rise strategy at beginning of 2000’s, and the ongoing Belt and Road initiative (Berta & Frassoldati, 2019; Hsu, 1996; F. Wu, 2015).
- 2 For instance see *Urban China* (2013) by Xuefei Ren, *Ghost Cities of China* (2015) by Wade Shepard, *Planning for Growth* (2015) by Fulong Wu, *Common Framework* (2016a) by Christopher Lee, *China’s Urban Revolution* (2017) by Austin William, *Zhengzhou* (2019) by Joan Busquets and Yang Dingliang, and *The City after Chinese New Towns* (2019) by Michele Bonino et al.
- 3 For instance the publications *Origins of the Modern Chinese State* (2002) Philip A. Kuhn, *East Asia Modern* (2005) by Peter G. Rowe, *Architecture of Modern China* (2009) by Jianfei Zhu, *Understanding the Chinese City* (2014) by Li Shiqiao, *Remaking China’s Great Cities* (2014) by Samuel Y. Liang.
- 4 For instance the publications *Urbanisation in China* (1985) by Richard J.R. Kirkby, *Restructuring the Chinese City* (2004) by Laurence J. C. Ma and Fulong Wu (eds.), *Urban Development in Post-Reform China* (2006) by Fulong Wu et al., *China’s urban space* (2007) by Terry McGee et al., *The Great Urban Transformation* (2010) by You-tien Hsing, *China’s Urban Billion* (2012) by Tom Miller, *China* (2013) by Ross Garnaut et al., *Urban China* (2013) by Xuefei Ren, *Transforming Chinese Cities* (2014) by Mark Y. Wang et al., *Planning for Growth* (2015) by Fulong Wu, *China’s New Urbanization* (2016) by Chuanglin Fang and Danlin Yu.
- 5 For instance the publications *Chinese Landscape* (1992) by Ronald G. Knapp, *The New Chinese City* (2002) John Logan, *China’s Rural Development Policy* (2009) by Minzi Su, *Eco-city Planning* (2011) by Tai-Chee Wong and Belinda Yuen, *Ghost Cities of China* (2015) by Wade Shepard, *The Rural Eco-Environment of China* (2016) Zhang Xiao et al., *Development and Planning in Seven Major Coastal Cities in Southern and Eastern China* (2016) by Jianfa Shen and Gordon Kee, *China’s Urban Revolution* (2017) by Austin Williams, *The Development of Eco Cities in China* (2017) by Juke Liu et al.
- 6 For instance the publications *Globalization and the Chinese City* (2006b) by Fulong Wu, *Building Globalization* (2011) by Xuefei Ren, *Globalization, Competition and Growth in China* (2013) by Jian Chen and Shujie Yao (eds.). Furthermore the Ph.D. thesis *Transnational Models* (2019) by Filippo Fiandanese (Politecnico di Torino).
- 7 For instance, the publications *The Extended Metropolis* (1991) by Terry G. McGee, *Great Leap Forward* (2001) by Rem Koolhaas et al., *Emergent Architectural Territories in East Asian Cities* (2011) by Peter G. Rowe, *Rural Urban Framework* (2013) by Joshua Bolchover and John Lin, *Homecoming* (2013) by

Joshua Bolchover et al., *Village in the city* (2014) by Bruno De Meulder et al., *Beijing Danwei* (2015) by Michele Bonino and Filippo de Pieri, *A Narrative of Urban Recycle* (2015) by Armando et al., *Common Frameworks* (2016a) by Christopher C.M. Lee, *Shanghai Regeneration* (2017) by Dingliang Yang et al., and *Hangzhou* (2017), *Chongqing* (2018) and *Zhengzhou* (2019) by Joan Busquets and Dingliang Yang, and *The City after Chinese New Towns* (2019) by Michele Bonino et al. Furthermore the Ph.D. thesis *Townization* (2014) Dingliang Yang (Harvard Graduate School of Design), *Luoghi Creativi e Patrimonio Industriale nella Cina Contemporanea* (2016) by Maria Paola Repellino (Politecnico di Torino), *Reaching the Sea* (2018) by Edoardo Bruno (Politecnico di Torino); *China: Capillarity and Territory* (2018) by Andrea Palmioli (Paris Est); *Elements in Desakota* (2018b) by Qinyi Zhang (IUAV Venezia).

- 8 During the Ph.D. I have broadly discussed how to study the urban transformations in the Central Plains of China, and more in general how to inquire Chinese urbanisation. This issue has been widely addressed by the China Room research group of Politecnico di Torino, to which I belong, particularly within the framework of the research *CeNTO – Chinese New Towns*, and the resulting publication *The City after Chinese New Towns*. Moreover, it has also been a core issue of two doctoral courses organized between February and May 2019 by the China Room research group at Politecnico di Torino: *The city after Chinese new towns* led by Francesca Governa (Politecnico di Torino) and Angelo Sampieri (Politecnico di Torino) with the participation of Yang Dingliang (GSD Harvard), Xuefei Ren (Michigan State University) and Austin Williams (Kingston University of London); *How to study contemporary China?* led by Michele Bonino (Politecnico di Torino), Francesca Frassoldati (Politecnico di Torino) and Alberto Bologna (Politecnico di Torino) with the participation of Christopher C.M. Lee (GSD Harvard), Guanghui Ding (Beijing University of Civil Engineering and Architecture) and Carine Henriot (UTC). Furthermore, this issue has been also approached during the doctoral courses: *Gardens of China: heritage, identity and design* by Bianca Maria Rinaldi (Politecnico di Torino); *Domesticating the Asian metropolis* led by Michele Bonino (Politecnico di Torino) and Francesca Frassoldati (Politecnico di Torino) in April-May 2017; *The project's invention in Chinese history* led by Francesca Frassoldati (Politecnico di Torino) with the participation of Feng Jiang (SCUT), Stanislaus Fung (CUHK), and Luca Zan (Università di Bologna) in February and March 2018.
- 9 During the field research periods I collected several documents, such as official publications, urban atlas, planning documents, advertising and promotional materials of real estate companies, and information displayed in public and private exhibition halls. Among them, the most helpful documents in understanding the current urban transformations in Zhengzhou are: the series of five volumes *Urban planning and architectural design of Zhengdong New District in Zhengzhou City (2001-2009)* (2010) by Li Keqiang, the Administrative Committee of Zhengdong New District and Zhengzhou Urban Planning Bureau; the atlases *Master Planning of Zhengbian New District (2009-2020)* (2009, 2010) by ARUP Engineering Consulting Company, Zhengzhou City Planning and Design Institute and Kaifeng City Planning and Design Institute; the volume *Solicitation for Spatial Development Strategic Planning Scheme of Zhengbian New District* (2009) by Zhengzhou Municipality. During the process of collecting data I have also dug into several digital archives such as: the academic archive CNKI ([www.cnki.net](http://www.cnki.net), accessed on February 4<sup>th</sup> 2020); the statistical archives of the Henan Province Bureau of Statistic ([www.ha.stats.gov.cn](http://www.ha.stats.gov.cn), accessed on February 4<sup>th</sup> 2020) and the National Bureau of Statistics of China ([www.stats.gov.cn](http://www.stats.gov.cn), accessed on February 4<sup>th</sup> 2020); and the archives of real estate agencies such as Soufang Technology Development Co. ([www.zz.fang.com](http://www.zz.fang.com), accessed on February 4<sup>th</sup> 2020), Cabin Information Technology Co. (<https://zz.ke.com/>, accessed on February 4<sup>th</sup> 2020), Tencent (<https://house.qq.com/>, accessed on February 4<sup>th</sup> 2020), and Fang Duoduo ([www.fangdd.com](http://www.fangdd.com), accessed on February 4<sup>th</sup> 2020).
- 10 Concerning the Chinese urbanisation process I refer to studies such as: *Urban China* (2013) by Xuefei Ren, *Ghost Cities of China* (2015) by Wade Shepard, *Planning for Growth* (2015) by Fulong Wu, and *China's Urban Revolution* (2017) by Austin Williams. Concerning the processes of urbanisation in the Central Plains of China I refer to both international and Chinese studies. The former ones are, for instance, publications such as *Common Framework* (2016a) by Christopher C.M. Lee and *Zhengzhou* (2019) by Yang Dingliang and Joan Busquets; and articles such as the ones of by Charlie Q.L. Xue et al. (2011), Junxian Zhu (2012), Charlie Q. L. Xue et al. (2013), and Xuefeng Wang and John Tomaney (2019). Among the Chinese literature the most significant are publications such as *Contemporary Zhengzhou Urban Construction* (1988) by Liu Yanpu; the Ph.D. thesis *Research on the Urban Spatial Expansion and Regulation in Zhengbian Area* (2010) by Xia Baolin; and articles such as the one by You Qi (2003), Gong



Fang-fang et al. (2004), He Wen-liang, and Zhang Gong-bao (2007), Wang Xu-sheng (2007), Liu Ying et al. (2008), Charlie Q. L. Xue and Wang Ying (2010), Shi Mingcan (2010), Wang An-zhou et al. (2010), Zhang Caili et al. (2010), Cai Anning et al. (2012), Wang Xuefeng et al. (2013), Zhang Jie and Lu Lou-wei (2013), Liu Jiaoming (2014) Wang Xianju (2014), and Yang Guang (2016).

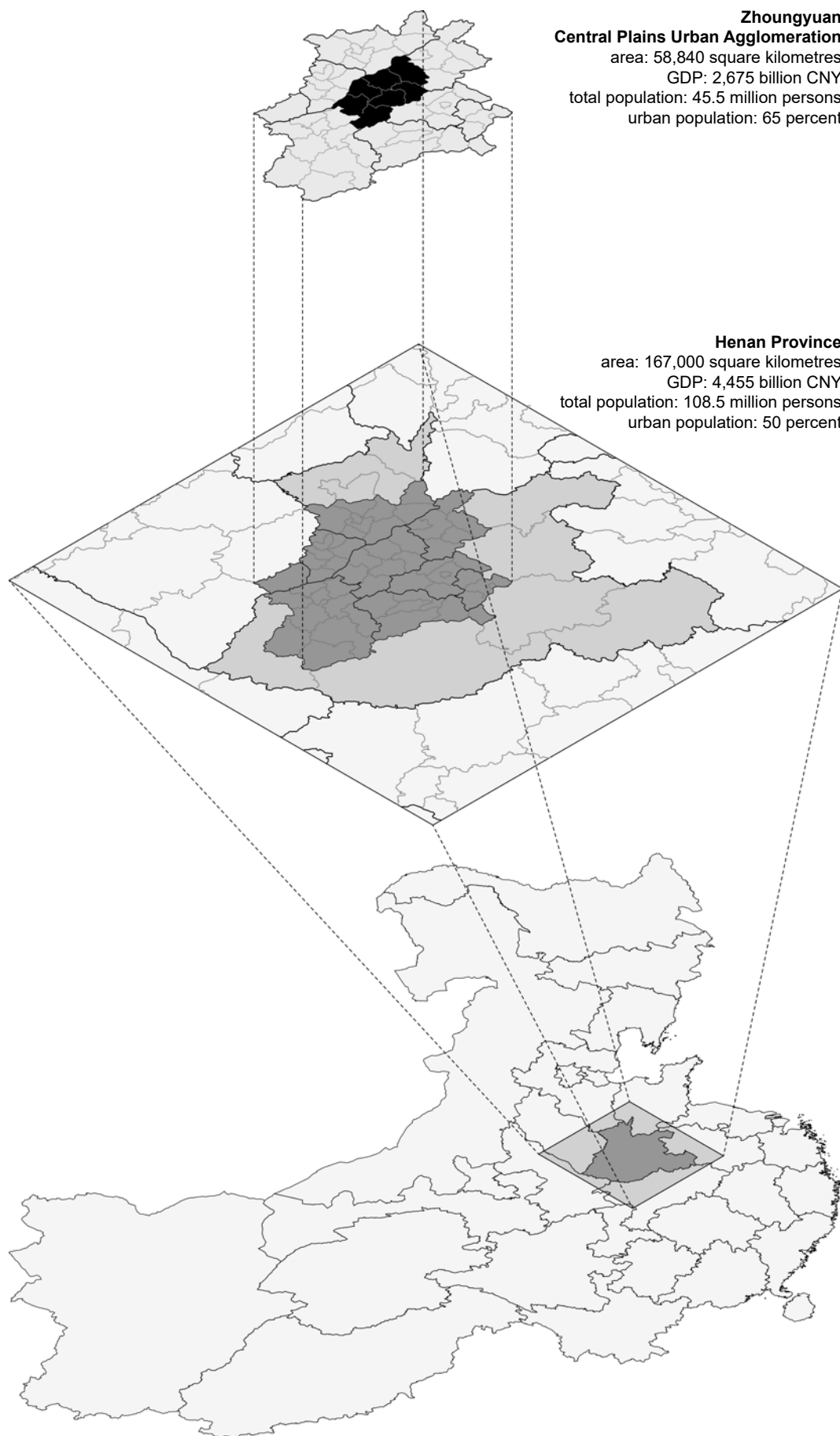
- 11 Methodological issues concerning the relations between the representations of spaces, the observation of urban phenomena, the digital tools, the memories and the social practices have been addressed during the doctoral courses: *Memory and the city* led by Filippo de Pieri (Politecnico di Torino), Alessandro Armando (Politecnico di Torino), and Florence Graezer Bideau (EPFL) January-February 2017; *Critical and reflexive methodologies in urban studies* led by Ugo Rossi (Università di Torino) in July 2017; *Socio-technical urbanisation* led by Francesca Governa (Politecnico di Torino) and Luigi Buzzacchi (Politecnico di Torino) in January February 2018; *City and territories: time, space and social practices* led by Maurizio Gribaudi (EHESS, Paris) in February 2018; and *Landscape-based regional design for the built environment* led by Steffen Nijhuis (TU Delft) in May 2018. Moreover in the workshop *The city and the landscape in Chinese ancient maps* led by Francesca Frassoldati (Politecnico di Torino) with the participation of Qingzhou Wu (SCUT), Feng Jiang (SCUT), Zhimin Zhang (SCUT), Stanislaus Fung (CUHK), Yue Zhuang (University of Exeter), Bianca Maria Rinaldi (Politecnico di Torino), and Franco Panzini in July 2018; and the *5th winter school on research methodology in the field of planning and urban studies* at University of Florence in January 2018.
- 12 The para-empirical investigation of satellite view has been conducted within the methodological framework provided by critical satellite studies. The critical use of satellite images has been recently inquired by several scholars adopting different perspectives (Parks & Schwoch, 2012; Warf, 2012). For instance, some scholars such as Julio González Álvarez or Daniela Petrelli work in order to ‘anchor’ a specific meaning to a satellite images through ‘autotopography’ (Petrelli et al., 2008); on the contrary others such as Paul Kingsbury and John Paul Jones III (2009) claim for a ‘displacement discover’ exploiting their ambiguities. Feminist scholars used remote sensing in order to refiguring the global vision, for instance by tracking the movements of women driven by sex trade as done by Ursula Biemann (2002). Lisa Park (2001, 2005, 2009, 2012) explores both the ‘footprint analysis’ as well as the ‘semiotic infusion’; while Laura Kurgan (2013) claims for a ‘para-empiricism’, using art and maps in order to inquire the social and political implications of satellite images
- 13 In January 2017, I spent ten days in China within the framework of research *CeNTO – Chinese New Towns*. During this first period I visited the new towns of Zhaoqing New Area (Zhaoqing, Guangdong), Tongzhou New Town (Beijing, Hebei), Zhengdong New District (Zhengzhou, Henan). After that survey I decided to focus my research on the urbanisation of the Central Plains of China. From September to December 2017, I spent three months in China working at Tsinghua University in Beijing. During this period I conducted a field research in Zhengzhou, Zhengdong New District and Zhongmu County in collaboration with the professional photographer Samuele Pellecchia (Prospekt Photographers), within the framework of research *CeNTO*. Finally, from April to May 2019, I conducted one month of field research in the Central Plains of China. During that period I visited the city of Zhengzhou, the Zhengdong New District, and the Zhengzhou Airport City. Then I moved to Zhongmu County to inquire the urbanisation of Zhengbian New District and the transformations which are affecting the rural areas. After that, in order to have a broader picture of the urbanisation process occurring in the Central Plains, I spent a week in Kaifeng and Kaifeng New Areas, and a week in Luoyang and Luoyang New District. In the three periods of field research I discussed my work with several Chinese scholars in particular at Tsinghua University of Beijing and South China University of Technology in Guangzhou, for instance prof. Liu Jian (Tsinghua University), who took part in the research *CeNTO*, and Ph.D. Xuefei Han (SCUT), who is now carrying on a research on Zhengzhou urban development. In Zhengzhou I presented my research at prof. Xianguang Li (Henan University), and I got in touch with prof. Ying Li and his assistant Zhou Lulu (Zhengzhou University). Moreover I discussed my research topics also with expertises directly involved such as Song Yuan Liu (Zhengzhou Design Institute), who took part in designing various new agricultural towns in the area of Zhengbian New District.
- 14 The critical uses of cartography, datascape schemes and pictures has been explored by several scholars and practitioners with different purposes. For instance scholars, architects and urbanists such as Saverio Muratori (1960; 1963), André Corboz (1993) or Anuradha Mathur and Dilip Da Cunha (2006; 2001),

used maps in order to recover the spatial transformations. In the field of landscape urbanism scholars and practitioners such as James Corner (2000) or Secchi and Viganò (2011, 2014; 2016) used cartography as instrument of both investigation and design; while other such as Raoul Bunshoten and CHORA architectural office (2006) use maps as a participatory tool for debating territorial transformations involving different actors. Finally, recently urbanists and geographers such as Clare Lyster (2016) or Nikos Katsikis (2018a) are exploring the potential of cartography in visualizing the territorial implication of phenomena such as ‘the space of flow’ or the ‘planetary urbanisation’. Related to each of these purposes different techniques of representation has been developed, for instance the ‘drift’, the ‘layering’, the ‘gameboard’; or the ‘rhizome’ (Corner, 1999; Waldheim & Desimini, 2016).

- 15** In the 2000s the Henan province was as the most inhabited Chinese province, accounting more than 95 million people (National Bureau of Statistics of China, 2018).
- 16** Also other cities of the Central Plains benefitted from the initiatives carried on during that period. For instance, during the Third Front movement Luoyang was ranked first by central government for urban and industrial development (Hsu, 1996; F. Wu, 2015).
- 17** From 2010 to 2013 the Henan government established fourteen new districts, and now the province accounts for 40 percent of China’s regional-level new districts (Fang & Yu, 2016).
- 18** With the Planning Act in 2008, the Ministry of Land and Resources (MLR) introduce a strict policy of farmland protection based on quotas (F. Wu, 2015). Consequently nowadays municipalities shall not exceed the established amount of built-up land. In spite of this, the quotas are just number that are not related to any geographical areas, therefore they can be relocated by institution from one place to another.
- 19** This value has been retrieved investigating the territory of Zhengbian using satellite images and GIS technology.
- 20** This value has been retrieved investigating the territory of Zhengbian using satellite images and GIS technology.
- 21** The authors (2019) associate the word with a type of economy that “on one hand [...] attempts to enrich things [...] especially associating them to tales; on the other hand [...] it exploits the trade in things that first and foremost cater for the rich and that constitute, even for the rich who trade in them, a supplementary source of wealth” (p. 9). According to the authors, this type of economy is fed by all (public institutions, businesspeople and individuals). This because the value of goods depends to a great extent on the tales concerning them; tales created by a multitude of actors (producers, sellers and users) and guaranteed by institutions in the public domain (Boltanski & Esquerre, 2019). Such an interpretation highlights some contemporary forms of the economy through which, adopting the necessary caution and keeping the necessary distance, it is possible to attempt an interpretation of the phenomena involved in the spatial transformations underway in the Central Plains of China. It is, however, vital to reiterate that this thesis does not intend to sustain the view that this territory is built on the foundations of the same economic phenomena that Boltanski and Esquerre observed in a European setting. The situation in China is very different; it cannot be simply pigeon-holed as another example of theories developed in a different context. However, it is possible to find vague analogies with a number of the phenomena described by the two French scholars and one can, justifiably, argue that the Central Plains of China is indeed a great *bassin d’enrichissement*.

**FIELD OF INQUIRY**





**The Central Plains of China**

Administrative Division

Map Legend

- provincial boundaries
- municipal boundaries
- district and county boundaries
- municipality
- county
- central plains urban agglomeration/zhoungyuan



Data Sources

The maps have been elaborated by the author from satellite images and GIS information, and are based on data archives such as Open Street Map (OSM) and the global land cover datasets provided by: the International Geosphere Biosphere Programme (IGBP-DIS) (Loveland et al., 2000), the University of Maryland (UMd) (Hansen et al., 2000), the European Commission Joint Research Centre (GLC2000) (Bartholome & Belward, 2005), and the MODIS land cover map (Friedl et al., 2002).



# Built Spaces

## Map Legend

- infrastructural network
- built spaces

## Infographic Legend

(page 45)

- urban population
- rural population

unit: persons

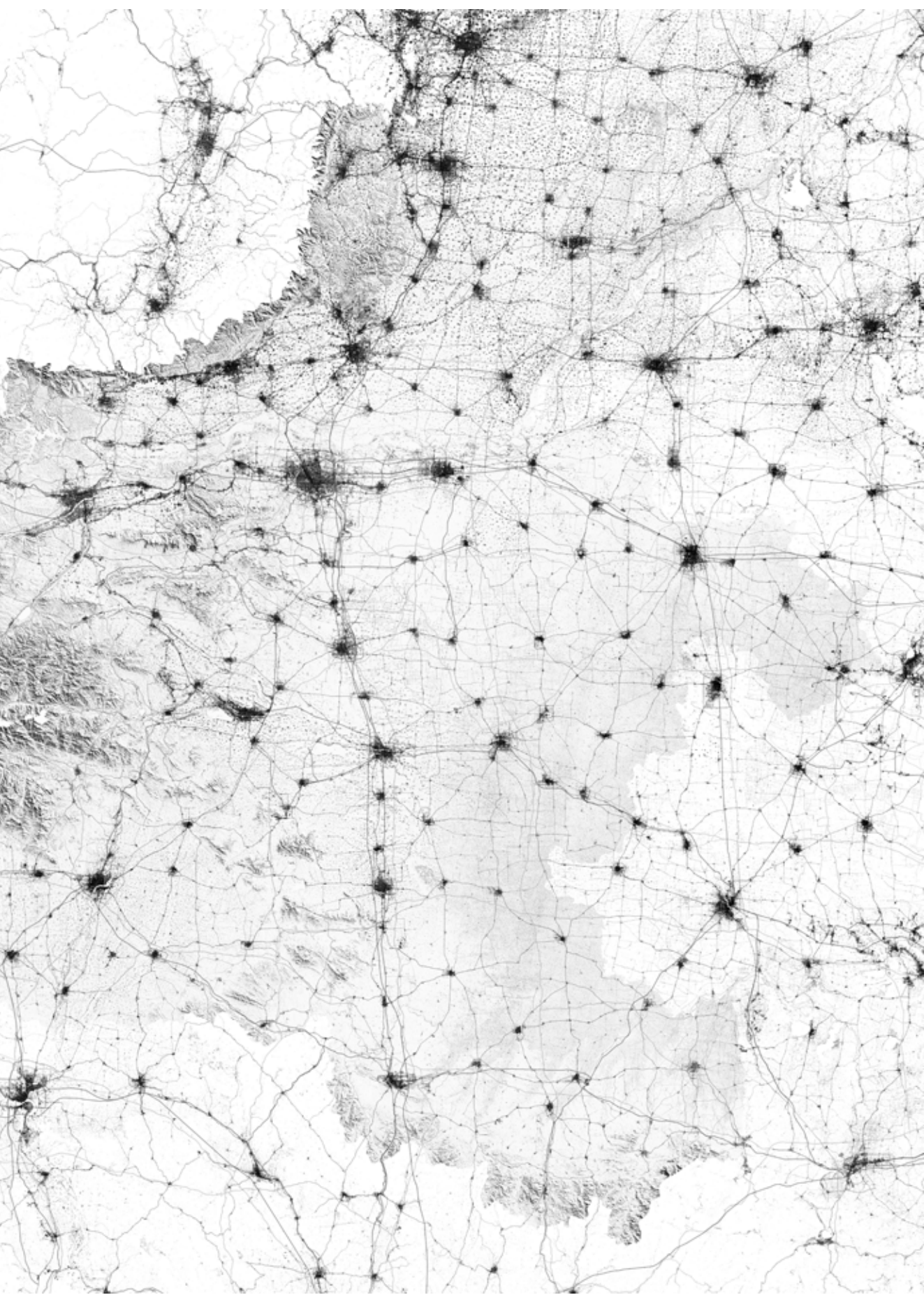
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The data show in the infographics at the following pages have been retrieved from the *Henan Statistical Yearbook 2018* (Henan Province Bureau of Statistics, 2018).

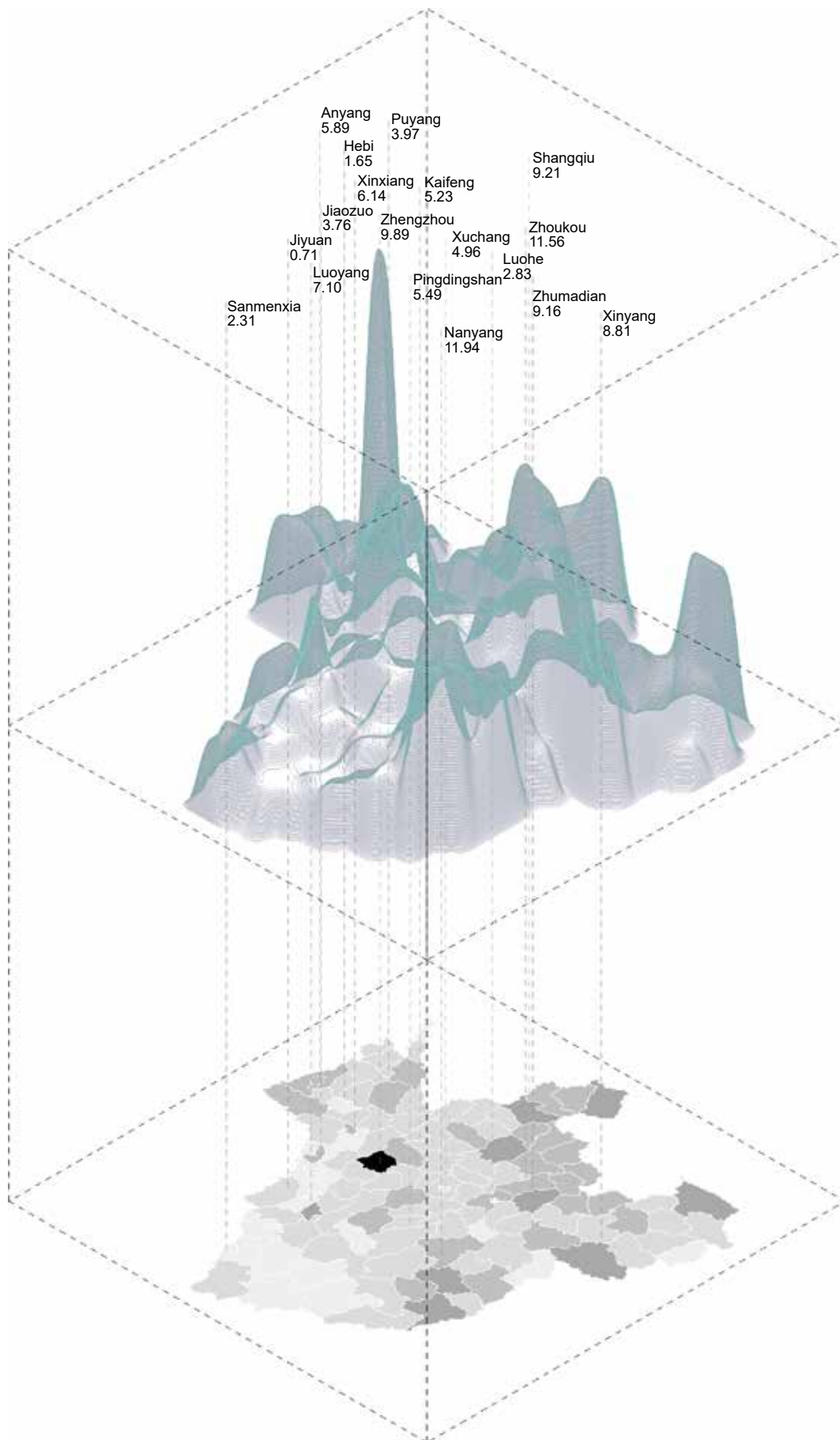






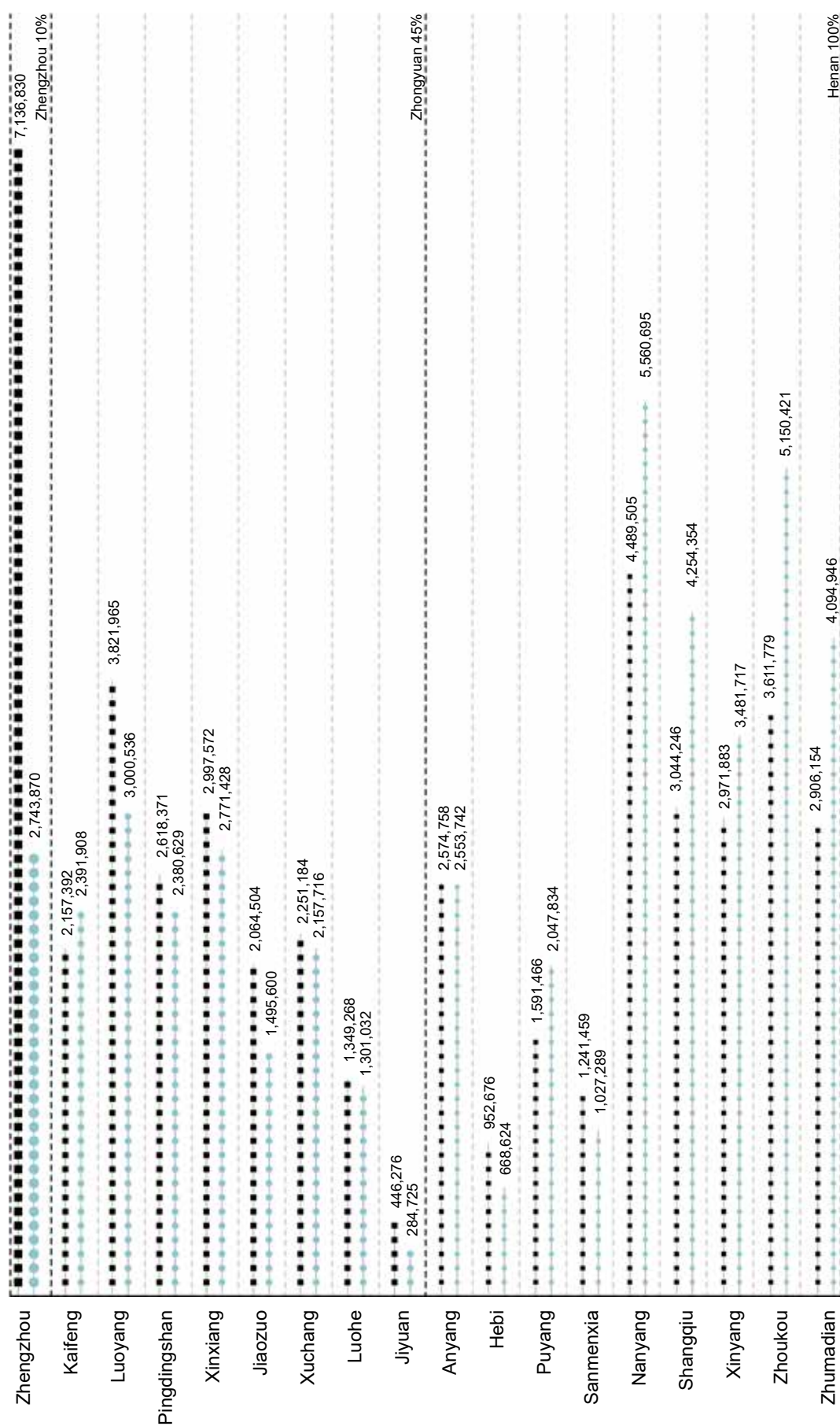
200

600



**Territorial Distribution of Population**

unit: million persons



Urban and Rural Population

unit: persons



# Industrial Areas

## Map Legend

- water and river basin
- infrastructural network
- industrial zones
- built areas
- orography

## Infographic Legend

(page 49)

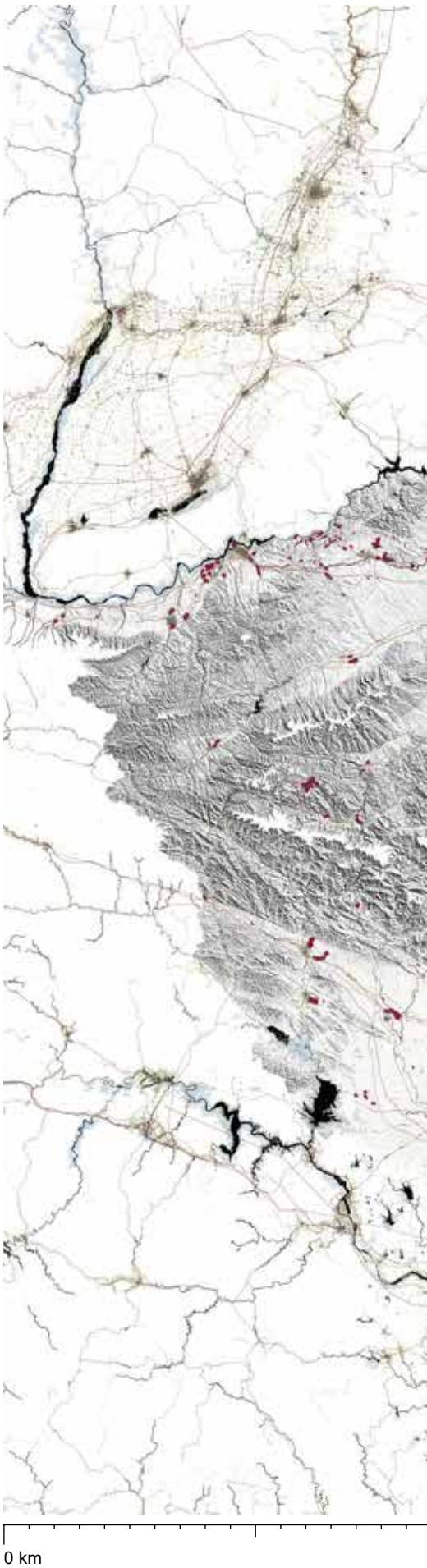
- GDP primary sector
- GDP secondary sector
- GDP tertiary sector

unit: billion CNY

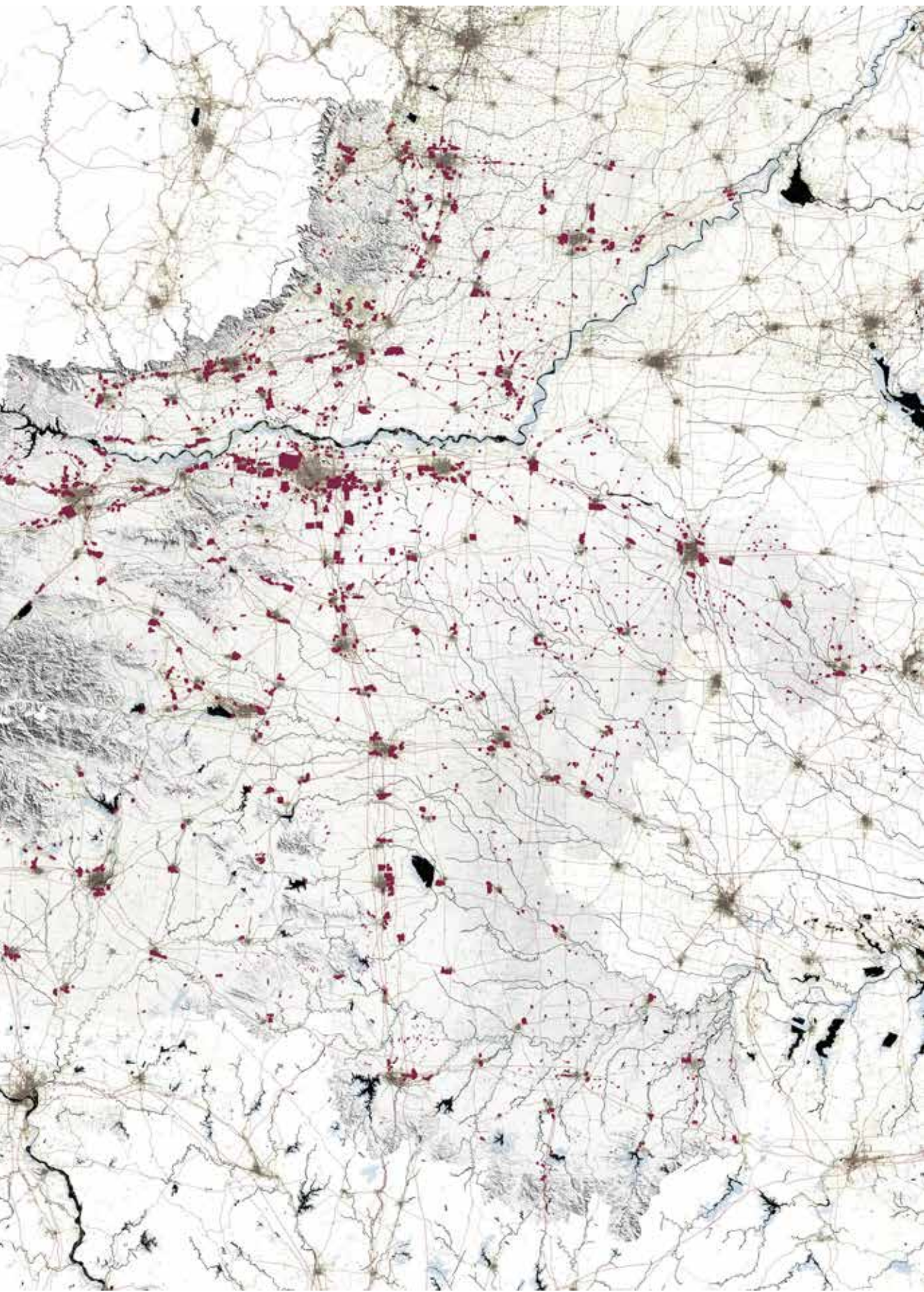
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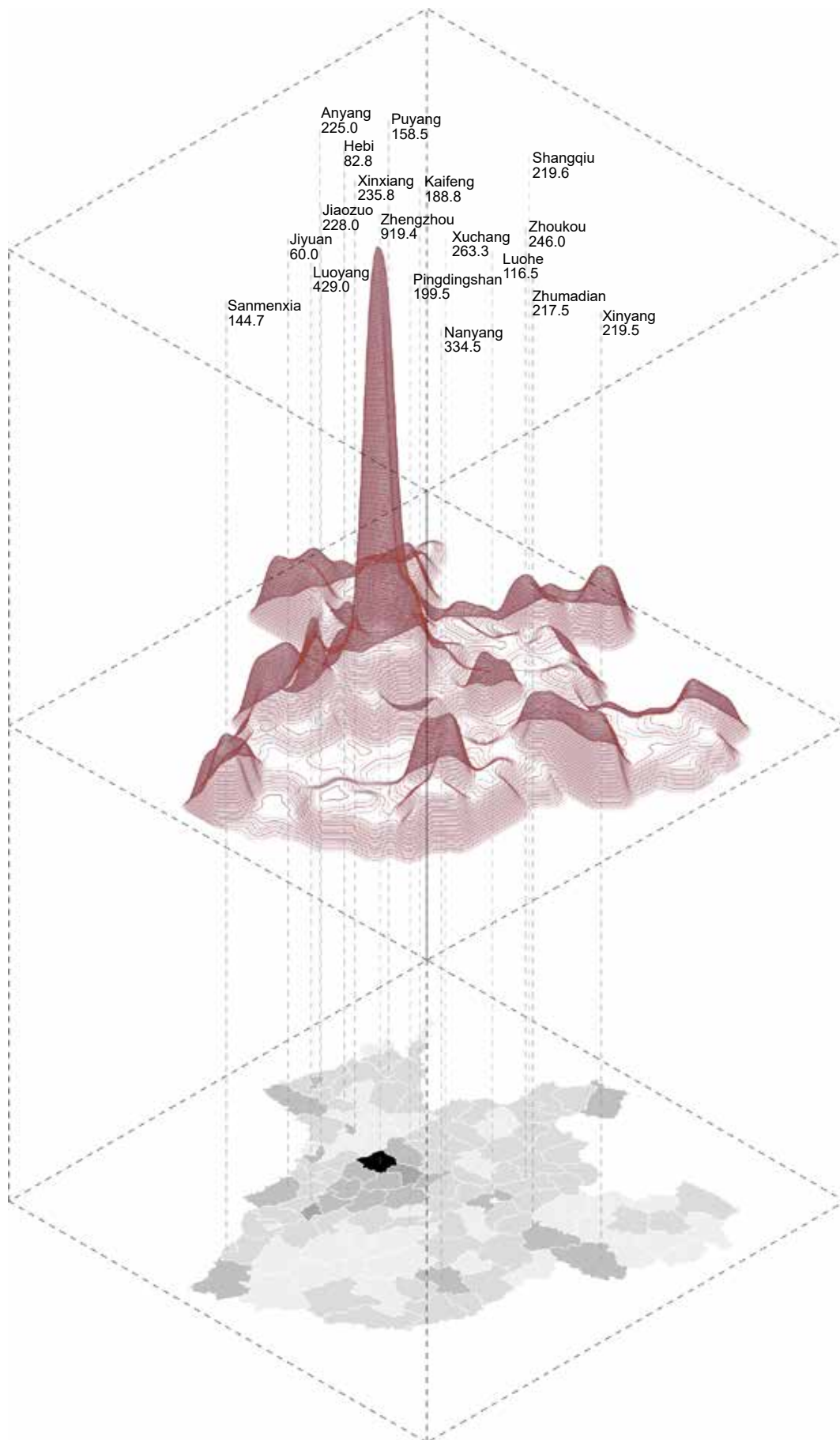






200

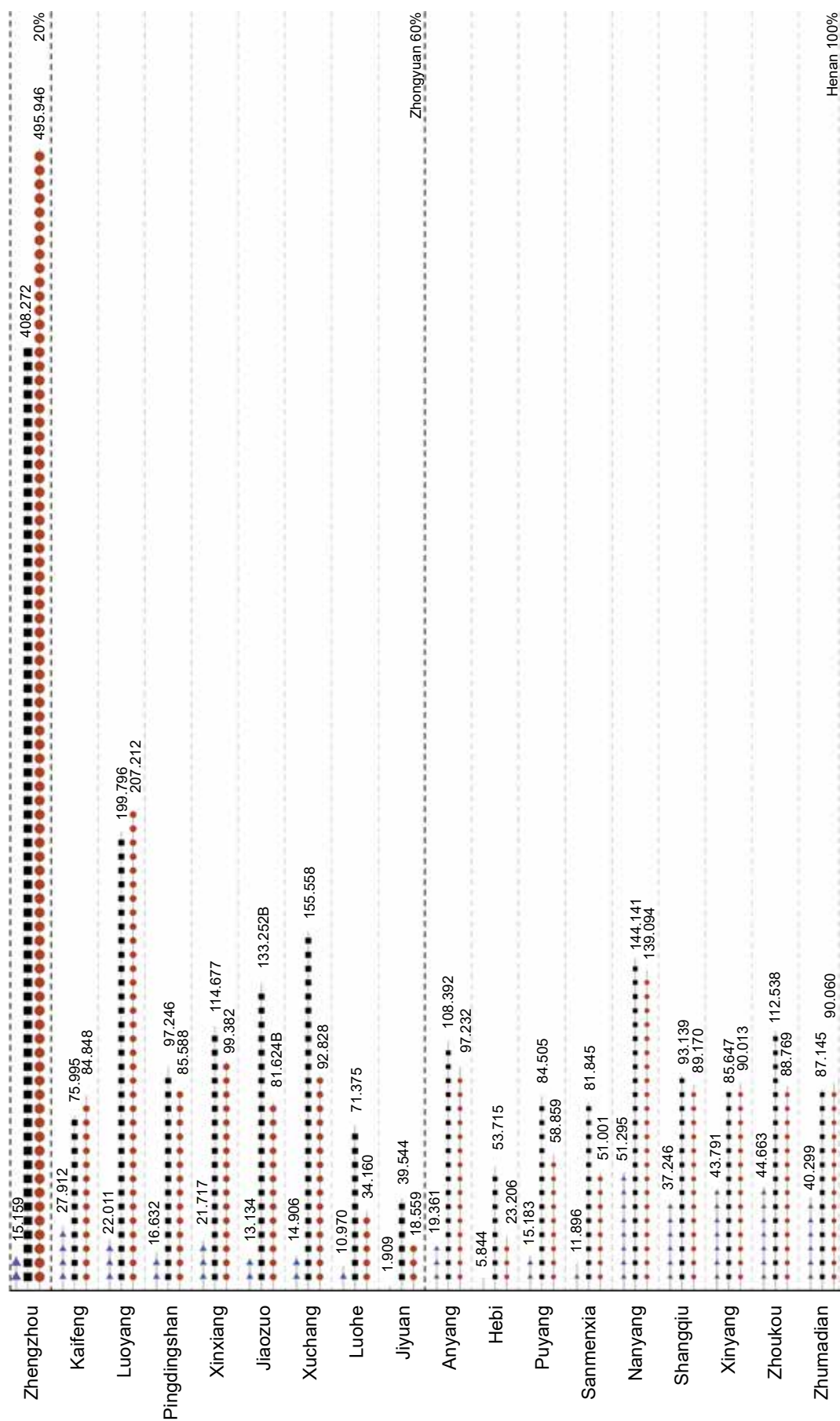
600



**Territorial Distribution of GDP**

unit: billion CNY











GDP per Sector

unit: billion CNY




# Agricultural Land and Vegetation

## Map Legend

-  water and river basin
-  mountainous areas
-  forests
-  meadows and shrubs
-  crops and arable land
-  artificial surfaces

## Infographic Legend

(page 53)

-  grain crops
-  vegetable oil crops
-  cotton, tobacco and fruit crops

unit: square kilometres

## Data Sources

The maps have been elaborated by the author from satellite images and GIS information, and are based on data archives such as Open Street Map (OSM) and the global land cover datasets provided by: the International Geosphere Biosphere Programme (IGBP-DIS) (Loveland et al., 2000), the University of Maryland (UMd) (Hansen et al., 2000), the European Commission Joint Research Centre (GLC2000) (Bartholome & Belward, 2005), and the MODIS land cover map (Friedl et al., 2002).

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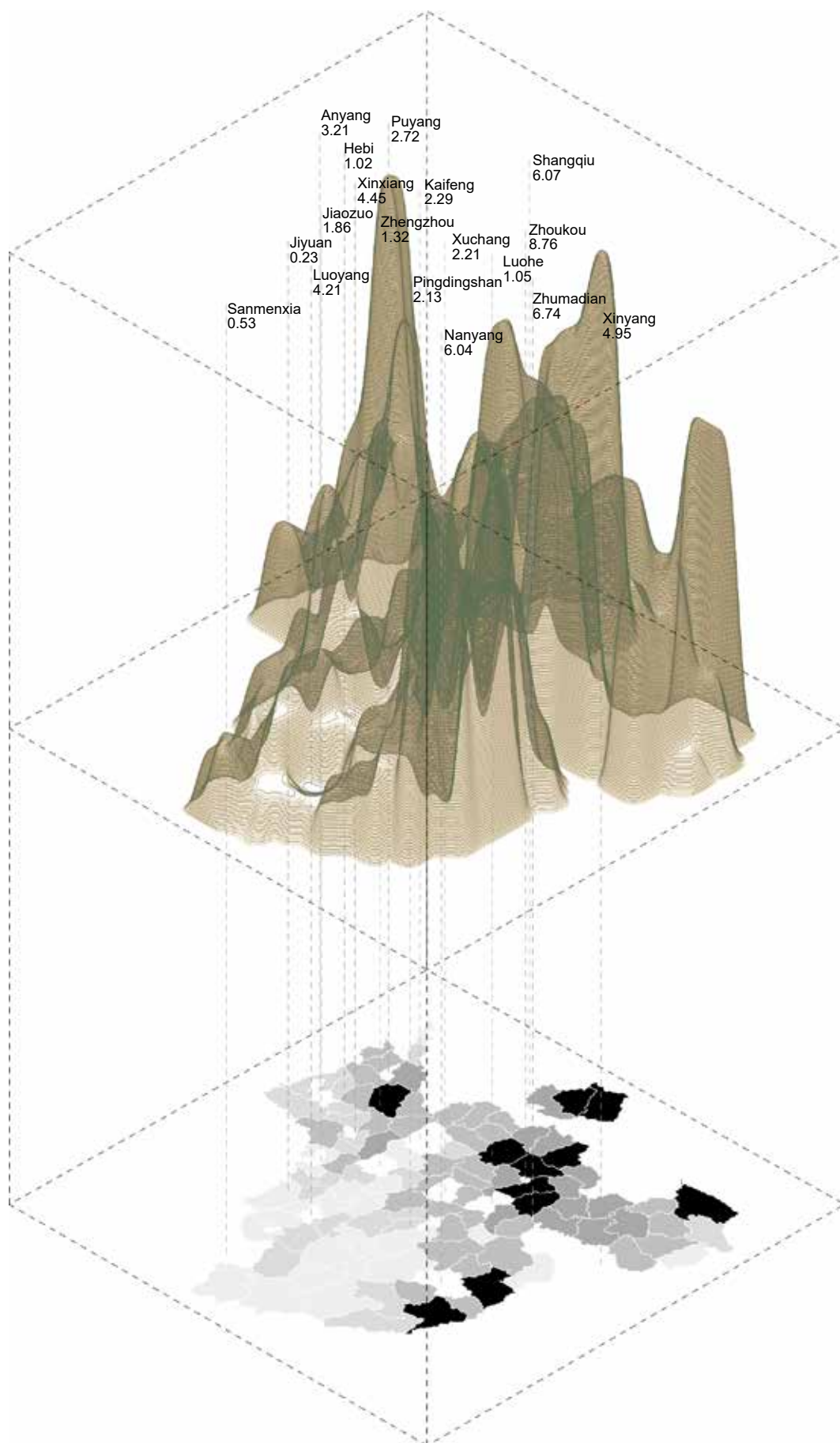


0 km









**Grain Production**

unit: thousand tons

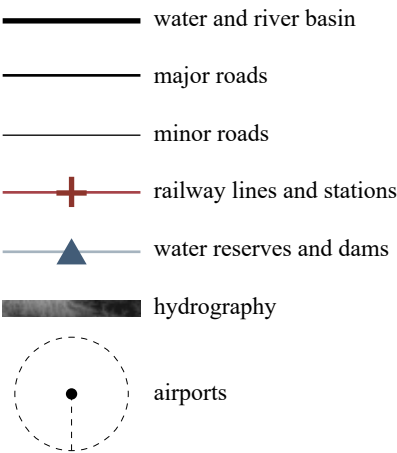


**Areas Under Cultivation**

unit: square kilometres

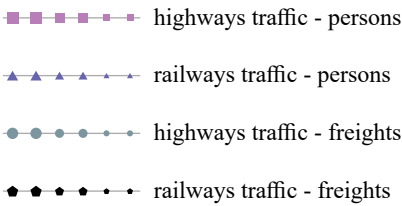
# Infrastructures

## Map Legend



## Infographic Legend

(page 57)

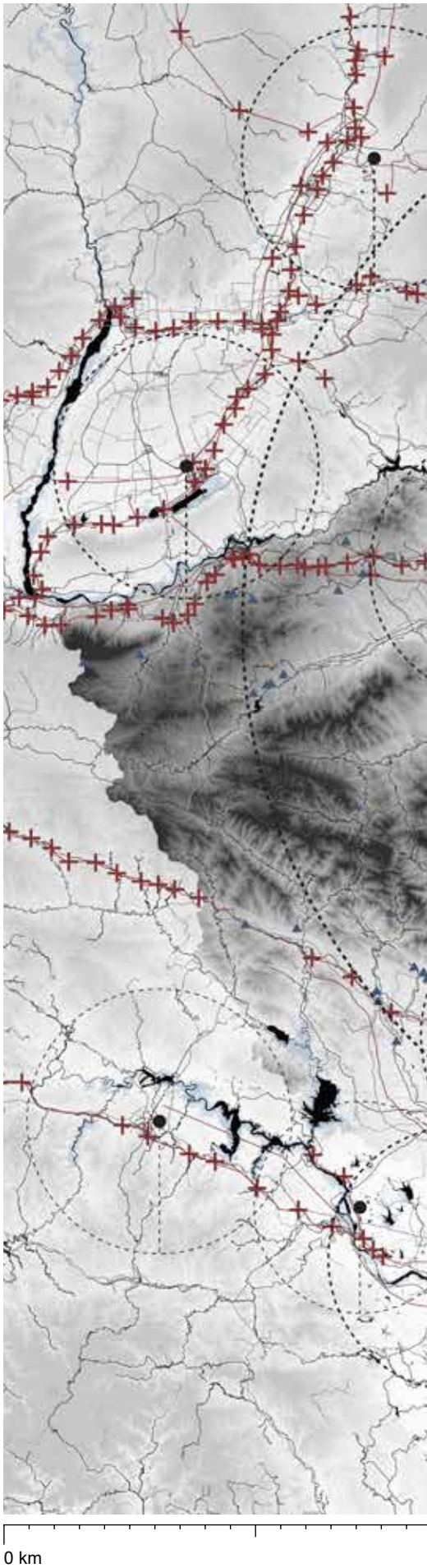


unit - persons: thousand persons  
unit - freights: thousand tons

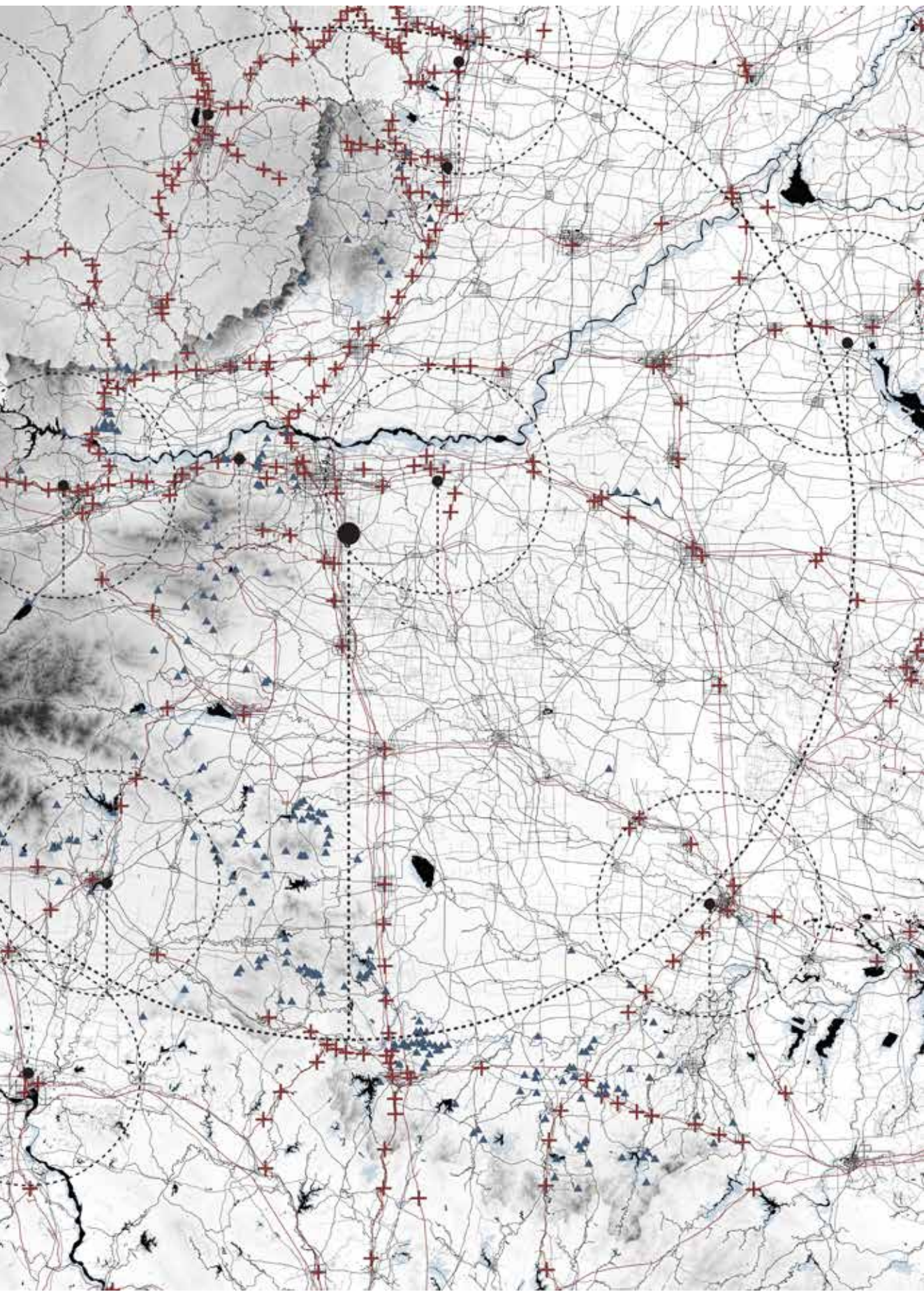
## Data Sources

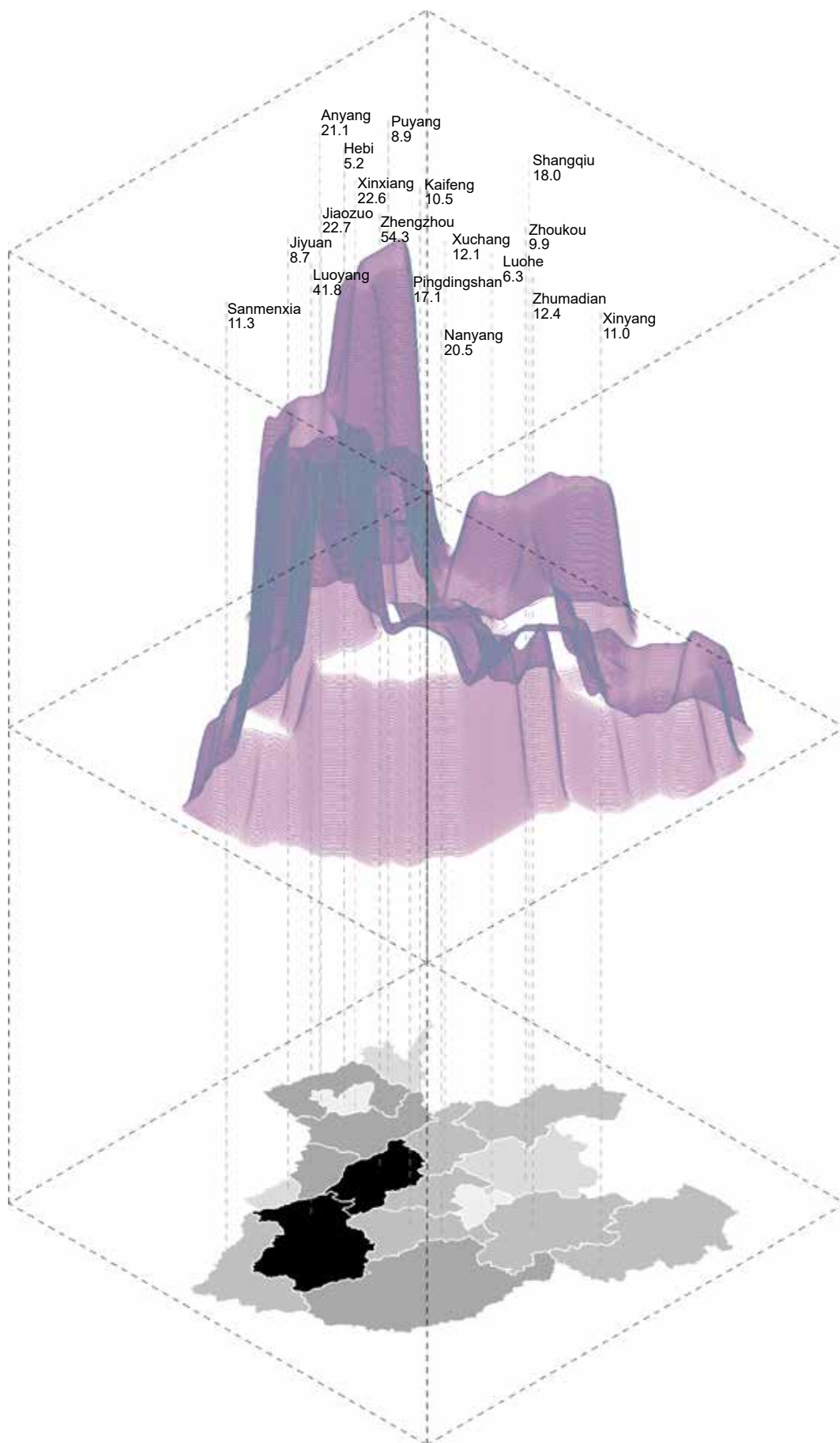
The maps have been elaborated by the author from satellite images and GIS information, and are based on data archives such as Open Street Map (OSM) and the global land cover datasets provided by: the International Geosphere Biosphere Programme (IGBP-DIS) (Loveland et al., 2000), the University of Maryland (UMd) (Hansen et al., 2000), the European Commission Joint Research Centre (GLC2000) (Bartholome & Belward, 2005), and the MODIS land cover map (Friedl et al., 2002).

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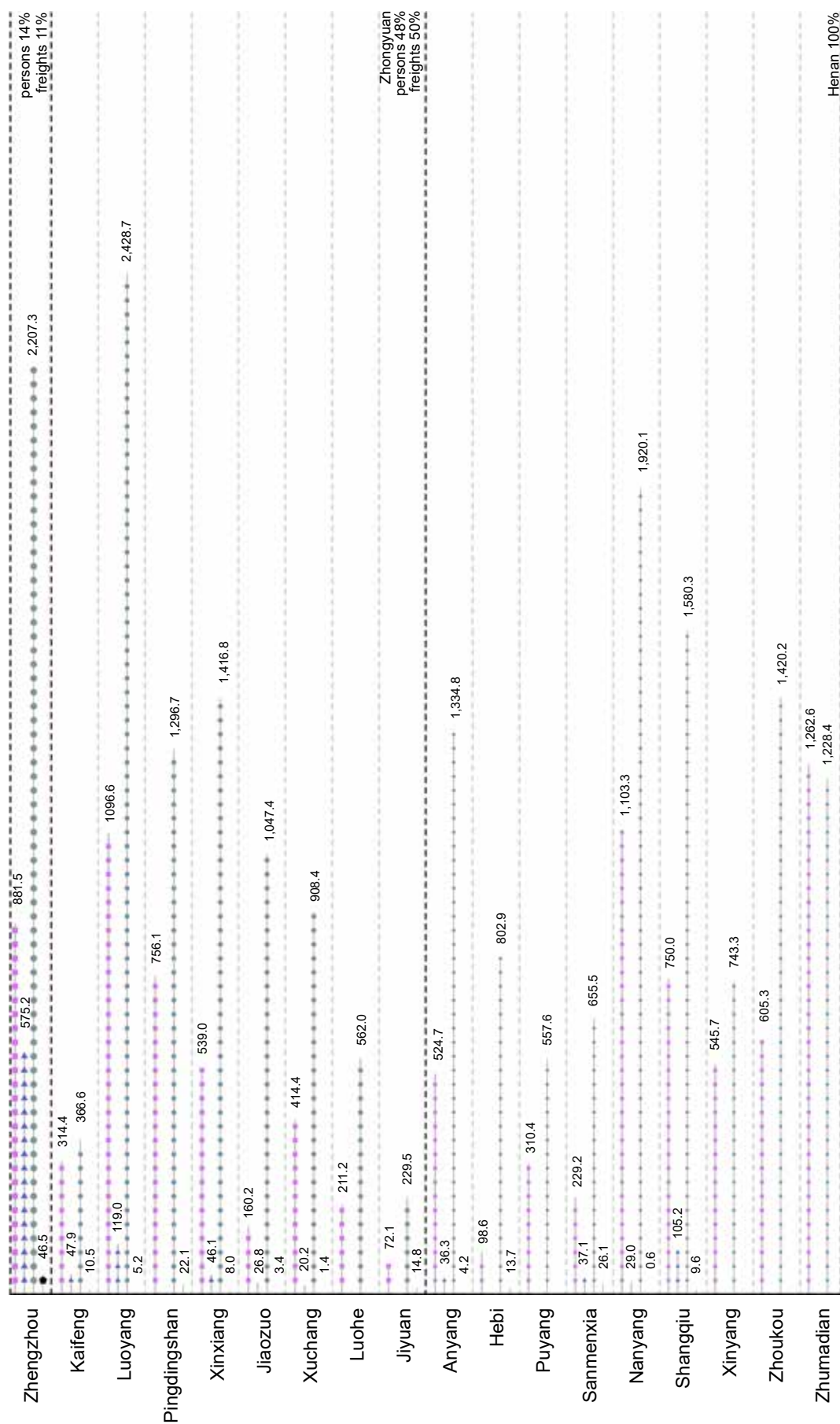




**Electricity Consumption**

unit: billion kWh





## Passengers and Freight Traffics

## Areas Under Construction

### Map Legend

- water and river basin
- infrastructural network
- major urban centres
- new districts and new areas
- new urban expansions

### Infographic Legend

(page 61)

- ■ ■ ■ ■ residences
- ▲ ▲ ▲ ▲ ▲ offices
- ● ● ● ● commercial activities
- ● ● ● ● others

unit: thousand square metre

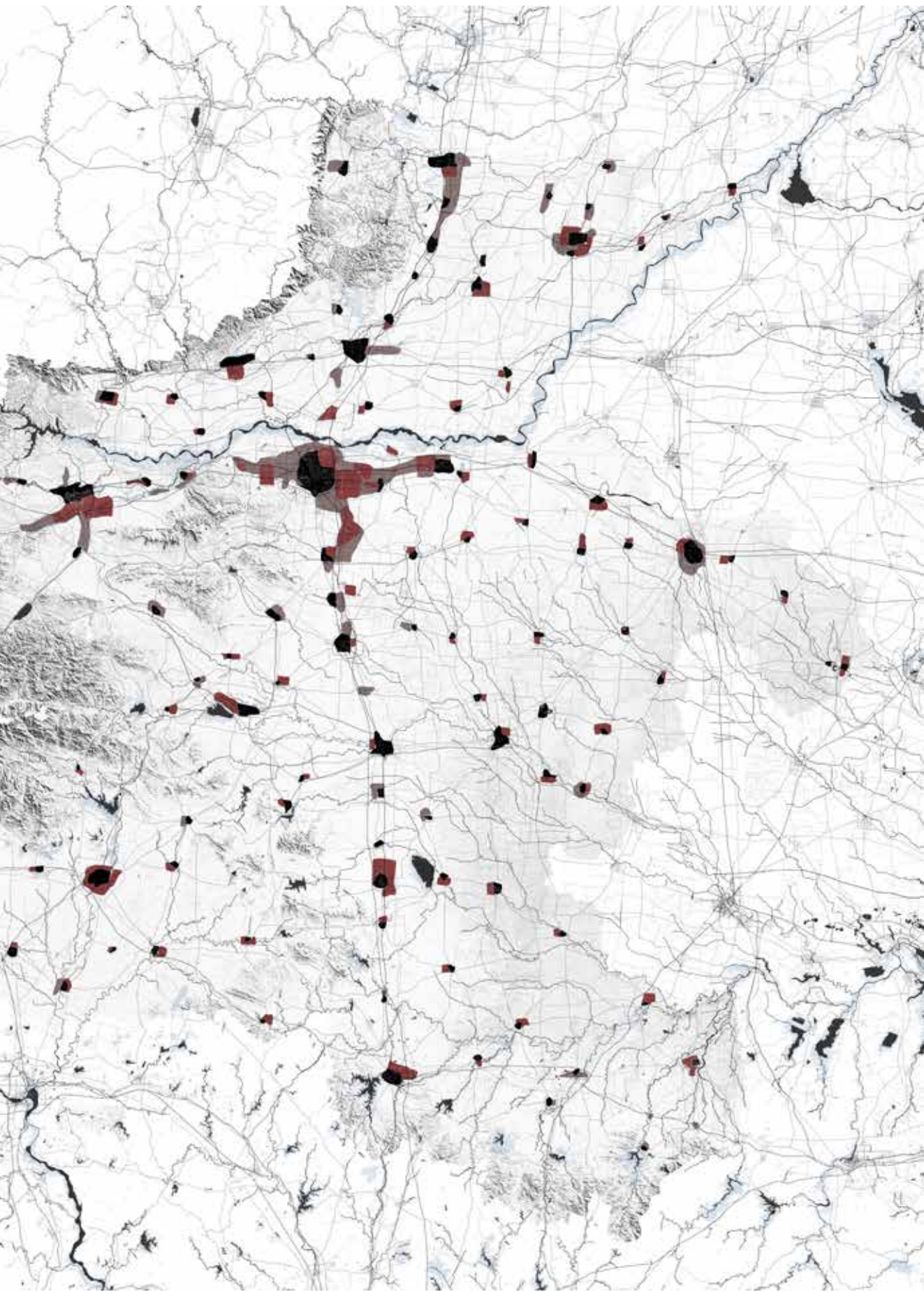
### Data Sources

The maps have been elaborated by the author from satellite images and GIS information, and are based on data archives such as Open Street Map (OSM) and the global land cover datasets provided by: the International Geosphere Biosphere Programme (IGBP-DIS) (Loveland et al., 2000), the University of Maryland (UMd) (Hansen et al., 2000), the European Commission Joint Research Centre (GLC2000) (Bartholome & Belward, 2005), and the MODIS land cover map (Friedl et al., 2002).

The data show in the infographics at the following pages have been retrieved from the *Henan Statistical Yearbook 2018* (Henan Province Bureau of Statistics, 2018).

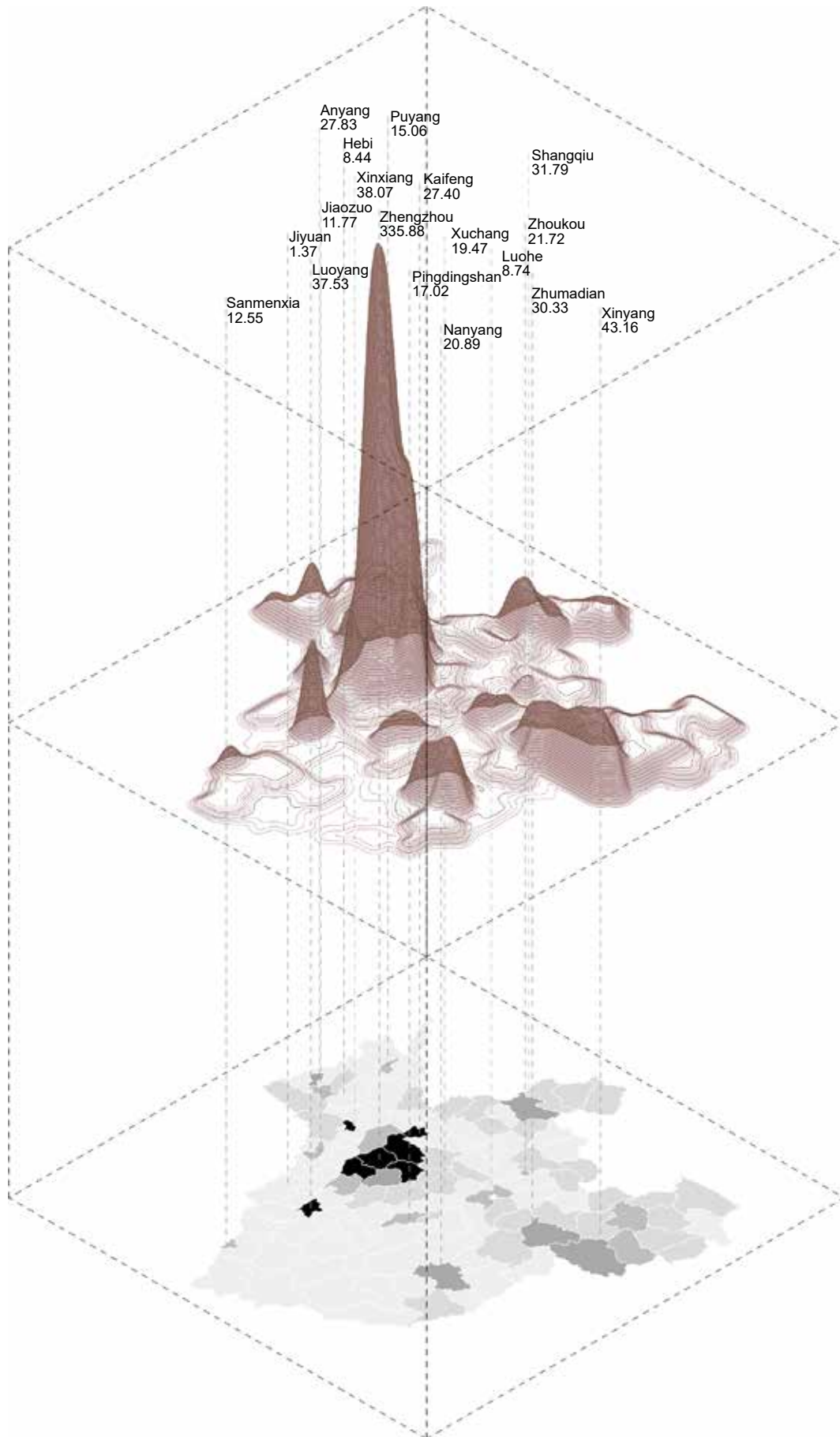






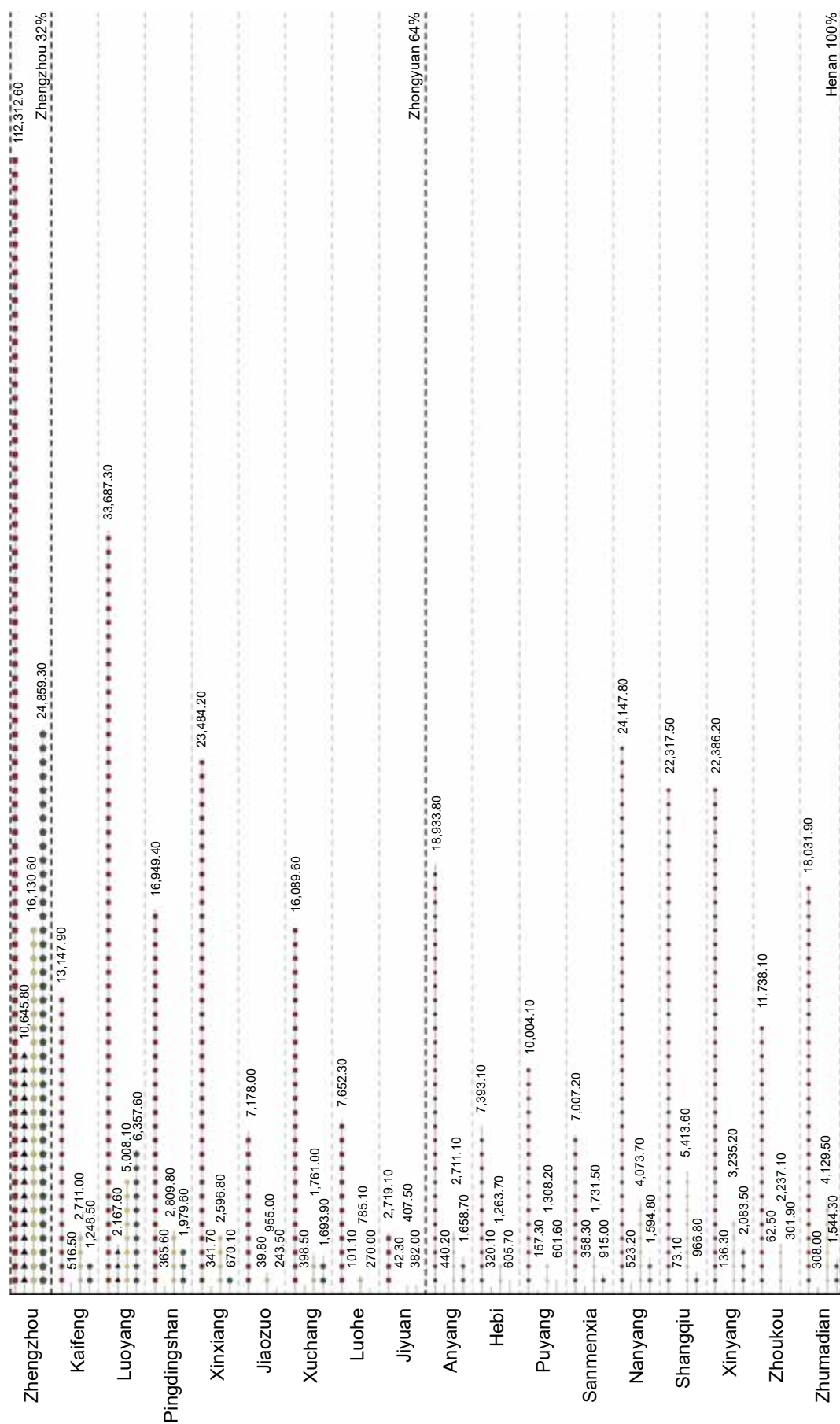
200

600



**Real Estate Investments**

unit: billion CNY



Number of Constructions per Function

unit: thousand square metre

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### *Data Sources*

The maps have been elaborated by the author from satellite images and GIS information, and are based on data archives such as Open Street Map (OSM) and the global land cover datasets provided by: the International Geosphere Biosphere Programme (IGBP-DIS) (Loveland et al., 2000), the University of Maryland (UMd) (Hansen et al., 2000), the European Commission Joint Research Centre (GLC2000) (Bartholome & Belward, 2005), and the MODIS land cover map (Friedl et al., 2002).

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SECTION I

**POSITIONING  
THE CENTRAL PLAINS  
OF CHINA  
INTO A THEORETICAL  
FRAMEWORK**



The objective of this section is to construct a theoretical framework within which to collocate the investigation on the Central Plains of China. In order to do so, it was decided to select from the literature over the last thirty years a number of territorial descriptions, the result of detailed and exhaustive investigations conducted by academics, planners, and practitioners which can provide some *synthetic interpretations* of the urbanisation processes observed. The objective of such interpretations is twofold. On one hand, it is essential to represent with unified images and coherent frameworks the workings of the urban, environmental and infrastructural systems which interweave on different scales and determine the *physical support* for the transformations in progress (a dense support that reflects ruling powers, economic interests, and values). On the other hand, there is the aim to render this interpretation and this representation an ‘operational field’: the background to a possible project, or, at the very least, the initial reasoning from which to develop hypotheses of transformation grounded on argument and dialectic.

In more detail, three interpretations of the urbanisation process will be examined: the creation of what was called the *middle landscape* in the United States (chapter 1); the process of *urban diffusion* in Europe (chapter 2), and, finally, the emergence of *logistical and infrastructural spaces* on a world scale (chapter 3). Each of them is illustrated by a series of images that highlights some features of the urban phenomena and the way in which they have been interpreted. This visual body is just a small selection made by the author, and it has to be considered as a parallel narration that does not claim to be exhaustive in respect of all the subjects described in the main text. Finally, in addition to the works by urbanists, architects,

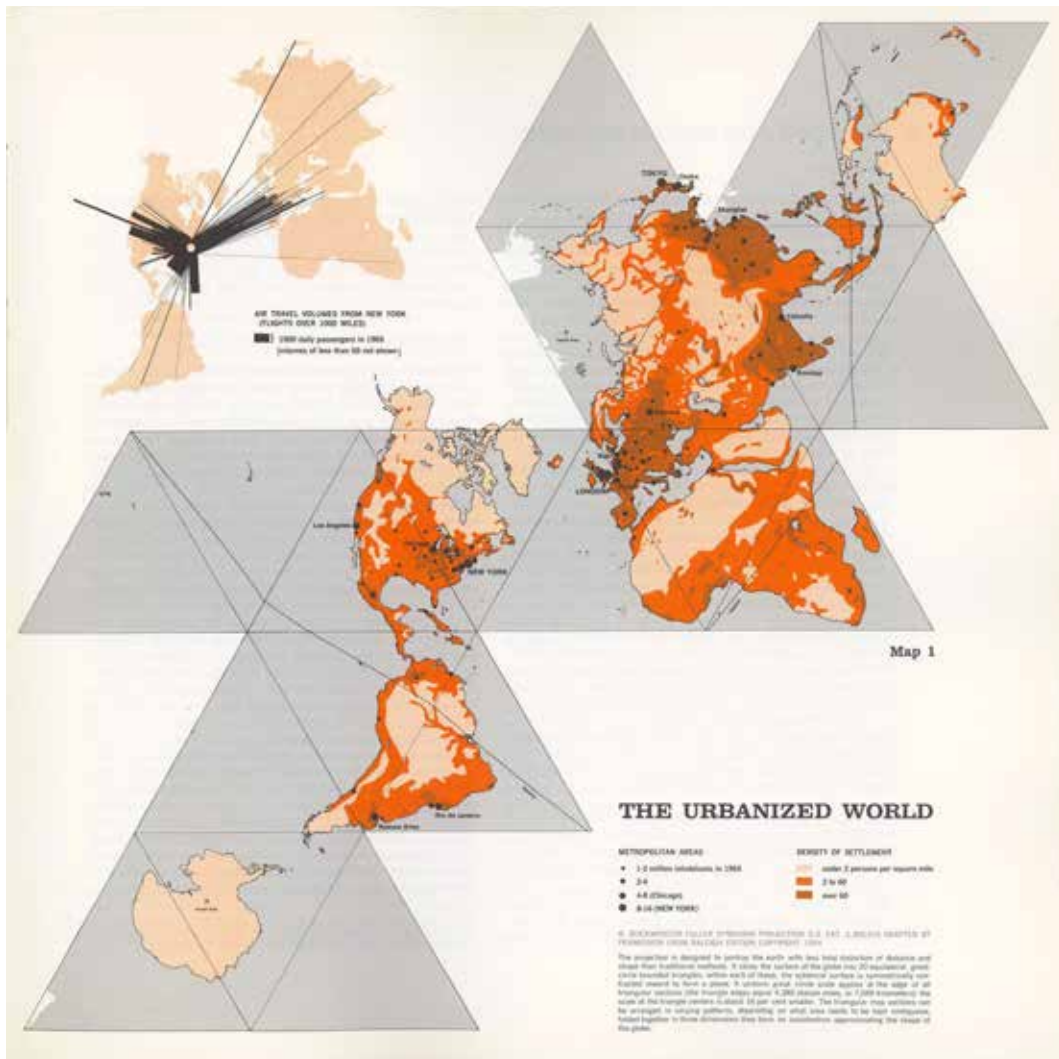
and artists, some significant pictures of three photographic campaigns are shown as particularly relevant in describing the landscapes resulted by the three urbanisation processes and the way in which they are inhabited: *American Prospects* (1987) by Joel Sternfeld (chapter 1), *A Fos-sur-Mer* (1986) by Lewis Baltz - Mission photographique de la DATAR (chapter 2), *In Between* (2016) by Henrik Spohler (chapter 3 ).

While having constitutive differences, the three urbanisation processes examined in this section all originate from a common background: the tension which accompanied urban expansion in the 20<sup>th</sup> century which was characterised by “the unstoppable growth of the city and the fear of its dissolution” (Secchi, 2005, p. 15) **[fig. S.1.1]**. This process of *implosion/explosion* (Brenner, 2014) is the result of the progressive blurring of the distinction between urban and rural, a distinction that was not only due to the different organisation of the land and the different uses of the spaces, but also to the different economies and societies that characterised the two spaces: the *city* and the *countryside*. Today, in many ways, that distinction has been wiped out by the emergence of ever more pervasive and selective infrastructures (Easterling, 2016; Graham & Marvin, 2001), by economies of agglomeration which act on an ever more extensive scale (Brenner, 1998; Duranton & Puga, 2004), and by an international division of labour that entails the progressive polarisation of wealth as well as land uses (Katsikis, 2018a; Secchi, 2013). These processes, while developing in different modes in different geographical areas and historical timeframes, have given life to new territorial conformations which have been carefully documented, described and interpreted in the studies reported in this section.

Despite the radical transformations that have engulfed the Chinese space, investigations and interpretations such as those selected herein have not dealt thoroughly with the phenomenon of Chinese urbanisation. Other methods and point of views have prevailed. Much of the literature aims for mere simplification: often this territory is regarded as a *banal space*, mostly made up of emulations (simplified and distorted versions) of international models (Bosker et al., 2013; Fiandanese, 2019; King, 2004; Ren, 2011; Sklair, 2006, 2006). Elsewhere, on the contrary, it represents a *Wunderkammer*; the Chinese city has been considered the result of a continuous process of accumulation of *unique spaces* (Ebanks & Cheng, 1990), spaces that are extraneous to the conventional definition of a city and urbanity. In assuming this position in the last few decades, numerous studies have stressed the *exceptional* character of Chinese urbanisation. From this, a dichotomic vision has emerged which juxtaposes: socialism and socialism with ‘Chinese characteristics’ (Dirlik, 1989; Lim, 2014; Wei, 2001; Yeoh, 2010), capitalism and capitalism with ‘Chinese characteristics’ (Huang, 2008; Peck & Zhang, 2013; Wei, 2001), neo-liberalism and neo-liberalism with ‘Chinese characteristics’ (S. He & Wu, 2009; Liew, 2005), city and city with ‘Chinese characteristics’ (Glaeser et al., 2017; Timberlake et al., 2014; Y. Wu et al., 2018). This dichotomic approach “does not help us to understand the way in which an ensemble of, albeit, localized specificities



surpasses local transformation processes” (Bonino et al., 2019, p. 22). Starting from this position, the hypothesis of this study is that to gain a greater understanding of the urbanisation processes underway in the Central Plains of China, it may be useful to link the specificities of the observed location to ‘other places’: not just in terms of distance and diversity in order to derive parallels, analogies and differences, but also as an opportunity to cast light on the history of the *interpretations* which have sedimented around the concept of city and its manifestations. Thereby, we may elude insofar as possible the simplifications around the urban history of China, which view it exclusively in light of adherence to and counter-point to well-worn models and histories – mainly of western making. Obviously, everything is different here and the processes by which analogies are constructed (*middle landscapes, urban diffusions, logistic and infrastructural spaces*) stem from a profoundly different origin in time, space and form as well as the narrative means used to recount and mythologise them. However, this same distance may prove useful in that it produces a much-needed perspective: preventing the eye from “catching sight of its subject too soon” (Bianchetti, 2008b, p. 43), and allowing new prospects for research through novel interpretations.



**S.1.1.** *The Urbanized World*, Regional Plan Association, 1967

# Chapter 1

## Middle Landscape

In *International Perspectives on Suburbanization* (2011), Nicholas Phelps and Fulong Wu highlight how in today's world the process of suburbanisation is taking place on a global scale.<sup>1</sup> The new forms of urbanisation that characterise both North and South America, Europe and Asia appear to be the result of “centrifugal forces so great [which] [...] the result was a city turned inside out” (Teaford, 2011, p. 24). This process of post-suburbanisation, that is, “simply suburbanisation carried to the extreme” (Teaford, 2011, p. 33), has given rise to new spaces “in the form of in-between cities” (Phelps & Wu, 2011, p. 247): basically the so-called *middle landscape*. This phenomenon has its roots in the suburban expansion which has characterised North America since the start of the 1900s and, in particular, since the post-world-war II period (Phelps, 2015; Teaford, 2011), when the *middle landscape* was first theorised based on some precise concepts: “the idea of median line between ‘primitivism’ and ‘civilization’ [...], the point lying between under development and over-refinement” (Thomas, 2000, p. 38); “neither wild nor overcivilized, where the dream of harmony between humanity and nature might be attainable” (Marx, 1964, p. 377), and “in which the conflicting values of art and nature, civilization and primitivism merge into a characteristically rural environment located between the pole of untamed nature and the city” (Machor, 1987, pp. 9–10). Overall, a place that, from a social viewpoint, is defined by political and symbolic values that respond to a “collective effort to live a private life” (Rowe, 1991, p. 290). Less clear, however, is the physical structure that characterises this space (Machor, 1987; Rowe, 1991). The *middle landscape*, therefore, alludes only to a precise spatial configuration unless it is associated with three further figures which give the term greater focus: that is, *modern pastoralism*, *agrarian urbanism* and *landscape urbanism*. Hereafter, through these three figures, this chapter discusses the spatial characteristics of the *middle landscape*.



**1.1.** *Lake Oswego, Oregon*, Joel Sternfeld, 1979



**1.2.** *Canyon Country, California*, Joel Sternfeld, 1983

## 1.1. Modern Pastoralism

### Machines in the garden

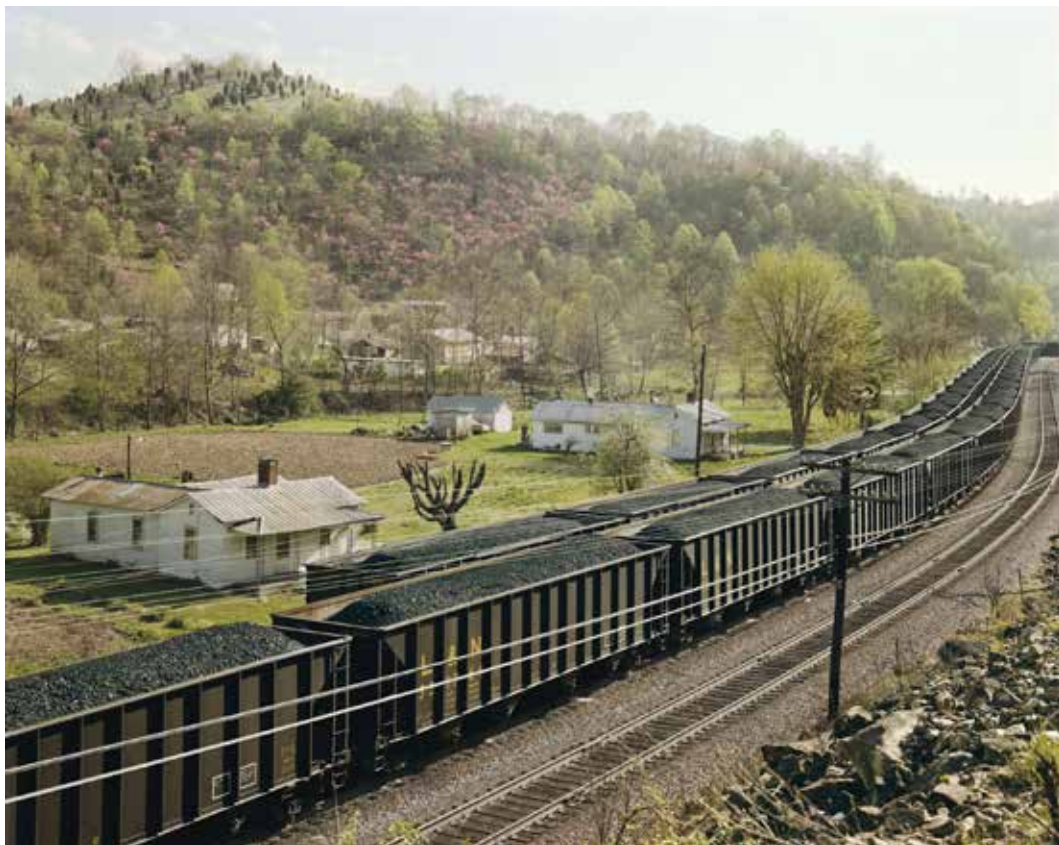
*Modern pastoralism* is the term first used by Peter Rowe (1991) to define an orientation towards modernisation and technical development in a pastoral environment, with the aim to build “[...] the American scene as a place where that dialectic [between city and countryside] finally could be synthesized [...] [into a] healthy, harmonious urban pastoral society combining the best of both worlds” (Machor, 1987, p. 5).<sup>2</sup> An aspiration that, in the post-war period in North America, found its outlet in what Luise A. Mozingo (2011) termed “the ‘suburban grand compromise’ [...] based on a careful leveraging of public funding for suburban expansion through mortgage subsidies and infrastructure financing, especially roadways, attraction of new business enterprises compatible with a suburban aesthetic, and restrictions that ensured race and class segregation” (p. 34). From these progressive “capital flows into the urban periphery” (Mozingo, 2011, p. 34), the American landscape took shape as an ensemble of independent *cultural artefacts* (Easterling, 2001; Hayden & Wark, 2004; Rowe, 1991; Tunnard & Pushkarev, 1964).<sup>3</sup> ‘House in gardens’, ‘retail realms’, ‘corporate estates’ and ‘highways and byways’ operate as *machines in the garden*, namely as a pastoral logic of taming the land, each seeking their own space above a common surface (Krieger, 2019; Marx, 1964; Tunnard & Pushkarev, 1964).



1.3. *The Lackawanna Valley*, George Inness, 1855



This phenomenon was initially driven by a form of *pastoral capitalism*, which from the 1940s, abandoned the overcrowded, unsafe urban centres in favour of the spaces outside the city.<sup>4</sup> In promoting this decentralized development, the corporate campus, the corporate estate and the office parks recalled, and harked back to, the images, forms and rhetoric of the ‘welfare capitalist factories’ or the ‘company towns’ of the previous century (Mozingo, 2011; Rowe, 1991). Indeed, they promoted an idealised image of the landscape through the re-proposal of *pastoral progressivism*, with the goal of an “edifying civility of bucolic small towns, technological modernity in service to life-enhancing progress, and the nuclear family ensconced in material comfort” (Mozingo, 2011, p. 42). Thus, the myth of the Lackawanna Valley portrayed by George Innes in the mid-18<sup>th</sup> century (village, industry and railway) [fig. 1.3], found in the 1950s its correspondence with the aerial photos of the General Motors Technical Centre, the General Motors Electronics Park, or the Wright Aeronautical Corporation (suburbia, corporation and highway), or even the most ordinary landscape of North America [fig. 1.4]. This trend to decentralisation of manufacturing plants characterised this territory for the entire second half of the 20<sup>th</sup> century; so much so that by the 1990s “the complex economy of the former suburbs has reached a critical mass, as specialized service enterprises of every kind” (Fishman, 1990). However, it was not just ‘blue-collar’ industries that moved outside the city. In 2003, in ten out of the thirteen largest metropolitan areas in the United State, most of the offices were to be found in what Robert E. Lang (2003)



1.4. Coeburn, Virginia, Joel Sternfeld, 1981

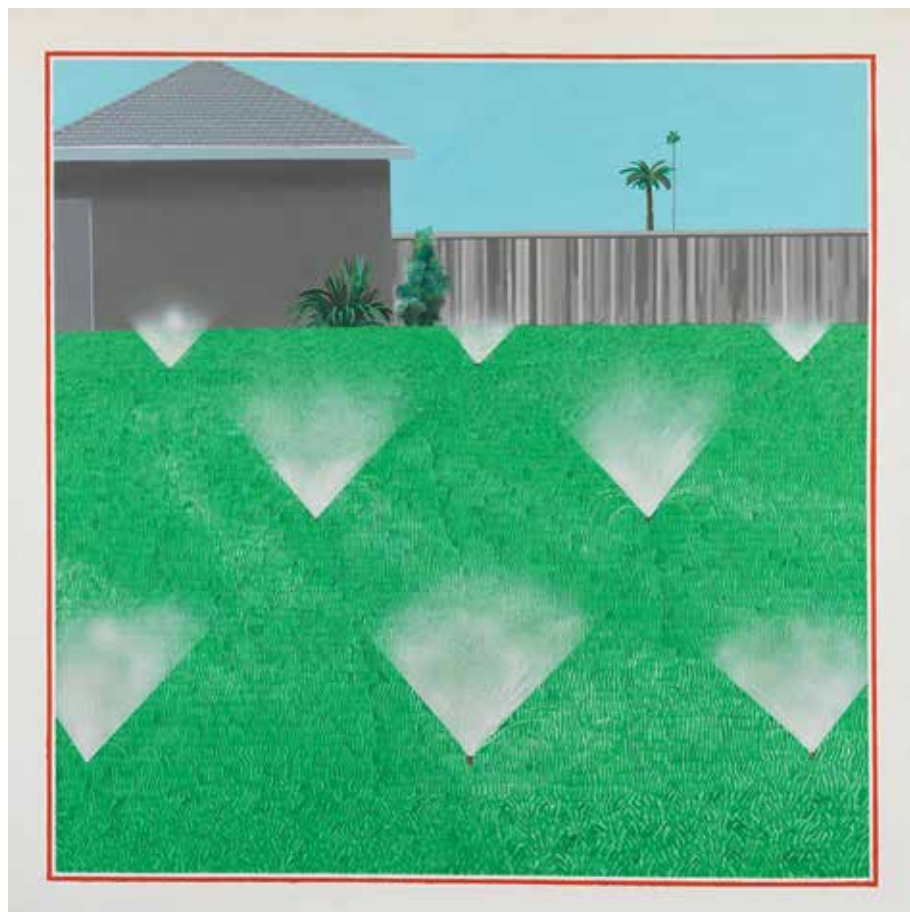
defined as the ‘edgeless city’, that is “a polite way of saying ‘office sprawl’” (p. 40).<sup>5</sup> Finally, in a similar way, the urban areas were also denuded of their historical commercial districts, and between 1958 and 1966 suburban shopping malls had sprung up, exploding from 2,900 to 42,048 (Koolhaas, Chung, Jeffrey, et al., 2001).

These ‘centrifugal movements’ have given rise to a phenomenon defined, generally disparagingly, as suburban *sprawl*: “low density, scattered, urban development without systematic large-scale or regional public land-use planning” (Bruegmann, 2006, p. 18).<sup>6</sup> Even this “current version of the great bourgeois vision of the good life in a tamed countryside” (Banham & Day, 1971, p. 238) exploited the rhetoric of *modern pastoralism*. On the one hand, the *pastoral* aspect has been recovered by transmuting the myth of the first settlers and pioneers who moved “from an eastern, establishment-built environment westward in the direction of nature [...] [into] a massive movement out of the central cities into the quasi-pastoral environment of suburbia” (Marx, 1991, p. 72). On the other hand, suburban



**1.5.** *Leave it to Beaver*, Joe Connelly and Bob Mosher, 1957-1963

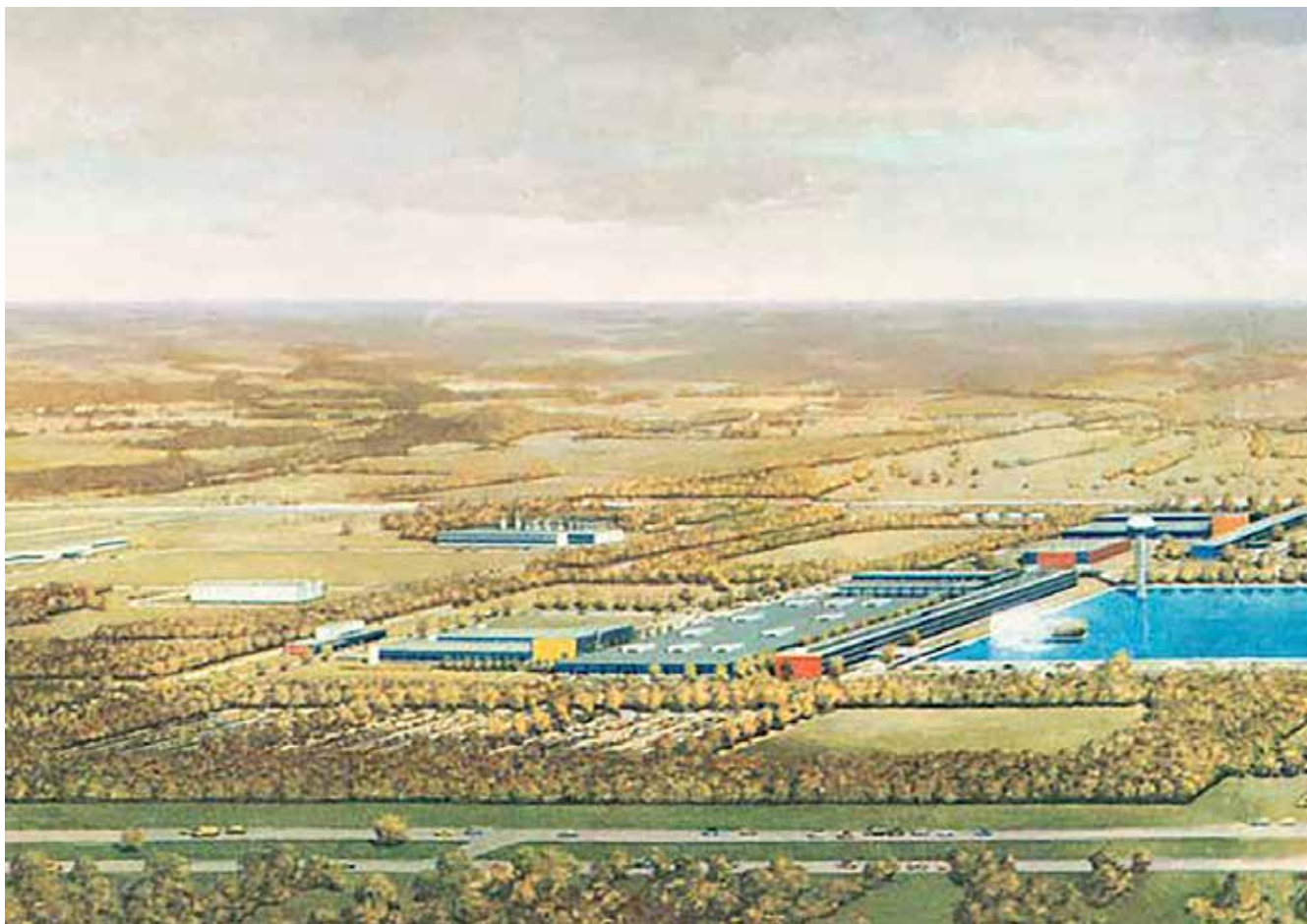
living also availed of the *modern* conveniences developed by the mass production industry in order to build one's own 'personal paradise' (Hayden, 1979; Marx, 1991; Tunnard & Pushkarev, 1964). In particular, both "the houses and the automobiles are equal figments of a great dream, the dream of the urban homestead, the dream of a good life outside the squalors of the European type of city" (Banham & Day, 1971, p. 238). These two 'commodities' ensure individual liberty, while acting as the spokespersons for a precise symbolic code, conforming each user to "appropriate cultural norms of formal and figure appearance" (Rowe, 1991, p. 105). This is because, at the end of the day, suburbia is a "simulacrum of genteel rusticity" (Marx, 1991, p. 75), founded on "autonomy, privacy and segregation" (Mozingo, 2011, p. 219). This 'gentle rusticity' is what is celebrated in the scenes of suburban bliss in the sit-coms of the 1950s such as *Father Knows Best*, *The Donna Reed Show* or *Leave it to Beaver* [fig. 1.5] (Beuka, 2016), as in the paintings of David Hockney in the 1970s [fig. 1.6]. While the progressivist aspects of suburbia find a greater outlet in architecture: not only the corporate estate such as the PepsiCo World Headquarters



**1.6.** *A Lawn Being Sprinkled*, David Hockney, 1967



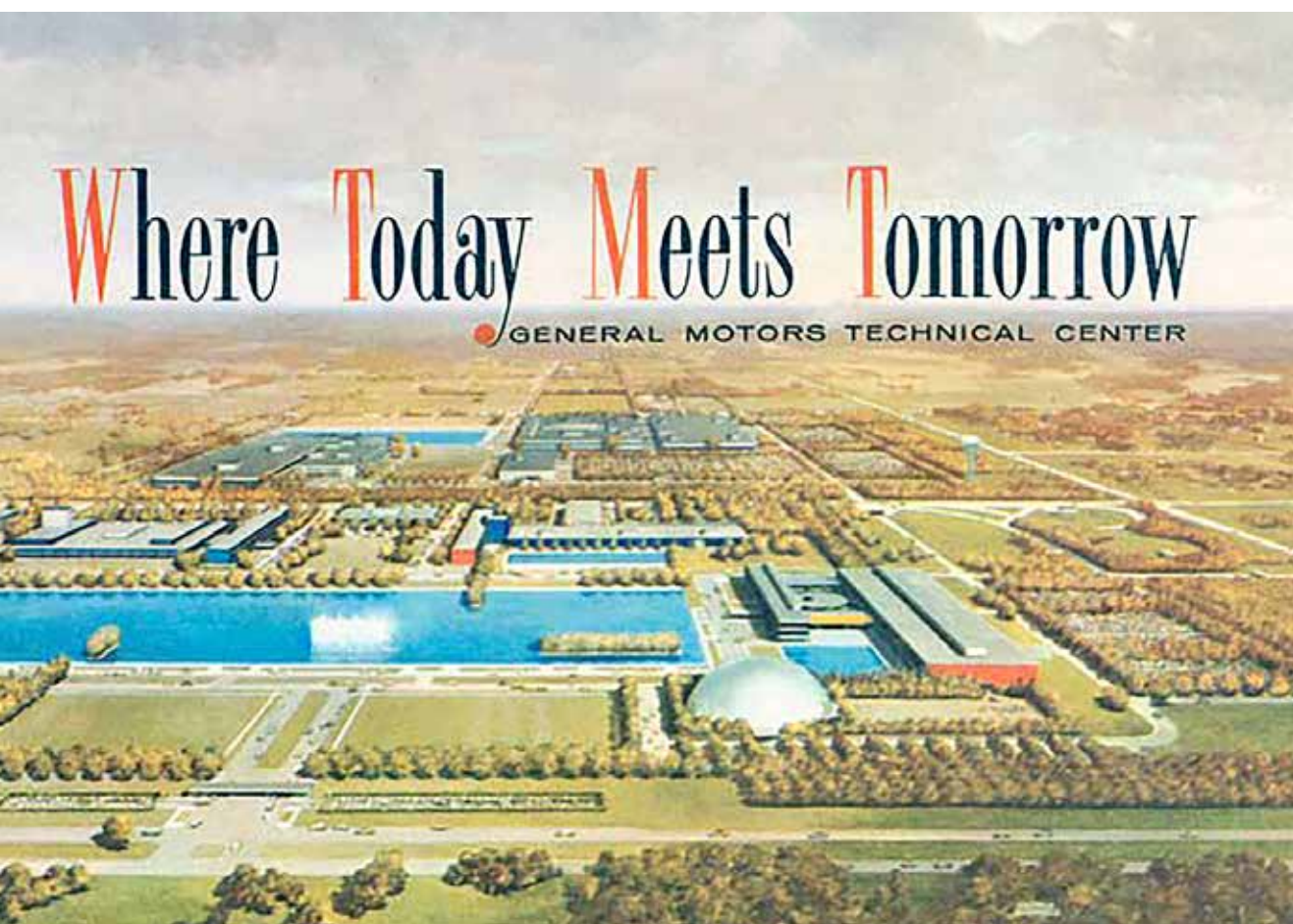
(1967) by Edward Durell Stone or the General Motors Technical Centre (1955) by Eero Saarinen [fig. 1.7]; but also in the construction of private villas epitomised by the Kaufmann House (1946) by Richard Neutra, the Glass House (1949) by Philip Johnson, the Farnsworth House (1951) by Mies Van der Rohe, as well as the house designs of Frank Lloyd Wright or those of Pierre Coening and Craig Ellwood in Los Angeles. All these buildings recall almost explicitly the archetype of *the machine in the garden* by establishing a rapport of mutual reciprocity with the land (Banham & Day, 1971; Wigley, 1999).



**1.7.** *Where Today Meets Tomorrow*, General Motors Technical Center, Eero Saarinen, 1956



The various manifestations of this paradigm on different scales allow us to affirm that, under the influence of *modern pastoralism*, the American dream is constituted as an ensemble of cultural artefacts which are laid out on a territory which assumes the significance of a 'common garden'; the 'American lawn' as recounted by Georges Teyssot (1999) is an uninterrupted horizontal surface of great symbolic value, since "the entire social order is seen to rest on neatly trimmed blades of grass" (Wigley, 1999, p. 156).<sup>7</sup> A surface on which "the symbols of *permanence* must be retraced through everyday materials, [...] topological devices that repeat themselves to infinity across the peripheries of America, interpreting themselves every time in different ways within different landscapes, without, however, defining the boundaries of a territory" (Sampieri, 2008, p. 98). Hence, the *middle landscape* is made of basic urban materials that rest on the land in "[an] organic form [which] is an antitechnocratic principle of order, [...] [that] would require the harmonious accommodation of each building to the site, each site to the city, each city to the region" (Marx, 1991, p. 73). A free composition of cultural artefacts that generates "[a] landscape [which] is not a scenery, it is not political unit; it is really no more than a collection, a system of man-made spaces on the surface of the earth" (Jackson, 1984, p. 156).



## 1.2. Agrarian Urbanism

### Overcoming the urban-rural dichotomy

The same tension to find a synthesis between the urban and the rural in *modern pastoralism* can be identified in the figure of *agrarian urbanism*. This represents an “attempt to reconcile the seemingly contradictory impulses of the industrial metropolis with the social and cultural condition of agrarian settlements” (Waldheim, 2016, p. 124). From the early 1900s, with the greater awareness of the “ongoing process of urban decentralization led by the industrial economy” (Waldheim, 2018, p. 49), the conviction took root that “the grass-roots democracy has its home in the suburban town” (Tunnard & Pushkarev, 1964, p. 19). Based on this belief, which in some of its variations may be said to be ‘anti-urban’, many territorial projects were formulated with the purpose of imagining a new relation between the urban and rural environment (Waldheim, 2016). Among them, while acknowledging their profound differences, some of the most significant are: *Rush City Reformed* (1910) by Richard Neutra, the *Broadacre City* (1934-1935) by Frank Lloyd Wright [fig. 1.8], the *New Regional Pattern* (1945-1949) by Ludwig Hilberseimer [fig. 1.9],

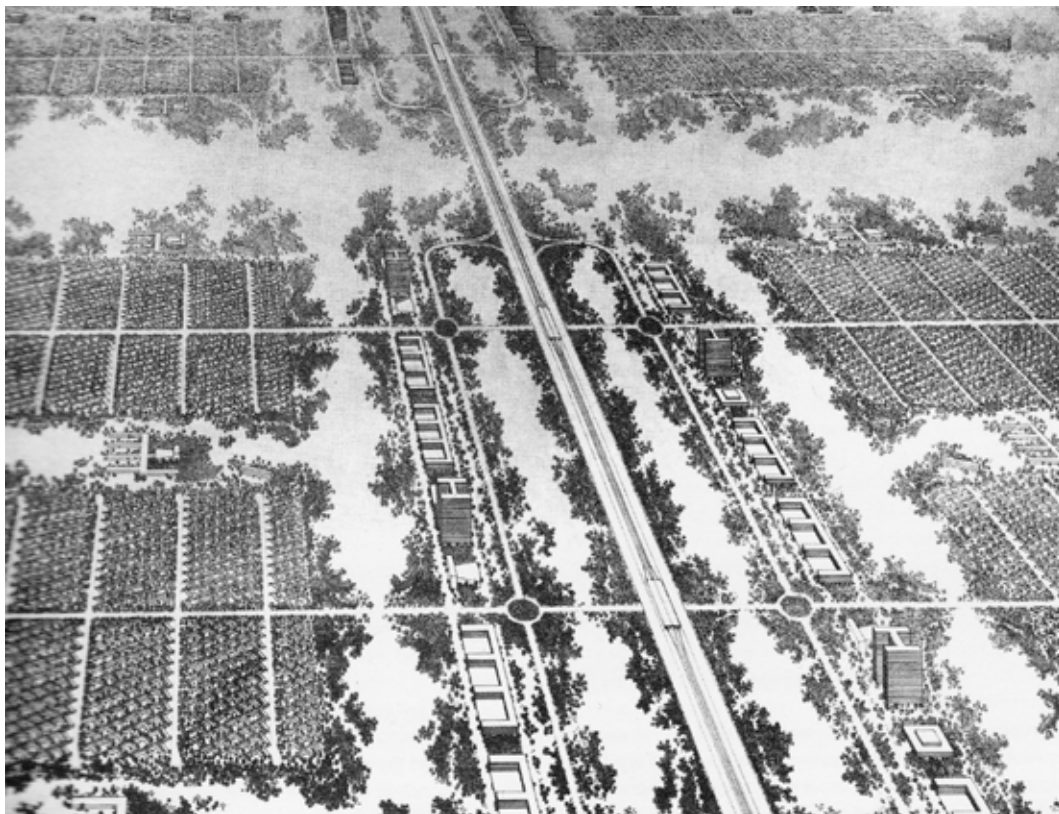


1.8. Broadacre City model, Frank Lloyd Wright, 1934



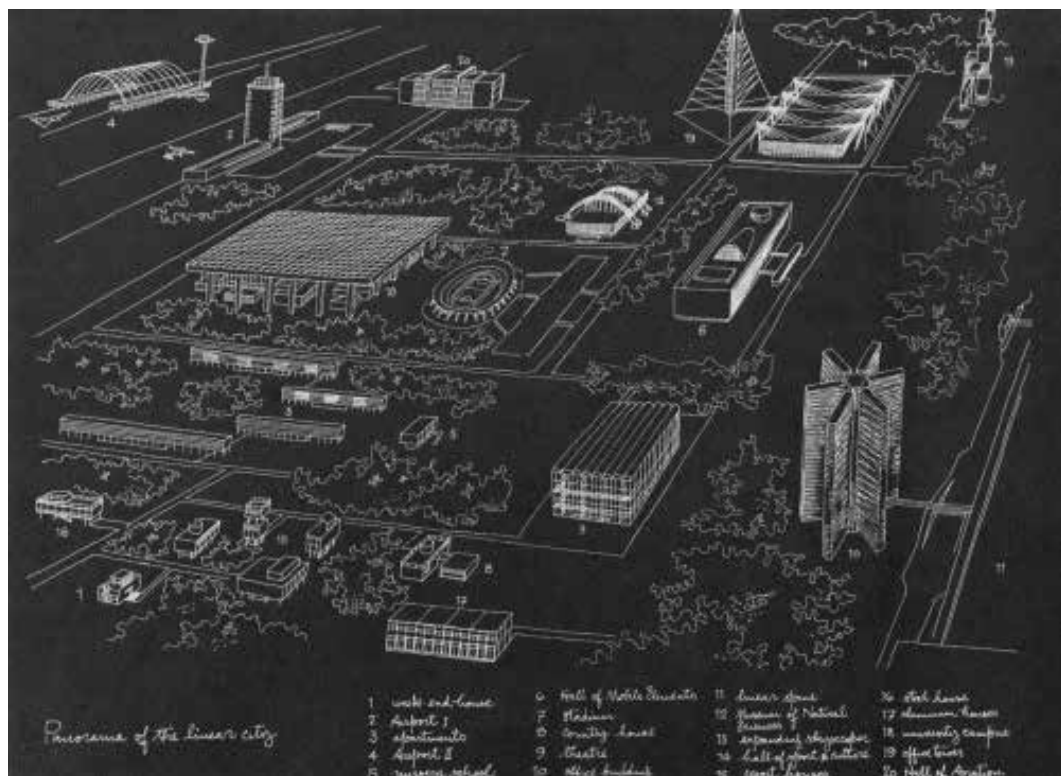
the *Linear Metropolis* (1956) by Reginald Malcolmson [fig. 1.10], and even the *Mesa City, Arcology* and *Arcosanti* (1959-1969) by Paolo Soleri [fig. 1.11]. These projects promoted scenarios in which “city and countryside, village and farmland, and urbanism and landscape are dissolved in favour of a third term, a proto-ecological landscape urbanism for the industrialized north American modernity” (Waldheim, 2016, p. 126). By considering that “building masses are less important in defining space, and landscape elements assume a dominant role” (Tunnard & Pushkarev, 1964, p. 68), these experiences attempted to encode a principle of spatial organisation able to shape a *continuum* composed of a variety of different environmental situations and urban materials. Their objective was to formulate a *structure* that, as Bernardo Secchi (2000) affirms when referring to Broadacre City, “determines the right differences [and distances] between elements, [...] and [it] can become the opportunity to find once again the relation of sense between the individual elements and the whole [territory]” (p. 65). This *structure* was deemed essential for the projects mentioned above that support the conviction that “only such a system of freedom within a general order can be satisfactory and appropriate in a democratic society” (Tunnard & Pushkarev, 1964, p. 444).

Such a ‘system of freedom’ relies heavily on the systems of mobility and infrastructure, and, in fact, Charles Waldheim (2016) highlights how “these projects proposed large territorial or regional networks of urban infrastructure bringing existing natural environments into relationship with new agricultural and industrial landscape” (p.125). Thus, it is the infrastructural network that allows the perception



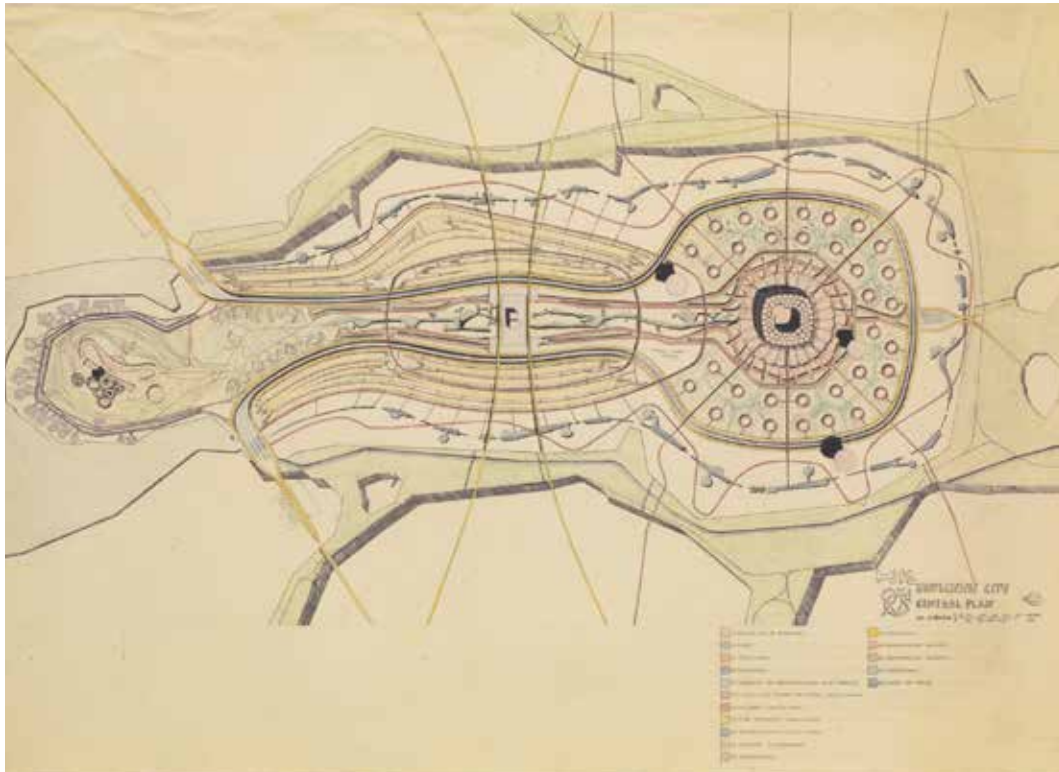
1.9. *New Regional Pattern, Settlement Unit with Commercial Areas*, Ludwig Hilberseimer, 1944

of uniformity in a landscape where “there is variety [...], but also sameness; [...] this makes for a pattern of uniformity on the scale of the macro-landscape, however varied the individual pieces of mosaic may be” (Tunnard & Pushkarev, 1964, pp. 21–22). This infrastructural network in the *middle landscapes* can assume different patterns: it can adopt the territorial subdivisions instituted by the Land Ordinance Act of 1785 as proposed by Wright (Wright, 1939; Mostafavi & Doherty, 2016); it can implode as in the *ladders* of Hilberseimer (Hilberseimer, 1949; Anderson, 2012; Pope, 2015); or it can even take on organicist and nuclear forms as in Soleri’s cities (Soleri, 1970). In each of these variations, the *middle landscape* takes shape originating from a *structure* able to dissipate the urbanity, incorporating different environmental situations, and assimilating various landscapes; as is already evident in Jefferson’s grids which measure, in crossing, the heterogenous landscapes that make up the territory of North America (Corner & MacLean, 2000). Furthermore, such systems of infrastructure are also the means that lead to the formation of *household networks*: individual micro-geographies created by the free assemblage of spaces operated by each inhabitant and each user (Fishman, 1990).<sup>8</sup> In the end, all this leads to the fact that “the suburbs have a diagrammatic clarity in their constituent parts that suburban residents link together as coherent experience as they move through the suburbs by automobile” (Mozingo, 2011, p. 218).



**1.10.** *The Linear Metropolis*, Reginald Malcolmson, 1956

However, despite claiming to be ‘a system of freedom’, *agrarian urbanism*, which is rooted in and based on modernist projects (Sampieri, 2008), appears to express, all in all, once again the same inherent tensions found in rationalist urban design, particularly with respect to the objective to “design society through the design of [physical] space” (Bianchetti, 2008a, p. 143). This underlying contradiction emerges when the projects and the spaces are feted as agents of free and open organisations. For instance when Denis Cosgrove (2000) claims that “the rectangular grid is the perfect spatial expression of the republic’s democratic imperative [...] [because it] privileges no one point above another [...], distributing power equally across space” (p. 8); or when Reyner Banham e Joe Day (1971), observing the metropolitan area of Los Angeles, affirm that “the private car and the public freeway together provide an ideal - not to say idealized - version of democratic urban transportation: door-to-door movement on demand at high average speeds over a very large area” (p. 217). Such claims make it explicit that, in the end, *agrarian urbanism* still finds its own focus in the systems of mobility and infrastructure as devices for structuring a democratic space able to guarantee individual freedom (Banham & Day, 1971; Waldheim, 2016). These, in fact, become the keystones of an all-encompassing ecological system, “a fundamental determinant of America as *landscape* rather than as *landscapes*” (Cosgrove, 2000, p. 8).



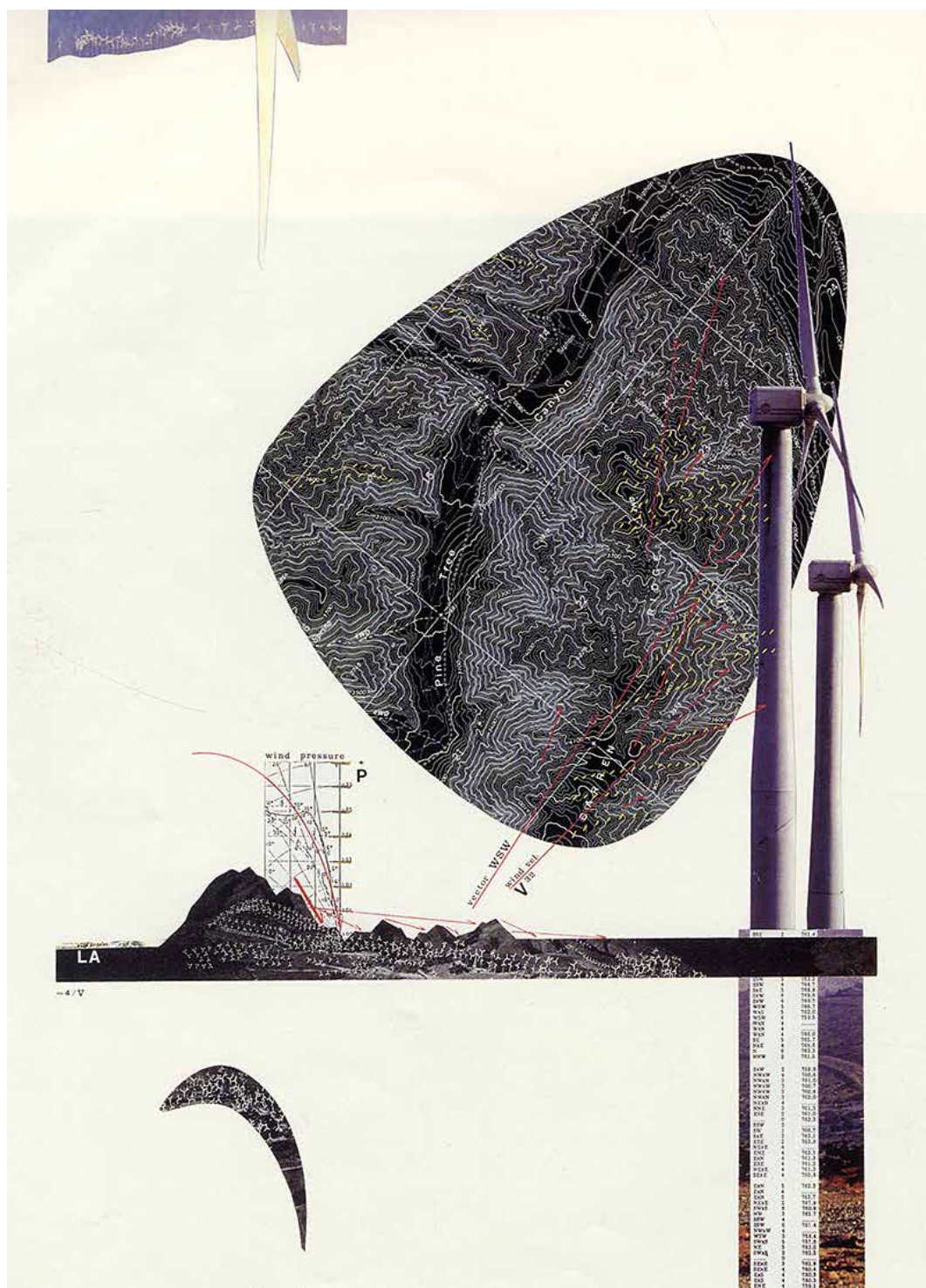
**1.11.** *The New Mesa City Plan*, Paolo Soleri, 1960

### 1.3. Landscape Urbanism

#### The ecology as common ground

With the advent of the 1970s and the onset of the crisis in Fordism, the *machine in the garden* paradigm, as the symbol of unconditional faith in progress and the capability to tame the land, seemed to be waning in strength. As in Gregory Crewdson's photographs (Banks & Crewdson, 2008; Crewdson et al., 2005), the machine seems to have broken down and the garden has taken on a hostile air. We find ourselves in *Suburbicon*,<sup>9</sup> where appearances are deceiving, and everything is wild and dangerous. A condition that not even the infrastructure systems can remedy as they reveal their rigidity and fragility, unable to absorb the changes brought about by the economic crisis, especially in the urban areas. The cities depopulate and all that remain are the ruins. Detroit is an exemplary case, so much so as to be deemed a “‘non-site’ for the architect in the same sense that Certeau's dead body ceased to operate as a ‘site’ for the physician's attention” (Waldheim, 2016, p. 92).<sup>10</sup> However, it is not only the city that is affected, the entire territory is strewn with ‘dead bodies’: industrial sites that have fallen into disuse, suburban areas that have been abandoned; this is the so-called *drosscape*<sup>11</sup> (Berger, 2002, 2007). A scene that seems to belie the elements of continuity, spotlighting the fractured landscape, the vacant, the debris. From these themes, the figure of *landscape urbanism* emerged (simultaneously a form of urbanisation and a disciplinary construct) as a means “to absorb the shocks of the economic restructuring and to insulate urban populations from the worst social and environmental impacts of these transformations” (Waldheim, 2016, p. 69).

With the restructuring of the industrial economy which profoundly affected the American landscape from the 1970s, “the city [...] can no longer be thought of only as a physical artefact; instead we must be aware of the dynamic relationships, both visible and invisible, that exist among the various domains of a larger terrain of urban as well as rural ecologies” (Mostafavi & Doherty, 2016, p. 29). This assumption relaunches and reinterprets the *pastoral* and *agrarian* paradigms in an attempt to conceive a new synthesis of urban and rural. No longer *machine* and *garden*, nor a structure capable of organising a space, rather a symbiosis of the ‘natural’ and ‘artificial’ environment which leads to a view of “the [entire] horizontal surface [...] [as a] ‘field’ of action [...] [where] surface [is] understood as urban infrastructure” (Corner, 2006). A single metabolism in which “the city [is treated] as a resource, like a river or a forest” (Viganò, 2014, p. 141). In light of this interpretation, the *middle ground* is subsumed into the figure of the *landscape* and becomes part of an all-encompassing system: fluid and holistic, whose description and design takes place through three steps: uncover the identity, produce images and organise processes (Sampieri, 2008). These three acts appear to run “counter to the idea of order and creation, [they are] antithetic to the recognition of the autonomy of the parts, to the introduction of a fracturing of plateaus, to the definition of the inertia present in deposited urban materials” (Sampieri, 2008, p. 81), which were, instead, emblematic assumptions of previous modern season.<sup>12</sup> On the contrary,

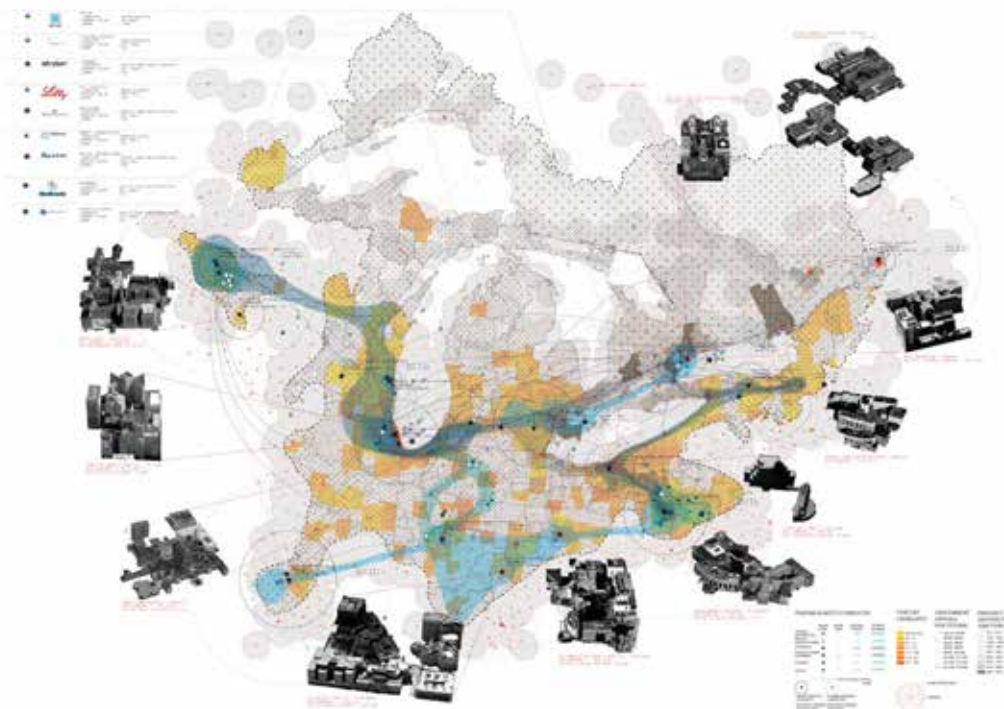


1.12. *Windmill Topography*, James Corner, 2000



they are the voice of a “new ecological paradigm [in which] the relationship between parts and whole is reversed. The properties of the parts can be understood only from the dynamics of the whole. In fact, ultimately, there are no parts at all. What we call a part is merely a pattern in an inseparable web of relationships” (Thün et al., 2015, p. 28). Furthermore, since “the property of a system that arises from the relationships among the parts is not represented in the individual parts which have their own requirements” (Berrizbeitia, 2002, pp. 123–124), attention is turned, in particular, to the performative dimension of actions. These actions do not aim to produce anything defined: neither a clear spatial connotation, nor a coherent symbolic value, rather their aim is to provide the possibility to establish ever-changing relationships among actors, elements and spaces. All with the goal of “irrigating territorial with potential” (Koolhaas, 1995, p. 969), that is, being open to new eventualities, new interpretative possibilities.

Through this interpretation, the *middle landscape* dissolves into the *terra fluxus* in which there is a progressive diminution of the importance of the individual parts while greater attention is given over to their interaction and organisation in terms of process (Corner, 2006) [fig. 1.12]. In this regard, it is emblematic the recent work *Infra Eco Logi Urbanism* (2015) by Geoffrey Thün et al., in which various authors describe and interpret the territories of the North American rust



**1.13.** *MediShed, A Project for the Great Lakes Megaregion*, RVTV, 2015



belt based on the infrastructural, ecological and logistics components, and focusing particular attention on the *flows* and *systems* rather than the *forms* and *structures* [fig. 1.13].<sup>13</sup> By adopting this approach, the *middle landscape* takes shape from the relational ‘grey spaces’, interstitials, undefined and open to change. These spaces appear not as fractures, but as resources to be drawn on by exploiting their flexibility and especially their ‘ambiguity’. Perfect examples of this are *Wheatfield, a Confrontation* (1982) by the artist Agnes Denes (Enderby et al., 2019) [fig. 1.14], or the various proposals submitted for the Downsview Park International Design Competition in Toronto (1999) and above all the winning project *Tree City* by OMA (Czerniak, 2002).

This new perspective places squarely at its centre the collective dimension of space, since “in landscape, there are no isolated individuals, but ‘light aggregations’ [...] made up of interiority, intimacy and organicity” (Sampieri, 2008, p. 93). Therefore, the *middle landscape* seems to articulate itself through common ground on which the tensions do not break into conflict, but, on the contrary, operate through ‘scales of undecidability’, that is, “the landscape’s capacity to engage multiple systems of signification at different scales” (Berrizbeitia, 2002, p. 125). This is construed as “social and political strategy, a tool for interference against any proposed solution that would be permanently static and definitive on the site” (Berrizbeitia, 2002, p. 125). Hence, by adopting this organicist, flexible, holistic, fluid vision, *landscape urbanism* tries to reinterpret “the middle ground as fragmented spatial capital and as an agent of transformation, as a support and a place of potentiality” (Viganò, 2014, p. 79).



**1.14.** *Wheatfield - A Confrontation: Battery Park Landfill, New York, Agnes Denes, 1982*

# Chapter 2

## Urban Diffusion

In parallel with the spread of the processes of suburbanisation in America, from the 1960s new forms of urbanity began to emerge in other regions of the planet along with the new forms of economy and society (De Geyter, 2002). These ‘new territories’ (Viganò, 2004), while presenting themselves in a “heterogeneous condition in which the contradistinctions between city and countryside is gradually blurring [...] [and] the city is no longer concentrated around a single core” (De Geyter, 2002, p. 23), gave rise to a different spatiality compared to those of the *middle landscape*. In fact, these new areas owe their nature to a “specific spatial condition characterized by a horizontality of infrastructure, urbanity, relationships, and by closely interlinked, co-penetrating rural/urban realms, communication, transport and economic systems” (Viganò et al., 2018, p. 1). Today, such conditions can be found in many areas of the planet (Viganò et al., 2018);<sup>14</sup> however, they manifested themselves in a particularly evident fashion in the European context.<sup>15</sup> Here, they have been to the subject of a great variety of descriptions and interpretations,<sup>16</sup> which have brought to light how, in the post-war period,<sup>17</sup> *urban diffusion* in Europe entailed a structural transformation of society and the economy, such to make it necessary to rethink the relation between the living environment, the models of economic development, and the ways of living and practices, places (Secchi, 1989). The result is a territory in which “space appears continuous, homogenous and infinite; therefore, bereft of a single centre, depolarised or, more accurately, in Pascalian terms, ‘saturated’ with centres. [...] [Hence] city and countryside no longer oppose each other” (Secchi, 1989, p. 260). A new environment “both urban and rural; [...] neither city nor landscape, but which has characteristics of both” (Sieverts, 2003, pp. 2–3). This territory supports a ‘society of minorities’,<sup>18</sup> composed of ‘multitudes’ no longer able to construct a ‘grand narrative’ as was the case in the modernist era (Secchi, 1989). A condition which led to a radical rethinking of the territory: not through the pursuance of unified projects, but exalting the diversity that was present. This condition led to a *physical space* that has been described as *isotropic*, sprinkled with mutually heterogenous *fragments*, whose wealth lay in the *mixité* generated by the melting pot of customs and traditions.



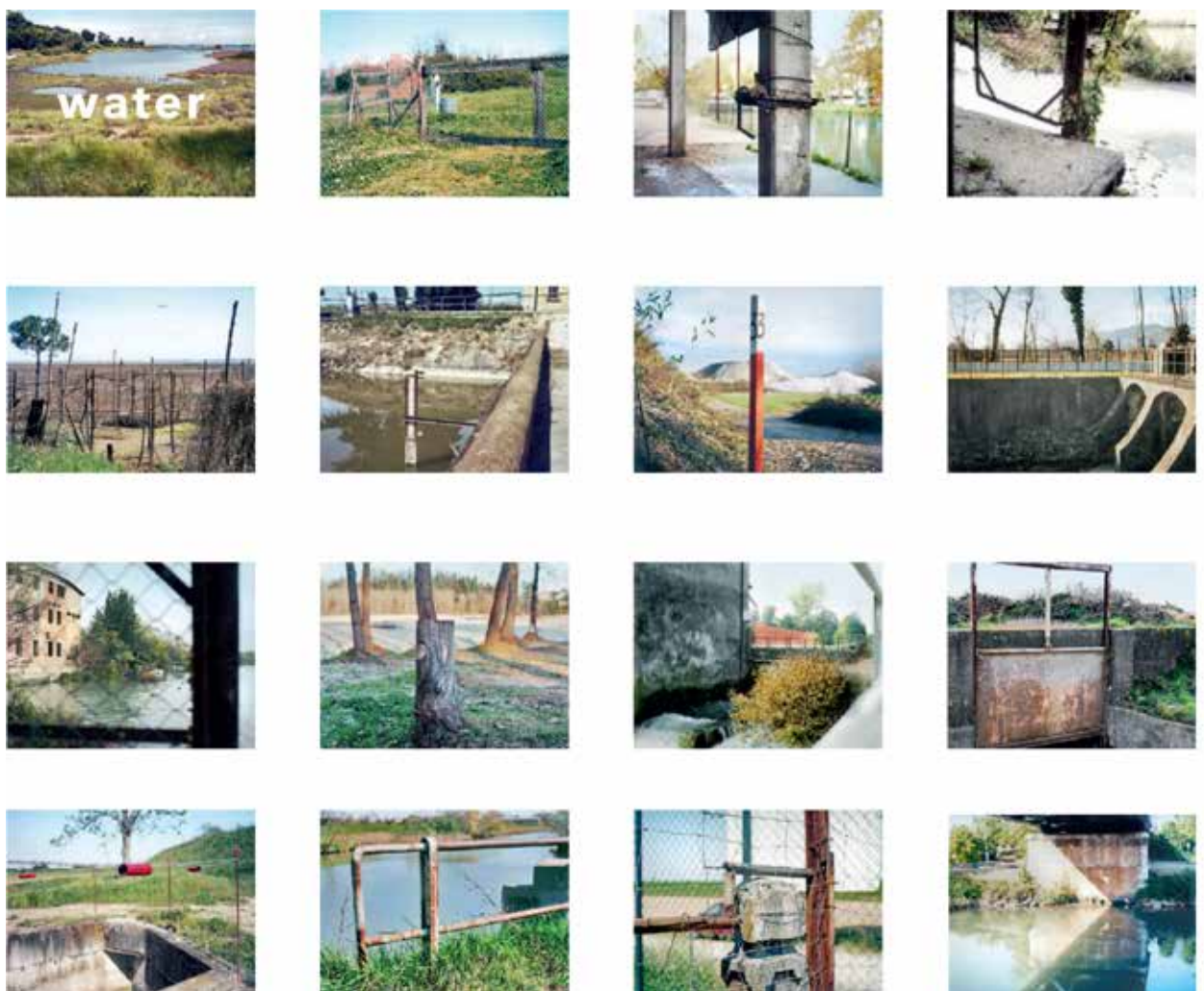
**2.1.** *A Fos-sur-Mer*, Lewis Baltz - Mission photographique de la DATAR , 1985

## 2.1. Isotropy

### A porous ground

The term *isotropy* defines a territorial configuration where “there are no prevailing directions; each and every node is equally connected to each other node, [...] [a system that] has neither centre nor periphery” (Viganò et al., 2016, p. 35). A terrain without hierarchy, in which all properties are evenly distributed among the parts so as to create a ‘homogenous body’ (Secchi & Viganò, 2011, 2014; Viganò, 2010). This figure was applied to describe and design some European territories where the phenomenon of *urban diffusion* appeared to have had the greatest impact: the Flanders, the Ruhr and the lower Padania plain (De Geyter, 2002; Grosjean, 2010; Indovina, 2009; Sieverts, 2003). The interpretation of these areas as *isotropic terrains* is tied to two main factors.

The first is due to the capillarity of a sophisticated infrastructural network composed of a dense fabric of tiny roads and small canals (a feature documented in several territorial studies, such as *Water and Asphalt* (2010) by Paola Viganò, Lorenzo Fabian and Bernardo Secchi) [fig. 2.2]. That allows the territory to act as



**2.2.** *Water and Asphalt*, Paola Viganò, Lorenzo Fabian and Bernardo Secchi, 2010



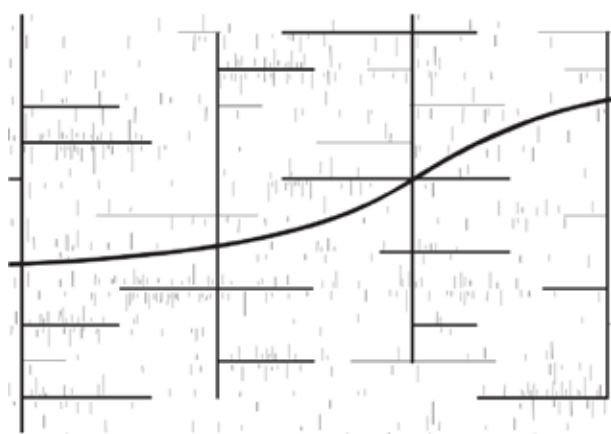
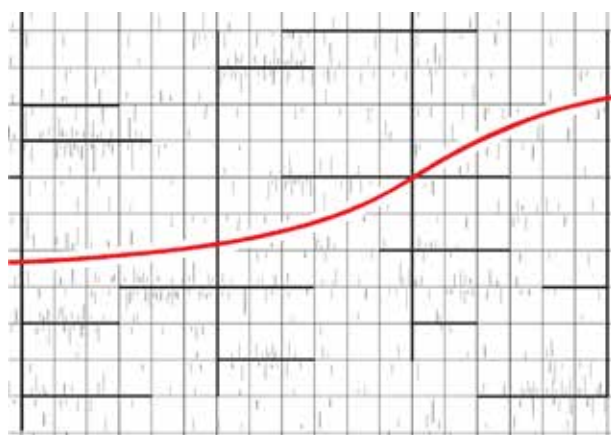
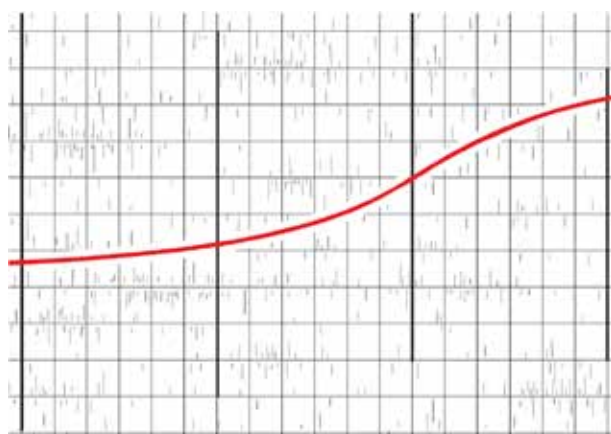
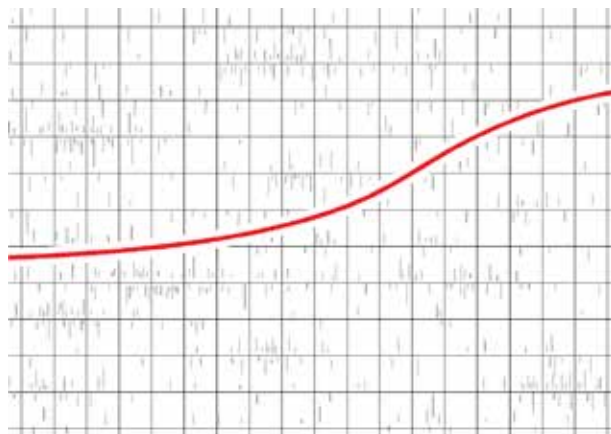
a *sponge*: a space within which movements take place by percolation, and *osmotic* exchange between parts (Secchi & Viganò, 2011, 2014; Viganò, 2014; Viganò et al., 2016) [fig. 2.3]. This image runs counter to that of the *tube*, a hierarchical figure that was one of the lynchpins of modern urbanism which has long celebrated the myth of movement and speed (Secchi, 2005) [fig. 2.4]. Therefore, in opposition to that, the condition of *porosity* of *urban diffusion* is linked to the presence of a pervasive system of fine infrastructural and environmental elements. A condition that has led the territories of *urban diffusion* to be considered as places of political, ecological, and economic rationality (Sieverts, 2003; Viganò, 2010; Viganò et al., 2016). A conviction which can be seen in studies for the *Horizontal Metropolis* (Viganò et al., 2018); but had already been encoded in its mature form in the scenario proposed by Bernardo Secchi and Paola Viganò for the competition *Grand Paris*.<sup>19</sup> In fact, this project identified “in discontinuity the principal obstacle to a better functioning of the territory” (Bianchetti, 2014a, p. 113); as barriers, fractures and separations are deemed to be the cause of ‘spatial injustice’ (Soja, 2010). Hence, the *project of isotropy* undertakes to ‘(re)join and heal’, that is, to mitigate the differences in ‘positional values’ on the land in order to relieve socio-economic polarisation (Secchi, 1989, 2013).





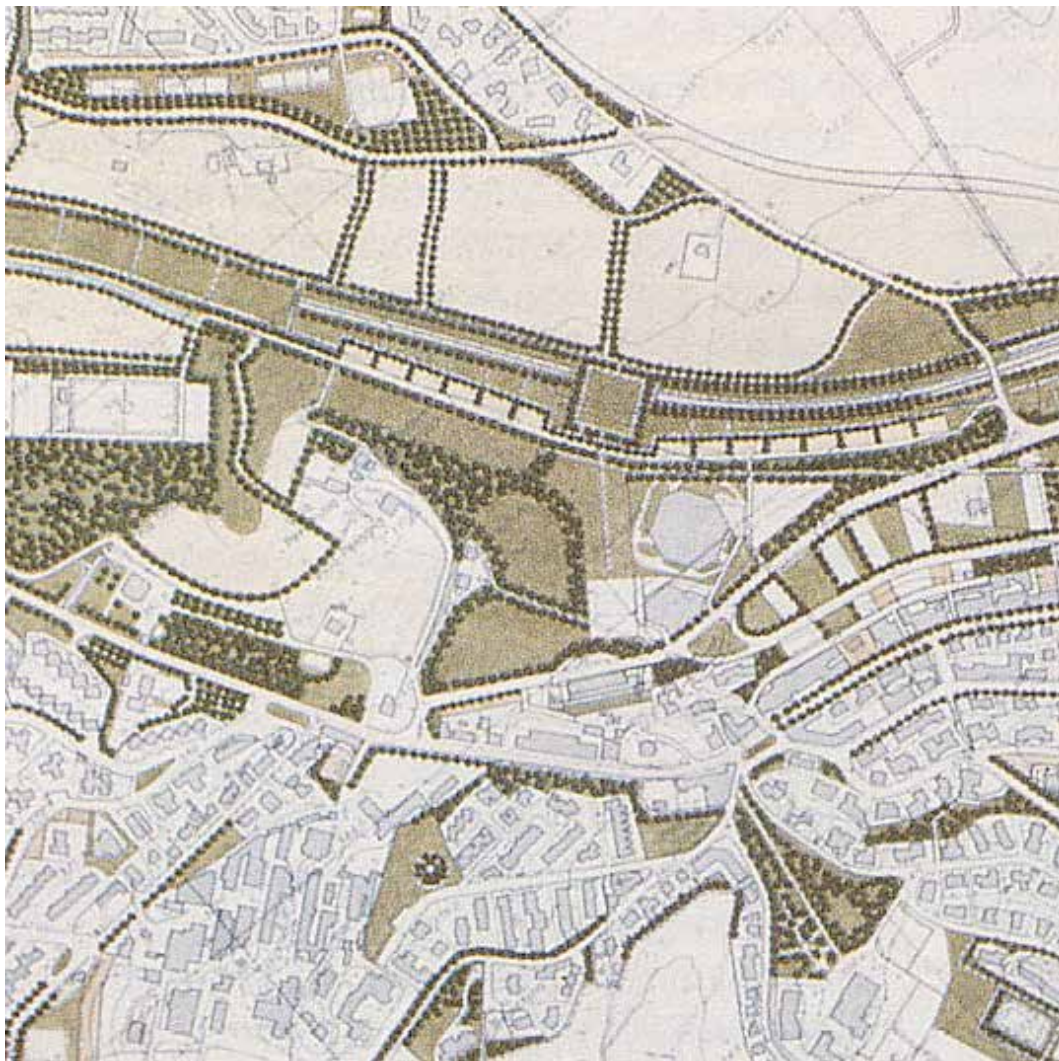
**2.3.** *The Project of Isotropy model*, Paola Viganò, Lorenzo Fabian and Bernardo Secchi, 2010





**2.4.** *Isotropy versus Hierarchy*, Paola Viganò, Lorenzo Fabian and Bernardo Secchi, 2010

However, the figure of *isotropy* displays a second distinguishing feature of the territories of *urban diffusion*: the prevalence of open spaces as the element structuring the land by gathering within itself different instances and arranging them into a whole (De Geyter, 2002; Sieverts, 2003; Viganò, 2010). A condition which conferred on these territories the character of ‘continuity’ thanks to the sequence of small differentiated objects (Bianchetti, 2014a). These relate to one another through the land, which acts as a support without the pretension of providing the whole with a deliberate plan. Thus, in territories of *urban diffusion* “things are ‘laid’, ‘placed’, ‘arranged’ in sites so very different from one another that it is impossible to find a place of residence for them, to define a *common locus* beneath them all” (Foucault, 2002, p. XIX). The space between things is, therefore, a space deprived of meaning, of urbanity. This gives rise to “continuous territories, without quality” (Bianchetti, 2014a, p. 112), in which open spaces are “room[s] for manoeuvre” (Sieverts, 2003, p. 51), a mere technical support. Although this support can be subjected to appropriation by individuals or minorities (Secchi, 1986), it is precisely this *terrain vague* which provides opportunities for individual and collective instances (de Solà-Morales, 1995). In fact, it is a “space that contemporarily ‘separates’ and



**2.5.** *Il Progetto di Suolo, Siena PRG (detail), Bernardo Secchi, 1990*

‘leans towards’” (Teyssot, 2000, p. 33), in which “the vacuum is absence, [and so] the space of the possible” (de Solà-Morales, 1995, p. 27). Indeed, it is these self-same neutral and malleable properties of the *in-between* space that are exploited in many projects and methods in approaching the *urban diffusion*, such as the *progetto di suolo* (Secchi, 1986) [fig. 2.5];<sup>20</sup> or the many scenarios dating from the early 2000s which promoted the rethinking of the city such as *After-sprawl* (De Geyter, 2002), *Zwischenstadt* (Sieverts, 2003), *Ville Poreuse* (Secchi & Viganò, 2011), *Horizontal Metropolis* (Viganò et al., 2018) [fig. 2.6]. These scenarios highlighted the possibility “[to] develop any diversity of settlement and built form, so long as [...] [they] remain embedded as an ‘archipelago’ in the ‘sea’ of an interconnected landscape; [...] in this way the landscape becomes the glue” (Sieverts, 2003, p. 9). Therefore, the territories of *urban diffusion* can be also said to be *isotropic* based on the importance attributed to ‘in-between space’<sup>21</sup> as ‘mediation space’, able to “offer to the specificities a ‘common area’ by placing them in relation, giving them a sense” (Secchi, 1989, p. XXI). *Urban diffusion* is, thus, regarded as a tune in which greater attention is given to the pauses, the correct spacing between the notes which structure the motif, orchestrating the parts in order to produce a coherent melody.



**2.6.** *The Horizontal Metropolis, Bruxelles 2040*, Studio Bernardo Secchi and Paola Viganò, 2012



## 2.2. Fragments

### The collection of singularities

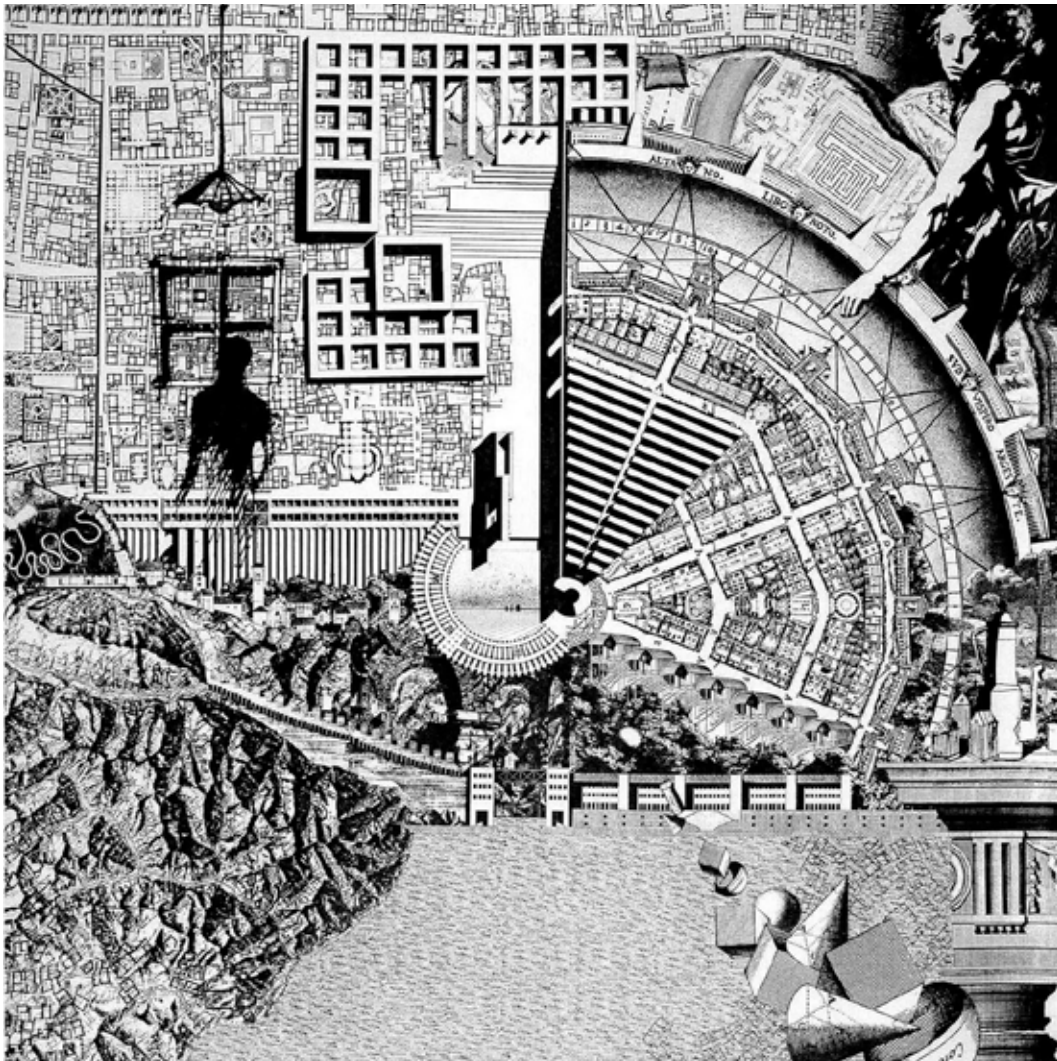
The image of the *urban diffusion* as an *isotropic* environment is often associated with another, in some ways complementary, figure: the *fragment*. This figure has been interpreted in different ways.

First, the historicist viewpoint has identified *fragments* as pieces of memory that compose the *analogous city* or *city by parts* (Rossi, 1966; Tafuri, 1986) **[fig. 2.7]**; made up of “relics” or ‘historical urban products’ that, through their “provocative availability, a magic that stems from the ambiguity of the possible signification of the non-finite” (Gregotti, 1966, p. 116) become the inspiration for new formal configurations. Such *fragments* are observed to be the result of a progressive selection and a constant sedimentation on the land of diverse urban materials (Secchi, 2000). A stratification that has been defined as a *palimpsest* (Corboz, 1985), in which “the city, the territory [...] appears, above all, as sites of the physical contiguity between diverse objects that more often than not are contradictory, perceptible only as part of an objectual ensemble of belonging” (Boeri, 2016, p. 42) **[fig. 2.8]**. Within this framework, *urban diffusion* is read as a “inhomogeneous gathering of ‘countless signs’” (Secchi, 1989, p. 100), each one displays specific positional, representative and symbolic values **[fig. 2.9]**.<sup>22</sup>

Second, the figure of the *fragment* also emerges from the everyday living environment and the economic activities of the inhabitants of the *urban diffusions*. In fact, each personal “story of conquest of a living space that is finally large enough and equipped with services unheard of until then” (Lanzani & Pasqui, 2011, p. 41) is celebrated formally, so much so that “each building, despite being structurally similar to any other, strives to ‘scream’ its uniqueness” (Lanzani & Pasqui, 2011, p. 42).<sup>23</sup> Moreover, these buildings, for the most part self-funded and self-constructed, are also the fixed asset of each family, as well as the main resource to be used for undertaking small-scale entrepreneurial initiatives (A. Bonomi & Abruzzese, 2004; Aldo Bonomi & Rullani, 2005; Lanzani & Pasqui, 2011). In fact, based on the conviction that they “can achieve a more humane material life, if only we better understand the making of things” (Sennett, 2009, p. 8), “the inhabitants of the urban diffusion, set themselves up as ‘solitary masters’ of a particular type of production based on the principle of ‘molecular capitalism’, who act individually or at most in reciprocal relationships with one another (A. Bonomi & Abruzzese, 2004; Aldo Bonomi & Rullani, 2005).<sup>24</sup> This ‘molecular capitalism’ corresponds to the fragmentation of production into ‘countless’ activities that support each other reciprocally by forming industrial districts composed of a multitude of small and medium enterprises. This territorial organisation is the spatialization of two “special conditions of our mature industrial societies: [...] on the one hand, low densities of activity and, on the other, freedom in the location of functions” (Sieverts, 2003, p. 10). These conditions are typical of the *urban diffusion* in which the relationship between the productive activities and the specificities of each territory is crucial

in supporting economies of agglomeration, since “the distinctions inside the ‘geographical space’ become the constitutive element of economic development” (Governa, 2014, p. 104).

Third, in the territories of *urban diffusion*, the figure of the *fragment* also emerges from the definitions and the uses of the public spaces (Bianchetti, 2008b). As described by Cristina Bianchetti (2011) “in contemporary Western cities, what is public [...] is shattered, exploded into a myriad of tiny shards, scattered here and there” (p.82). Hence, the democratic character of the public space is no longer defined by the modern “capability to manifest the themes and values deemed universal” (Bianchetti, 2011, p. 81), rather by the ability to guarantee “the wellbeing of each individual, as defined by one’s preferences, lifestyle, cultural circumstances and customs” (Bianchetti, 2008b, p. 75). A condition that reverberates in the contemporary city which, “unlike the modern city, [...] appears labile,



**2.7.** *Analogous City*, Aldo Rossi, 1976

mobile, frayed. No longer a unified whole. Even residual, fragmented, temporary” (Bianchetti, 2008b, p. 75). A dispersion that, taken to its extreme, brings about the atomisation of *fragments* into individual forms: nothing more than ‘bodies in space’; individuals that just occasionally and temporarily reconfigure themselves according to variable aggregations (Bianchetti, 2016). This because *urban diffusion* is “a simpler model, and more simply emulative, less sophisticated [than the modern city]. Because *do it yourself* implies *do it alone*” (Sampieri, 2014, p. 29).



**2.8.** *Atlas du territoire genevois: formation - transformation aux XIXe et XXe siècles*, André Corboz, 1993



Eventually, the figure of the *fragment* can be traced in the post-modern European design culture which worked on the basis of well-defined boundaries that regulate the relations between each urban element and the external (pre-existing) context. In this way, the architects who worked in the *urban diffusions* sought to recompose the whole urban environment through the autonomous parts which try to resist the dispersion (Gregotti, 1999). A clear example of this trend is the urban acupuncture which European cities have been subjected to since the 1980s.<sup>25</sup> These operations forsake large-scale projects and centre on the architectural object, privileging this over the urban plan. A condition which obliges urbanists and planners to “accentuate the procedural, the incremental and the contractual, [...] to observe from close up, [...] to confine one’s gaze and one’s action to the fragment” (Secchi, 1989, p. 110) while not giving up, however, on the idea that, although reasoning ‘by parts’, “the sense of these [architectural] projects, the sense of their differences, may only be grasped and evaluated if posed against the background of a more comprehensive and longer-term narrative” (Secchi, 1989, p. 110). Based on this position, a new approach to urban design has been developed. This approach, considers the territory as something that “acquires ‘sense’ within a more generalised social project and acquires ‘value’ through architecture” (Secchi, 1989, p. 132). Based on this viewpoint the *urban diffusion* has been designed as an assembly of *fragments* each one corresponding to the habits of individuals or social groups that together create “a [multilinear] territory in which diverse spaces and situations are to be found” (Bianchetti, 2008b, p. 38).<sup>26</sup>



**2.9.** *Studi per una operante storia urbana di Roma*, Saverio Muratori, 1963

## 2.3. Mixité

### The juxtaposition of diversities

Finally, the territories of *urban diffusion* are characterised by a third figure, the *mixité* resulting from heterogeneous *fragments* positioned on an *isotropic* land. This *mixité* of the *urban diffusion* is different from those pursued by the late-modernist projects through actions known as ‘social engineering’, which postulated that through a “well-balanced presence of different functions, it is possible to generate an urban attraction and an urban interaction” (Bianchetti, 2013, p. 2). This kind of *mixité*, while intending to run counter to the practice of ‘separating and isolating’ the elements by zoning the land (Barattucci, 2013), inadvertently became a new form of functionalism, with the effect of leading the debate back to the question of fixing the ‘right layout’ and establishing the ‘right standards’ (Bianchetti, 2014c, 2013). On the contrary, the *mixité* in the territories of *urban diffusion* is constituted thanks to the malleability of the in-between spaces, by which the ‘right distance’ is renegotiated day by day, by trial and error, refusing all rigid, formal regulation (an aim pursued in several urban projects, for instance the urban plan for Prato, by Studio Bernardo Secchi and Paola Viganò in 1996).

This condition appears evident when examining the small-scale everyday living environment of *urban diffusion*, where “each site contains versatile spaces for different uses and a variety of functions” (Lanzani & Pasqui, 2011, p. 42). Houses, for instance, are, at the same time, dwellings, workshops, factories, shops, and warehouses; evoking the myth of the ‘craftsman’s workshop’ where ‘home’ does not suggest established stability but is something to struggle for (Sennett, 2009). Hence, in the territories of *urban diffusion*, *mixité* is a condition tailor-made by individuals that contribute, through their actions, to the porosity of connections, the pervasiveness of threshold (public) spaces, and the dispersion of functions. Thanks to this condition “the ‘diffuse city’, in general appears to be connoted by a strong mixture of population, activity, and practices” (Viganò et al., 2016, p. 39).



2.10. Agronica, Andrea Branzi, 1995

The *urban diffusion* is, therefore, the environment in which “[the] space for personal existence is composed of innumerable individual territories which can be spontaneously connected and separated” (Sieverts, 2003, p. 74). In other words, “everything is in constant flux, [...] [a flux characterised by] lack of coordination, anachronisms, lines that link positions, mark regressions and distances” (Bianchetti, 2014a, p. 112). This territory may be read “as a system which permits the widest variety of action, spaces, and connections, or as a ‘menu’ with the help of which its inhabitants can put together for themselves a life à la carte” (Sieverts, 2003, p. 71). This ‘atomized way of life’ is characterized by weak, light and provisional aggregations composed of different persons that work together, time by time, to pursue a common goal without establishing lasting relationships. In other words, the territories of *urban diffusion* allow “the possibility that individual rhythms converge in more complex and articulated spatial configurations thanks to the interweaving and overlapping of individual paths. All this without forming indissoluble relations and, on the contrary, recognizing their fluidity” (Todros, 2014, pp. 40–41).

The condition of *mixité* that characterised the process of *urban diffusion*, while most commonly observed in recent years within well-established urban areas as a consequence of the economic crisis that affected European territories,<sup>27</sup> is also the cornerstone of several design activities, for example, the project for a ‘weak and diffused modernity’ by Andrea Branzi (2006) [fig. 2.10-2.11]. Most of these activities consider the *urban diffusion* as a space in which “the urban landscape’s whole image no longer corresponds to the activities carried out within it. The close relationship between form and function has dissolved” (Branzi, 2006, p. 10). Hence, these projects consider this light, ‘anti-urban’ *mixité* a value which makes the *urban diffusion* the field in which to practice “the right to ‘habiter autrement’ and to keep (and to be kept) at a safe distance. Here, urbanity for contiguity’s sake is a meaningless myth” (Bianchetti, 2014b, p. 79).



2.11. *Agronica*, Andrea Branzi, 1995

## Chapter 3

# The Infrastructures and Logistic Space

In the late 1980s Jean Gottmann (1987) declared that “the modern cities are better viewed not in isolation, as centres of a restricted area, but rather as part of a ‘cities system’, as participants in an urban network revolving in widening orbits” (p. 57). Within a few years, with an enormous increase in scale, the *network* went global (Castells, 2004; Soja, 2000), and the urban agglomerations which comprised it dissolved into what has been described as *planetary urbanisation* (Brenner, 2014; Katsikis, 2018a).<sup>28</sup> Among the many factors which brought about this situation, the one that appears to be of primary importance is the pervasiveness of infrastructural networks and information technologies, both of which have gained momentum in their growth in recent years.<sup>29</sup> In fact, the *liquid* properties (Bauman, 2000) of these infrastructures and technologies have rewritten consolidated spatial configurations, done away with relations of proximity and brought about a progressive separation of spaces which affects local environments just as much as those on a planetary scale (Castells, 2004; Lyster, 2016). A case in point of this phenomenon is the gradual concentration of specific manufacturing industries and functions in specific areas of the world, with the consequent development of a *global zoning* which seeks to organize the planet into clusters of specialisation. The functioning of this planetary organisation is highly dependent on the exchange of data and information made possible by regulations and procedures based on standards and indicators. A condition which has strong repercussions on the territorial organisations, transforming the *landscapes* in *datascares*. This leads to systems of spatial organisation that are more and more disconnected from the local context, which ignore the relation of proximity, and tend to consider space as a sort of *storage* in which to allocate urban materials according to contingent demands. The considerations that follow highlight these conditions in the knowledge that, despite numerous sources documented that “infrastructure is then not the urban substructure, but urban structure itself – the very parameters of global urbanism” (Easterling, 2016, p. 12), the spatial consequences of such constructions still appear to be unclear.





**3.1.** *Warehouse in Vilarreal, Spain, Henrik Spohler, 2017*



**3.2.** *Package logistics, distribution center at Cologne-Bonn Airport, Henrik Spohler, 2017*



### 3.1. Global Zoning

#### Operational landscapes

On 6th July 2018, following the lack of progress in the negotiations over the tariffs imposed by the United States government, the Chinese administration applied a 25 percent tariff on a range of US products, among which was soy (Bloomberg News, 2019a, 2019b; Leng, 2018; Plume, 2019). This decision badly affected US growers, who account for 35 percent of global production (Food and Agriculture Organisation of the United Nations, 2019).<sup>30</sup> This percentage corresponds to 362,286.6 square kilometres of American land, located mainly in the Midwest [figs. 3.8-3.9-3.10.-3.11]. This area, over the course of the last century, has been organised in terms of methods and equipment to turn this region into the leading global producer of soy and corn (Berlan et al., 1977). Likewise, the near-monopoly of China over the production of rare-earth metals, of which the potential to restrict export is considered an economic weapon in the hands of the Chinese government, is not simply due to the concentration of these metals in the territory. These, in fact, despite their name, are found in various areas of the planet (U.S. Geological Survey, 2014).<sup>31</sup> Hence, the near-monopoly is the result of political and socio-economic factors which have developed over the course of the last fifty years brought about by the perfecting of a highly-developed mining industry in the Chinese regions, such as the Bayan Obo Mining District: the largest extraction plant in the world for rare earths (Humphries, 2013; Tse, 2011) [fig. 3.3].<sup>32</sup> Located in Inner Mongolia, this extraction plant has turned 200 square kilometres of the Gobi desert into a production site replete with roads and railways as well as towns that house about 30,000 inhabitants (Kanazawa & Kamitani, 2006).



**3.3.** Bayan Obo mining site, China, 2019

These two examples brought into the spotlight by the trade war between the US and China, highlight how, over the last century and with a notable increase in pace since the 1990s, different areas of the planet have gradually developed into specialised production centres for particular goods.<sup>33</sup> Specialised spaces are to be found everywhere: lithium mines in the Atacama desert in Chile and Argentina (Carlisle & Pevzner, 2019; Romero et al., 2012), massive areas deforested to make way for palm oil plantations in Malaysia (Bablon et al., 2019), or expanses of greenhouses for horticulture in the Almeria province in Spain (Tout, 1990) [fig. 3.4]. Nikos Katsikis (2018a) defines these sites as *operational landscape*, that is “specialized regions of production, extraction and circulation where land, energy and labour are invested in the exploration, harvesting and operationalization of all physical and material substances that sustain contemporary urbanisation” (p. 43). The establishment of such ‘appendices of planetary urbanisation’ (Brenner, 2014) is not just linked to specific social, political, topographical or climatic conditions, but is due to the pervasiveness of infrastructural networks, which enable operations on a global scale.<sup>34</sup> Together with new communications technology, such networks make “new markets accessible on a cost-effective basis [...] [allowing] a new functional division of labour in space. [...] The combination of technological advance and trade liberalization has contributed to the increased specialization, internationalization, and dispersion of production processes” (Donaghy, 2012, pp. 396–397). In essence, a combination that has permitted the spread of *global-supply-chains* which have the purpose of a *vertical fragmentation* of productive activities, and their *horizontal spread* to seek out the most suitable locations for specific processes (Jones & Kierzkowski, 2001).<sup>35</sup>



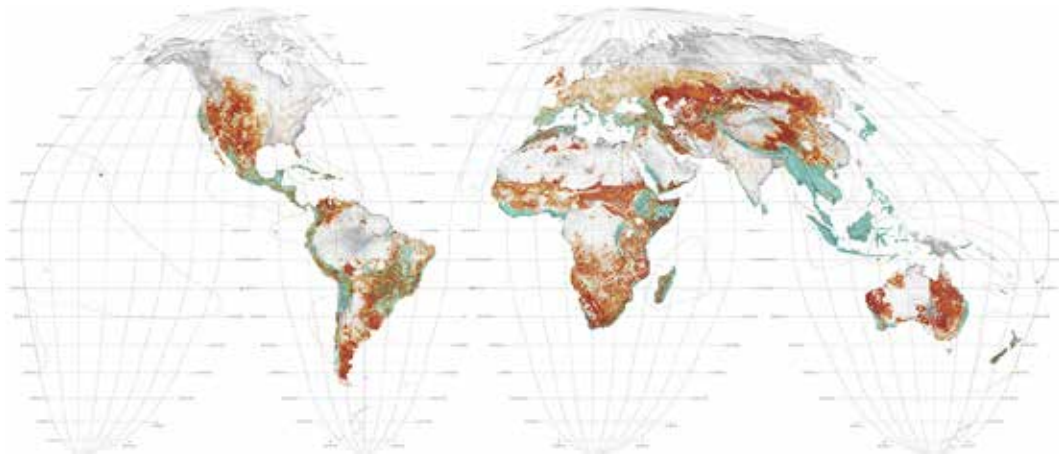
3.4. Almería greenhouses, Spain, 2019

Consequently, to make the *global-supply-chains* work, the territory is organized according to the principles and rules of logistics. As for the representations by Richard Weller (2015), each productive activity is located on a specific territory according to the performance that this can offer **[figs. 3.5-3.6-3.7]**. Hence, the selection of the location is made on the basis of its efficiency rather than any local conditions or administrative boundaries. As found by Jesse LeCavalier (2016) “this approach cultivates modes of corporate geographical perception that respond to performance criteria rather than political boundaries” (pp. 148–149). It can, therefore, be affirmed that logistics apply to a territory the economic notion of *fungibility*: any two sites are equivalent and, thus, interchangeable as long as they both meet the ‘performance criteria’. These criteria appear to be less and less influenced by the specific characteristics of each place, and more by the relation between the site and the wider (global) infrastructural network.<sup>36</sup> Keller Easterling (2016) defines this character as *disposition* or “an unfolding relationship between potentials. It describes a tendency, activity, faculty, or property in either beings or objects – a propensity [...] in the relation between the components” (p. 72).

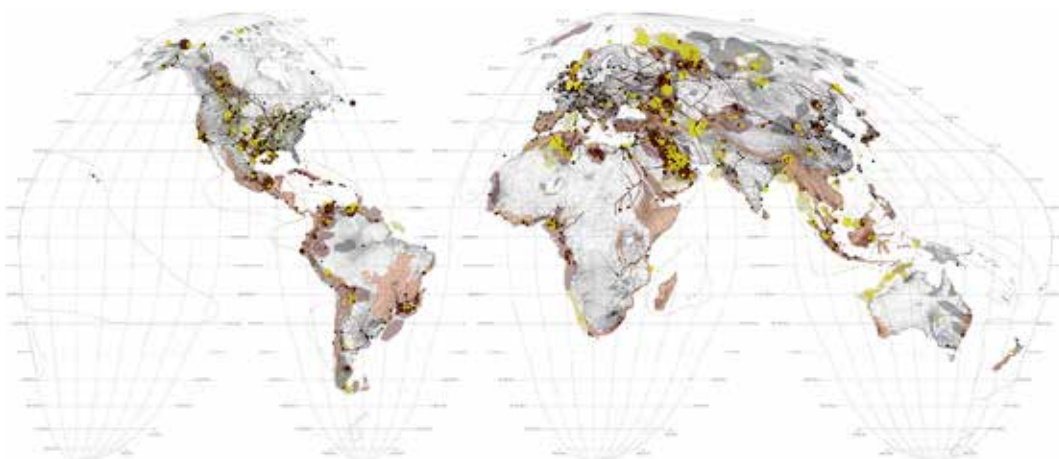
In light of this condition, the articulation of space appears to be determined by the infrastructural networks which constitute “a set of instructions for an interplay between variables, [in which] design acquires some of the power and currency of a software. This spatial software is not a thing but a means to craft a multitude of interdependent relationship and sequences – an updating platform for inflecting a stream of objects” (Easterling, 2016, p. 80). An example of this ‘updating platform’ is the *nowhere-to-nowhere route* established by the low-cost airline Ryanair, which has produced “a new map of Europe that revealed an alternative spatio-geographic indexing of the continent, one that focused on previously obscure places and projected them as significant points on the Euro map. [...] Ryanair demonstrates how networks act as urbanizing agents for smaller insignificant places - new geographies - that suddenly emerge as pivotal sites, not because of natural features, resource extraction or climate (i.e., traditional geospatial catalysts)” (Lyster, 2016, p. 22). A similar and even more radical network is Airbnb: a virtual place where every user who offers an apartment or just a room introduces a physical space into a digital platform. Such networks seem to highlight a new ephemeral and changing urbanism, which since recent years has been subjected to fascinations and conceptualisations. Among the most recent, the *Kinetic City* theorized by Rahul Mehrotra, Filipe Vera and José Mayoral (2017): a place that “is temporary in nature, dependent upon ephemeral conditions [...] a place where designing functional arrangements is more important than the construction of the architectonic body, where openness prevails over rigidity and flexibility is valued over rigor. It is a city that premised on detachment. In this context, sustainability relies more on the city capacity to deconstruct, disassemble, reconfigure and reverse previous interactions” (p. 11).

This “urbanism after form” (Waldheim, 2011, p. 4), which is created through infrastructural devices, is actually anything but shapeless and ephemeral. In fact, it allows for spatialization, in places considered the most suitable, for specific

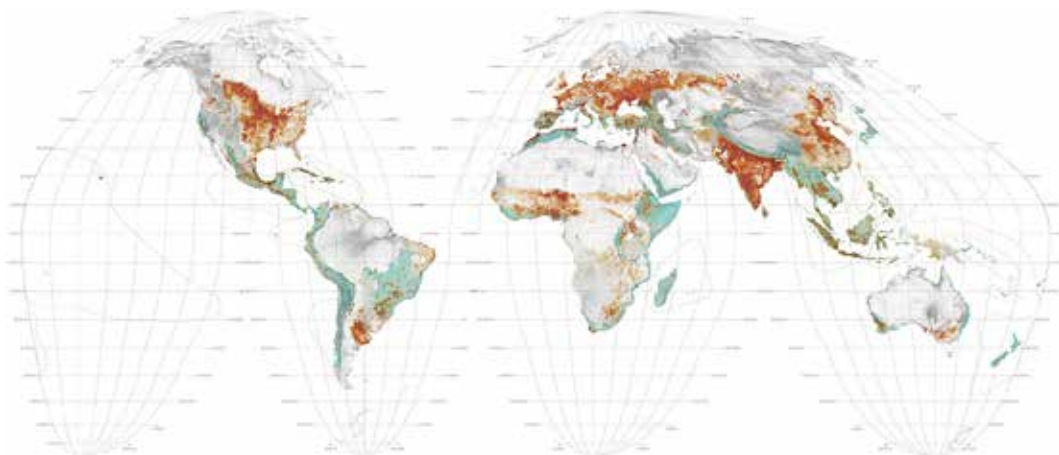




**3.5.** *Meat Landscape*, Richard Weller, 2015



**3.6.** *Energy Landscape*, Richard Weller, 2015



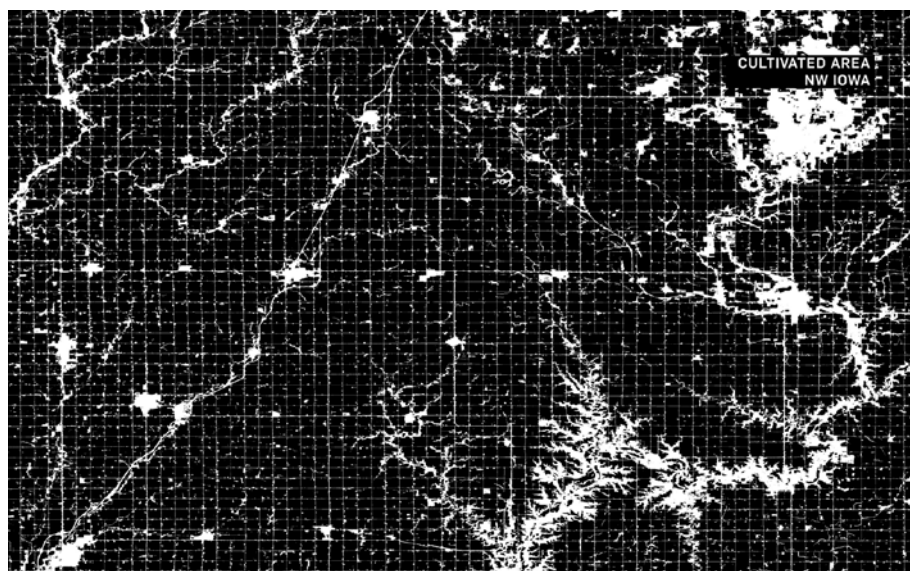
**3.7.** *Cropland Landscape*, Richard Weller, 2015

uses and types of production. Not content “to accommodate local contingency while maintaining overall continuity” (Allen, 1999, p. 55), it rather acts to *exploit* local contingency by maintaining overall continuity. Hence, the resulting spatial organisation seems to be quite different from that ‘weak and diffuse modernity’ which envisaged a mix of spaces and functions and a co-mingling, or, at least, a simultaneity, of uses and practices starting with the overcoming of the morphological constraints brought about by new technology (Branzi, 2006). On the contrary, the space that emerges reflects more closely the ‘space of commodities’ described by Henri Lefebvre (1991): “space thus understood is both abstract and concrete in character: abstract inasmuch as it has no existence save by virtue of the exchangeability of all its component parts, and concrete inasmuch as it is socially real and such localized” (pp. 341-342). Overall, a sort of compromise between the visions, in some ways opposing, of Buckminster Fuller and Constantinos Doxiadis: a space in which “[the ephemeral] and seamlessly interconnected planetary system of flows, almost entirely detached from earthly boundaries”, imagined by the former (Katsikis, 2014, p. 493), organises “an optimal zoning of the earth to promote an appropriate system of world management” (Katsikis, 2014, p. 489), envisioned by the latter.

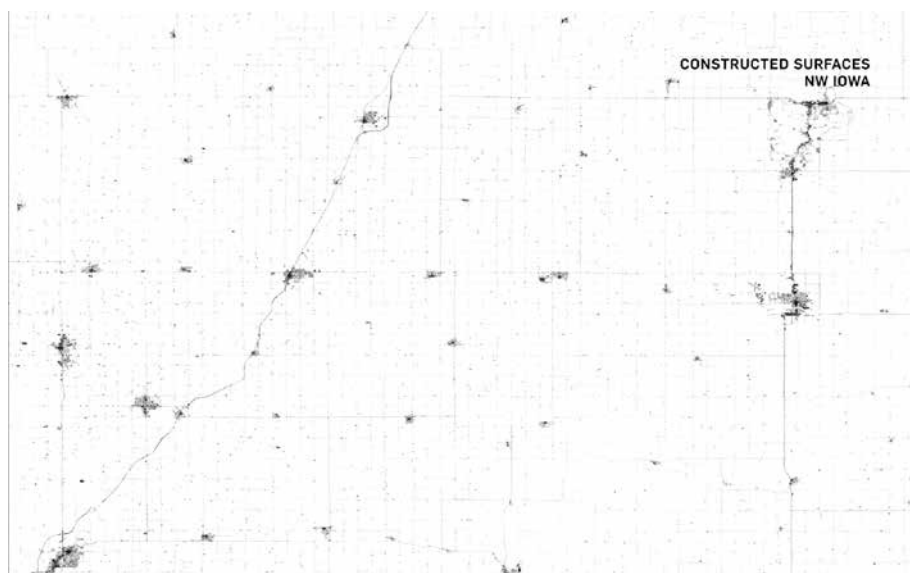


**3.8.** Northwest Iowa, USA, 2019

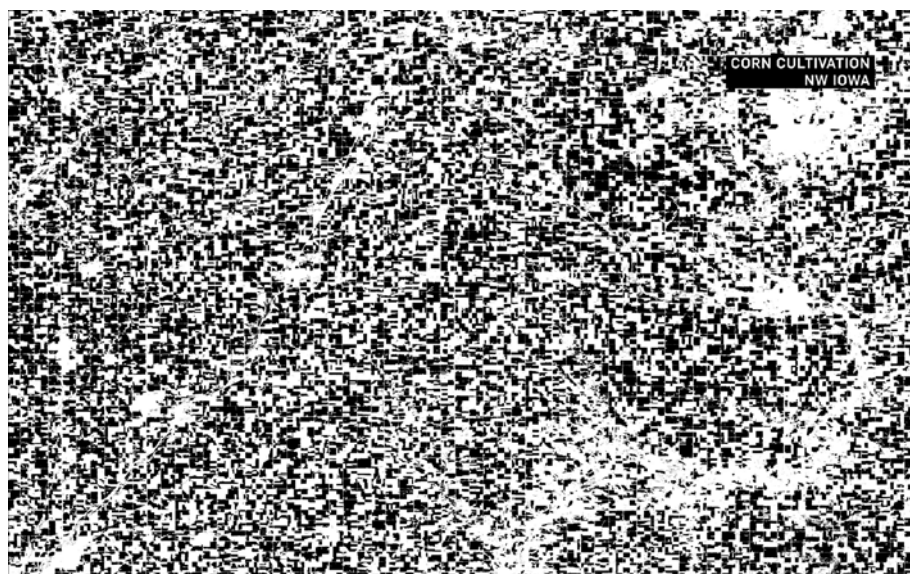




**3.9.** *Cultivated Area in the American Midwest*, Nikos Katsikis, 2018



**3.10.** *Constructed Surfaces in the American Midwest*, Nikos Katsikis, 2018

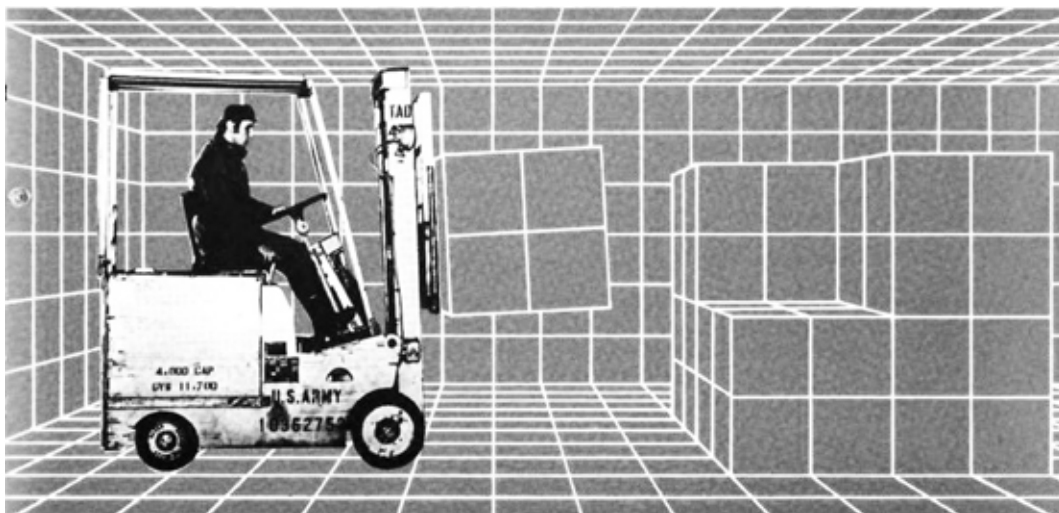


**3.11.** *Corn Cultivation in the American Midwest*, Nikos Katsikis, 2018

### 3.2. Performative Standardization

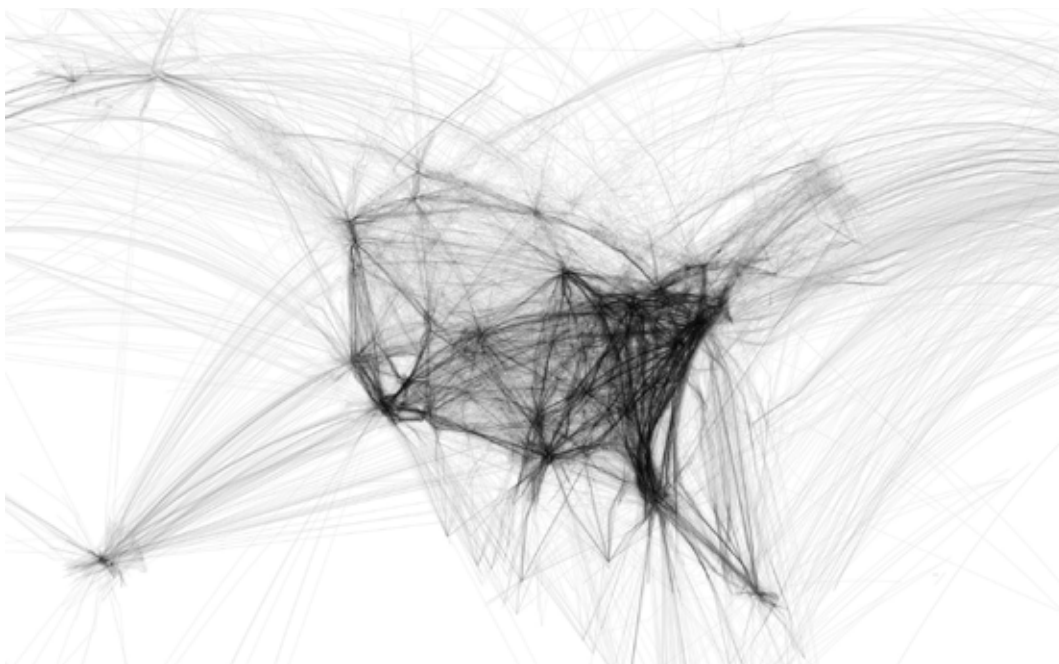
#### From landscape to datascape

The progressive standardisation of spaces and uses has always been driven by the spread of infrastructural systems. Until the end of the last century, especially in the West, setting standards was the prerogative of national governments, which, through the development of infrastructural systems, aimed to create a ‘continuous surface’, capable of, amongst other things, ensuring territorial cohesion (Entrikin, 1989; Goodchild, 1990; Graham & Marvin, 2001), and, through this, normalisation of the customs and practices (Balbo, 1993; Choay, 1969; Sandercock, 1998).<sup>37</sup> With the rise of the pluralist society and the decline in state investments as part of the neo-liberal political agenda, “[the modern] single, monopolistic infrastructural grids start giving way to multiple, separate circuits of infrastructure which are customized to the need of different (usually powerful) users and spaces” (Graham & Marvin, 2001, p. 100). The development of what Stephen Graham (2000) defined as ‘premium networked spaces’<sup>38</sup> or what Neil Brenner (1998) called ‘glocal scalar fixes’<sup>39</sup> led to a change in the role of logistics. The *infrastructural space* has become an agency that “has an imaginary all its own that is capable of both transforming existing spaces and producing new ones in pursuit of better alignment with ever-larger logistical regimes” (LeCavalier, 2016, pp. 49–50) [fig. 3.12]. This alignment is brought about by the setting out of regulations to which specific spaces and highly specialised networks must abide: spaces ‘tailor-made’ to fit with standards issued by non-governmental organisations.<sup>40</sup>



3.12. *Modelling the Wholesale Logistics Base*, Charles B. Einstein, 1983

Today, standards and indicators are ever more pervasive as devices necessary to build relations between non-contiguous areas on a global scale [fig. 3.13]. Through these devices, it is possible to translate *landscape* into *datascape*, by reducing the space and all its components to a set of measurable, comparable and manageable variables (Allen, 1999; LeCavalier, 2016). The process of translating physical objects into arrays of data has its own roots in some experiences which are landmarks in the development of modern logistics. For instance the synthetic way of representing landscape by William Caraher in 1975 is a perfect example of this [fig. 3.14], while some of the most relevant progresses were strictly related to the rise of large supermarket chains. In 1917, Clarence Sanders, founder of the *Piggly Wiggly* supermarket chain, first tested the ‘self-service’ system (LeCavalier, 2016). Thanks to this organisation, the goods of different producers are displayed side by side and reduced to an array of data: cost, quantity, components, packaging. Even more radically, the appearance of the first bar-code systems in the first half of the 1970s led to an analogous revolution in thinking, transforming “[the way in which] objects were imagined because it not only encoded them with information but also allowed them to be treated like information” (LeCavalier, 2016, p. 63). Nowadays the wide variety of certifications such as SEED (Social Economic Environmental Design),<sup>41</sup> LEED (Leadership in Energy and Environmental Design),<sup>42</sup> or the standards such as ISO 37120, or even the new ‘performance indicators’ act in an analogous manner, reducing the urban environment to a series of comparable, and scoreable data. This process of *datafication*, which starting from the building and its component parts, is taking in ever greater swathes of the surroundings; reaching the point that, as in the research carried out by the Centre for Social Science Engineering at the University



**3.13.** *Flight Patterns*, Aaron Koblin, 2005

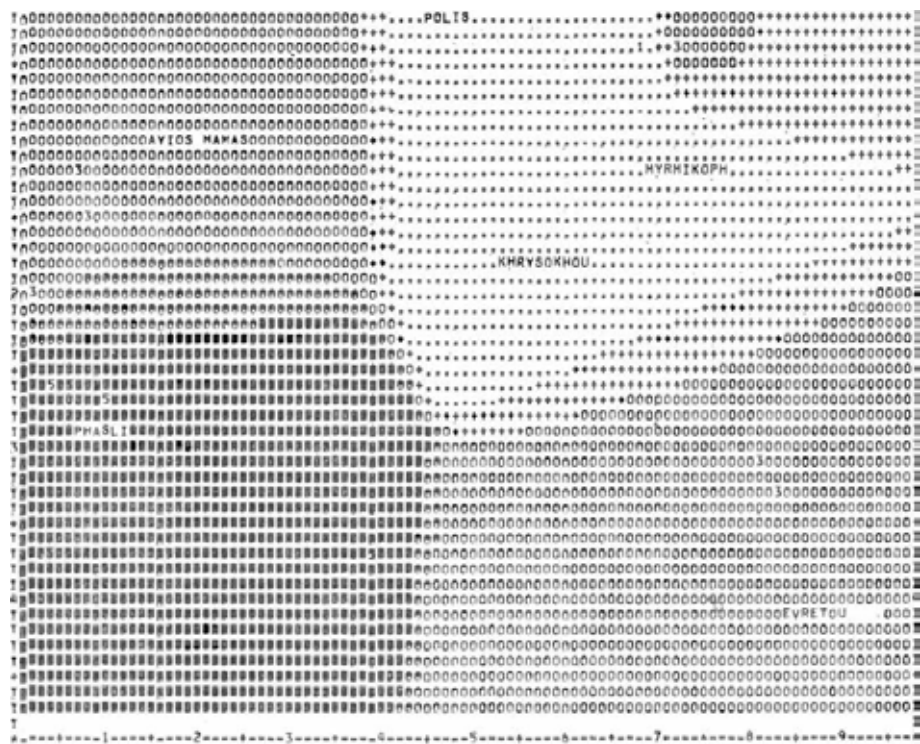


Figure 16 SYMAP of Neolithic/Chalcolithic components in the Khrysokhou drainage. Note: This and all other SYMAPS correspond to the area delimited in figure 15. The key for this map is applicable to all SYMAPS used in this article except figure 18.

Key: · Zone I  
 + Intermediate Zone I/II  
 O Zone II  
 θ Intermediate Zone II/III  
 ■ Zone III  
 1,3,5 Single component on single site locus  
 S Multiple components of a given settlement system on single site locus

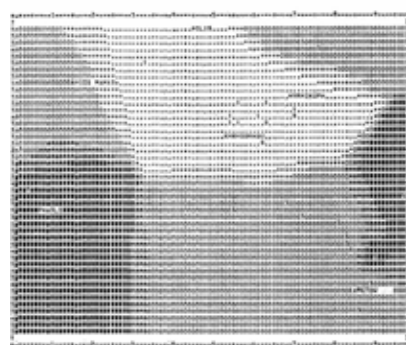


Figure 17 SYMAP of Bronze Age components in the Khrysokhou drainage

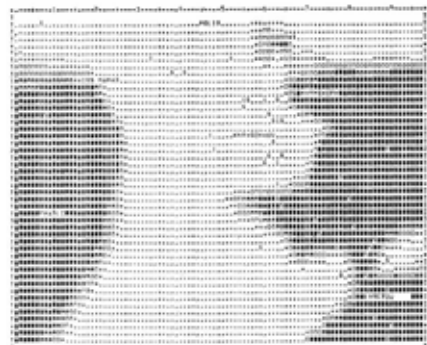


Figure 18 SYMAP of Cypro-Geometric to Hellenistic components in the Khrysokhou drainage

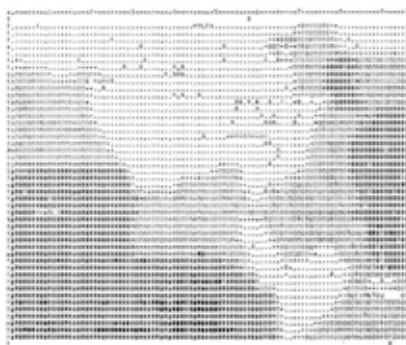


Figure 19 SYMAP of Roman components in the Khrysokhou drainage

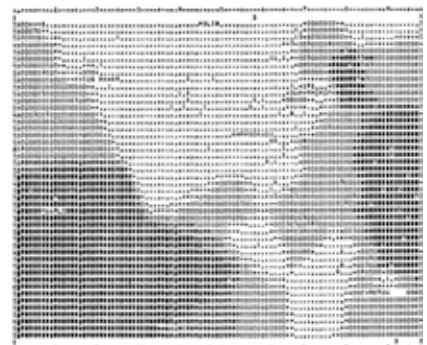


Figure 20 SYMAP of Byzantine/Medieval components in the Khrysokhou drainage

### 3.14. SYMAP of Khrysokhou, Cyprus, William Caraher, 1975

of Toronto, ‘an ontology for global city indicators’ has been developed in order to perform a ‘computational analysis of city performance’.<sup>43</sup> At present these “international standards bodies constitute an extensive yet mundane and, to now, rather silent force of social rationalization across the globe” (Mendel, 2006, pp. 162–163) in that “[they] format the performance and calibration of many components of infrastructure space at every scale, from the microscopic to gigantic” (Easterling, 2016, pp. 171–172). A force that strongly impacts any territory and its design since its site, architecture and infrastructure are considered “mediating elements [that] sit between these physical networks and data networks” (LeCavalier, 2016, p. 52).

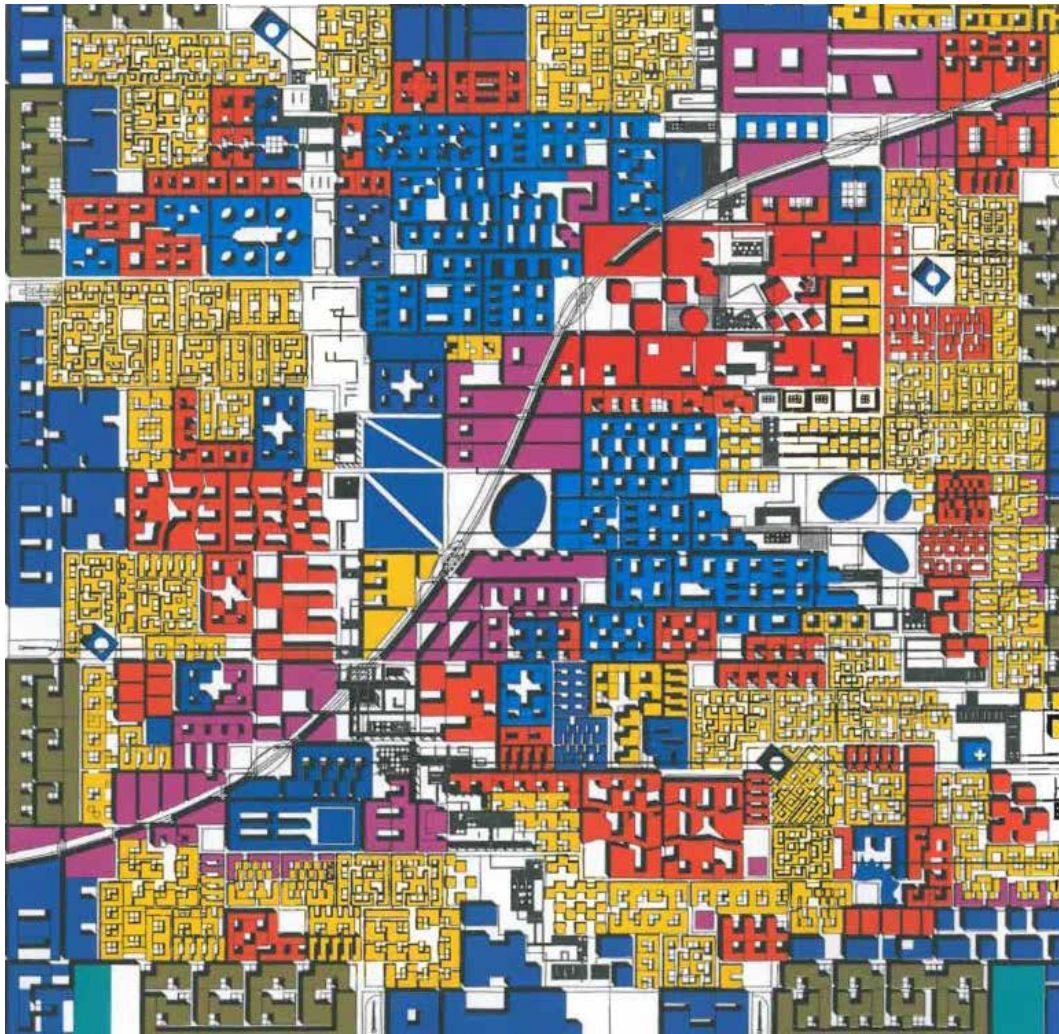
The force of this influence may be seen in examining the design of eco-cities in the Asian region: in particular, in the Chinese context (Williams, 2017), or, more specifically, the Masdar Eco-City designed in 2006 by Norman Foster in the United Arab Emirates.<sup>44</sup> In 2003 the Ministry of Environmental Protection of China drew up a series of indicators “[that] clearly put forward the specific standards for the construction of the ecological county, the eco city, and the ecological province” (Juke Liu et al., 2017, p. 68).<sup>45</sup> In October 2009, the Chinese Society for Urban Studies (CSUS), a body of the Ministry of Housing and Urban-Rural Development (MoHURD), presented the *China Low-Carbon Eco-City Strategy*, which was followed in June of the same year by the *Eco-City Assessment and Best Practices Program* which established 61 ‘performance indicators’ for the design and evaluation of eco-cities (Baeumler et al., 2012; Williams, 2017).<sup>46</sup> These indicators have strongly conditioned the development of the main pilot projects; as is the case of the Sino-Singapore Tianjin Eco-City,<sup>47</sup> where the definition of the *eco-cell* became the overriding design concept: that is, based on precise criteria for dimensions, functions and residential density.<sup>48</sup> This urban development based on performance criteria appears to show up as an Asian version of the ‘new functionalism for a sustainable city’ seen in recent years in the European context: a functionalism built on the basis of set standards (Sampieri, 2015).

With respect to the Chinese experiences, the case of the Masdar Eco-City in the United Arab Emirates offers a further point of interest [fig. 3.15]. Indeed, not only does the design of the city comply with the specifications laid out in the political agenda *Vision 2030* drawn up by the government of Abu Dhabi in 2008, but the plan also fixes its objective to create a space in which “after having been designed and manufactured, [technological] products are integrated into the urban fabric [...] and their performance is tested using the entire city as a laboratory” (Cugurullo, 2016, p. 9). Hence the city, in order to be flexible and high-performance, is designed to be a ‘responsive technology’, capable of continually adapting itself to new stimuli. A trend which already characterises various experiences undertaken by Western scholars and practitioners in recent times, for example, the projects developed by ecoLogic Studio [figs. 3.16-3.17-3.18],<sup>49</sup> or Future City Lab,<sup>50</sup> or the experiments regarding the uses of technology for responsive materials in architecture and in the urban context,<sup>51</sup> or the research on the techniques of *spacematrix*, *mixed-use index*, or *space syntax*.<sup>52</sup> Although differing from one another, these experiments have

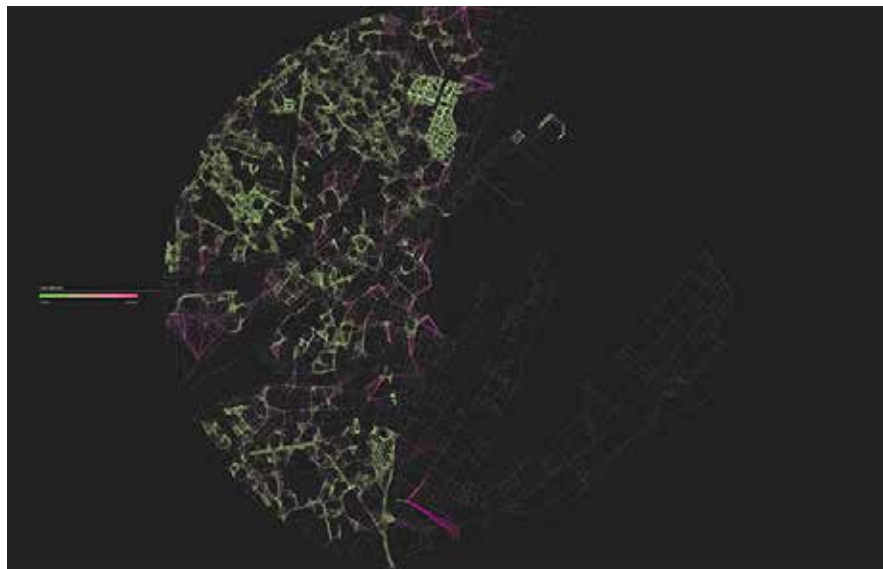


in common “the passage from concrete, material things to ephemeral signs – the dissolution of objects into flows of information” (Allen, 1999, p. 49). In this context, “everything becomes data” (Picon & Ratti, 2019, p. 1000) through a translation which avails of standards, protocols and indicators based on infrastructural devices.

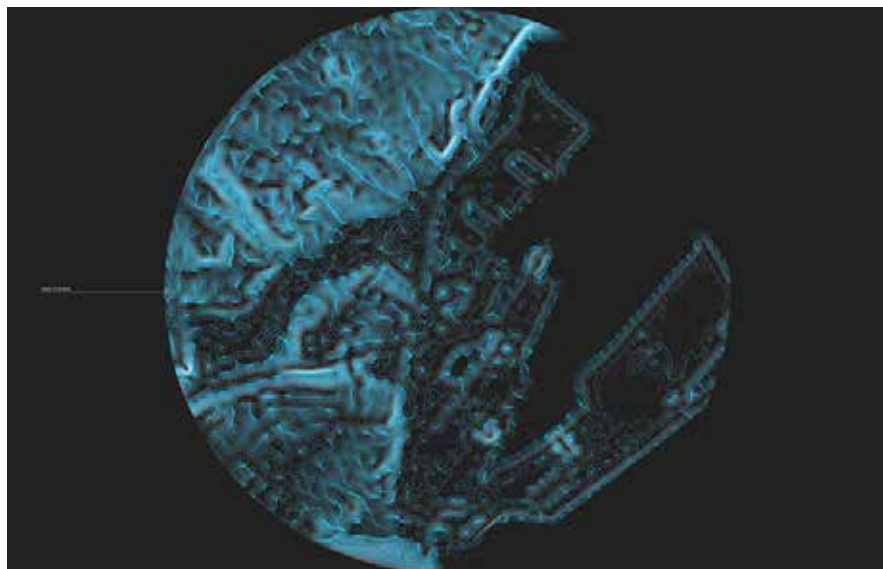
Given this transformation, as Keller Easterling (2016) affirmed “floating and adaptable protocols, establishing not fixed content but rather an interplay of active forms, might become customary bargains in the global exchange [...] [and] source of inspiration for alternative urban design projects using [...] [them] as an undisclosed carrier” (pp. 202–203). On this subject, Clare Lyster (2016) observed how in designing the logistic spaces “design is legible [...] in the highly designed and most likely very expensive systems that together make up a machine landscape. [...] [Therefore] architecture as we know it might become a much more minimal, if not absent, set of procedures, with the effect that space would be read at first as an infrastructural [...] artefact”(pp. 149-151). In this sense, “quality [and its protocols] lends to infrastructure space part of its inherent disposition – a drive to habituate without specific content. Perhaps nothing could be more powerful” (Easterling, 2016, p. 187).



**3.15.** *Masdar Development Plan*, United Arab Emirates , Foster + Partners, 2007



**3.16.** *Tree Correlation Map, Aarhus WetCity, ecoLogic Studio, 2017*



**3.17.** *Water Flow Map, Aarhus WetCity, ecoLogic Studio, 2017*



**3.18.** *Vegetation and Infrastructures Map, Aarhus WetCity, ecoLogic Studio, 2017*

### 3.3. Replascap2.0

#### Storage

In October 2010, while the first six buildings in the Masdar Eco-City were being occupied, about one hundred kilometres away to the North-East, sheik Ahmed Bin Saeed Al Maktoum was inaugurating the Dubai Logistics Corridor [fig. 3.20]. Regarding this event, the newspaper, Emirates 24|7 (2010) wrote: “the Dubai Logistics Corridor, which links sea, land and air, is spread out over an area of approximately 200 square kilometres. The corridor bridges Jebel Ali Port, the sixth-largest container port in the world; Jebel Ali Free Zone, host to more than 6,500 companies; and Dubai World Central, home to the Al Maktoum International Airport, which, upon completion, will be the world’s largest airport in both size and volume”. Actually, the Dubai Logistics Corridor aims to become much more than just a series of technical spaces for handling goods and passenger transport. Inside the area, there is: the Dubai Internet City, the Dubai Health Care City, the Dubai Maritime City, the Dubai Industrial City, the Dubai Media City, the Dubai International City, the Dubai Textile Village and the Dubai Knowledge Village (Akhavan, 2017; Easterling, 2016). If one considers that in the United Arab Emirates “noncitizens make up 99 percent of the private work force (two-thirds of which are South Asian), and while there are more than 4.5 million residents, there are only 800,000 Emirati citizens” (Cowen, 2014, p. 173); the Dubai Logistics Corridor will be a heterogenous city, hosting heterogeneous functions, and inhabited by a heterogenous population.



3.19. Package distribution center (detail), Lodz, Henrik Spohler, 2017



Similarly, four years later, a co-operation agreement between China and Kazakhstan sealed “the building of a new Dubai in China”:<sup>53</sup> Khorgos Gateway, one of the key projects in the Belt and Road Initiative, the largest dry port in the world located in the desert on the border between the two countries [fig. 3.21].<sup>54</sup> As reported by the website which promotes the operation,<sup>55</sup> Khorgos Gateway is more than just six terminals equipped with cranes for container transfer onto different rail lines.<sup>56</sup> The site covers an area of 1.3 square kilometres and has 10,000 square metres of warehousing and can handle up to 18,000 containers daily. Inside the Khorgos Gateway, there is both a Special Economic Zone and a Free Trade Zone, that consists of “an absolutely massive area that has been cleared and prepped for large-scale manufacturing and warehousing operations” (Shepard, 2017). Moreover, the site also includes the city of Nurkent, “a new town [...] with apartment blocks, a school, kindergarten and shops to serve the railway workers, crane operators, customs officials and other staff needed to keep the dry port running” (Higgins, 2018). On a par with the Dubai Logistics Corridor, what the CEO of Khorgos Gateway envisages as a future ‘oasis’ of global trade (Higgins, 2018) is already today a composite space, a fully-fledged city.

The Dubai Logistics Corridor and the Khorgos Gateway are emblematic of how infrastructural and logistics spaces are redefining their status based on hitherto unforeseen spatial articulations. In fact, if the construction of infrastructure up to the 1990s seemed to be still linked to the imperative ‘enclave construction *for* global economic integration’ (Graham & Marvin, 2001); thus, the need to equip



some territories in order to channel flows of capital or to allow these places to latch onto trans-scalar economies. Today infrastructural and logistic areas are no more ‘spaces without urbanity’. On the contrary, these sites contain a plurality of urban elements, functions and practices that are ever more heterogeneous; so much so that it is difficult to consider such portions of land as merely technical devices. “As it opened its door to manufacturing and to new populations of workers, the zone also began to develop its own peculiar form of urbanity” (Easterling, 2016, p. 31), an urbanity that yet remains difficult to decipher. In an attempt to produce a definition, Andrew Barry (2006) affirms that the “technological zones [...] [are] forms of space which are neither territorially bounded nor global in their extension, yet are of considerable political and economic significance. A technological zone [...] [is] a space within which differences between technical practices, procedures of forms have been reduced, or common standard have been established. [...] Technological zone cannot be marked on the map, yet they do have limits. Moreover, they may also imply particular demands on the identity of objects and persons that exist within them. [...] Their limits may not just be contested, but also unstable and uncertain” (p. 239). This definition, rather than casting light on the physical characters of these zones, seems just to signal the impossibility of regarding these spaces as merely ‘technical spaces’. In fact, in recent years, these zones have not only become a part of the *mechanosphere*,<sup>57</sup> which makes up any contemporary city (Amin & Thrift, 2002), but “the zone has transformed itself into a model for the metropolis [...] a persistent yet mutable instrument, transforming as it absorbed more and more of the general economy within its boundaries” (Easterling, 2016, pp. 36–42).



**3.20.** *The airport of the Dubai World Central and the Dubai Logistics Corridor, Leslie Jones Architecture, 2014*



However, if “the zone is a city” (Easterling, 2016, p. 42), what spatial connotations does it assume? What emerges from observing zones such as the Dubai Logistics Corridor and Khorgos Gateway is that the articulation of urban spaces based on the rules of contemporary logistics configures the city as on a par with a *storage* unit: a large internal space which has the capability of being filled or emptied, in which portions of the site are equally suitable for the storage of objects, uses, practices and different morphological layouts. Such different characteristics, functions, and urban objects co-exist alongside others without any sense of continuity. The Dubai Logistics Corridor appears to be the perfect example of this situation. Here, it is possible to rent a plot of land, from a minimum of 5,000 metre square for an annual fee of 10 to 30 dollars per metre square.<sup>58</sup> The rental fee for the ‘plot of land’ includes access to specific facilities (road infrastructure, electricity and water, telecommunications infrastructure and 24 hour security); but the space inside each plot is completely customisable, and is promoted as suitable for industrial zones, warehouses, tertiary activities, or even residential uses.<sup>59</sup> This spatial organisation ensures that in Dubai “the entire vision for the city resembles a computer motherboard” (Cowen, 2014, p. 172), that is, a space where the infrastructural system operates the same way as an operating system: storing and supporting the correct functioning of the different programmes which rarely interface with one another. Similar to the *functionoids* theorised by Andrea Branzi (2006), this space “does not possess a single function, but as many functions as the operator needs [because] [...] the close relationship between form and function has dissolved: the computer has no function, but has functions as numerous as the



**3.21.** Khorgos-Eastern Gate Dry Port, Khorgos Municipality, 2016

operator's need" (p. 10). As observed by Angelo Sampieri (2019), with reference to the Chinese new towns, these spaces are mainly "a backup space available to be used when necessary" (pp. 210-211), that is, equip the space to make it available for future colonisation. In fact, as is the case for the Khorgos Gateway and many other expansions of this type in Asia, this space is available with an infrastructural grid layout. Within this hardware, the city takes shape through an 'assembly of order strategy':<sup>60</sup> a "*material practice* [...] [based on] large scale assemblages over time" (Allen, 1999, p. 52). This 'urbanism on demand', where "urbanity is no longer a destination in the habitual sense; it is recast as a multi-layered organism of exchange" (Lyster, 2016, p. 126), renders 'the city as a service platform'.<sup>61</sup> Hence, to paraphrase Noel Greis (2004), it can be stated that: cities are no longer selling *spaces* with service attached, rather they are selling services with *spaces* attached.<sup>62</sup> As in the infrastructural spaces described by Stan Allen (1999), this form of city is defined by "the division, allocation and construction of surfaces; the provision of services to support future programs; and the establishment of network of movement, communication and exchange" (p. 54). Based on this organisation 'the space between infrastructures' is a space whose value is set by the capacity to be manipulated or modified, since "zones are not fixed structures within which action takes place. Zones are always in process. They demand regeneration adjustment and reconfiguration: frequent maintenance work" (Barry, 2006, p. 40). Such zones may be said to be, just like a Walmart Supercentre described by Jesse LeCavalier (2016), "both conduits and containers, these installations are simultaneously enclosures and passageways in which an exterior is both reinforced and undermined" (p. 89). The landscape they configure within themselves is an updated version of the *replandscape* described by Louise Wyman (2002).<sup>63</sup> In fact, the zones allow "a technologically enhanced replication of landscape[s]" (Wyman, 2002, p. 619),<sup>64</sup> which respond to specific conditions and which, just as easily, can be replaced in that no part is indispensable to the functioning of the whole. A *replandscape 2.0*, where the prefix *repl-* refers to the capability *to reply* to specific input, *to replicate* specific conditions and (if necessary) *to replace* specific objects.



**3.22.** *Container terminal*, Rotterdam, Henrik Spohler, 2017



**3.23.** *Storing empty containers*, Bilbao, Spain, Henrik Spohler, 2017

## Notes

- 1 In the publication different authors discuss several case-studies in different cities and metropolitan areas such as: the Greater Los Angeles and the Greater Boston (Jonas, 2011); Santiago de Chile (Heinrichs et al., 2011); Pilar in Argentina (Roitman & Phelps, 2011); Paris, Amsterdam, Frankfurt, Zurich, Helsinki, Budapest and Prague (Bontje & Burdack, 2011); the London City-Region (Cochrane, 2011); the Moscow City-Region (Golubchikov et al., 2011); the Jakarta Metropolitan Area (Firman, 2011); Tokyo Metropolitan Area (Sorensen, 2011); Seoul Metropolitan Region (Lee S. & Shin, 2011).
- 2 More specifically the *modern pastoralism* is described by Peter Rowe as: “a complex formulation [...] the dialectic of two inherent terms that gives it its power, as well as the possibility of staring straight at the dark side of one perspective from the temporary safety of the other” (Rowe, 1991, p. 247). Rowe identifies the ‘pastoral perspective’ as “motif [that] seeks to transcend the ordinary by describing a far better world, [...] a third term which is not entirely of humanity or of nature” (Rowe, 1991, pp. 218–221) obtained operating what he defines as an action of ‘moral gardening’. In a similar manner, in *The American Ideology of Space* (1991) Leo Marx highlights how the pastoral myth in America is the synthesis between the anthropocentric *utilitarian myth*, developed in the 17th century by the protestant migrants (in particular the puritan) who considered necessary for man to overcome nature; and the *primitivist myth*, developed by the romantic thought in late 18th century, that considered nature as the moral refuge from the corruption of modern civilization.
- 3 The definition *cultural artefacts* has been used by Peter Rowe (1991) in *Making a Middle Landscape* to designate different urban elements such as ‘house in gardens’, ‘retail realms’, ‘corporate estates’, and ‘highways and byways’. Since the last fifty years in a similar way, numerous scholars have studied the North American landscape by deconstructing this territory into peculiar elements. For instance the publications: *Man-made America* (1964) by Christopher Tunnard and Boris Pushkarev (who categorized the territory of United States in: ‘the urbanised landscape’, ‘the dwelling group’, ‘the paved ribbon’, ‘the monument of technology’, and ‘the outline of open space’); *Los Angeles* (1971) by Reyner Banham and Joe Day (who coined the terms ‘surfurbia’ and ‘autopia’); or the recent works *Organization Space* (2001) by Keller Easterling and *A Field Guide to Sprawl* (2004) by Dolores Hayden and Jim Wark (who used taxonomic terms such as ‘landscapes’, ‘highways’, and ‘houses’).
- 4 According to Louise A. Mazingo (2014) the process of decentralization was mainly driven by three factors. First, companies want to divide ‘white collars’ and ‘blue collars’, because of two main causes: on the one hand, the increase in income and prestige of the middle class, that has demanded for better working and living conditions; on the other, the companies wanted to separate the trade unions, since in those years the workers’ associations were gaining momentum. Second, many companies moved outside the city-centres to find more suitable conditions in terms of space and location, since the downtowns were overcrowded and difficult to control. Third, this migration from the cities was also supported by the American government that promoted decentralization policies as a defensive strategy during the Cold War, the most well-known example was the *National Security Factors in Industrial Location* enacted by president Harry Truman in 1949.
- 5 Based on the research *Edgeless Cities* (2003) by Robert E. Lang, in early 2000s only in New York, Chicago and Washington D.C. most of the offices were located in downtown. In Los Angeles, Boston, Denver, Dallas and San Francisco the number of offices in downtowns were almost equal to the one in edgeless cities; while in Houston, Atlanta, Detroit, Philadelphia and Miami most of the offices were located in the so-called edgeless city.
- 6 The definition given by Robert Bruegmann is probably one of the most common ways of intending *sprawl*. However, in recent years several scholars have debated on this definition, since it presents numerous controversial aspects. The most relevant is about ‘density’. In fact, the same Bruegmann highlights how Los Angeles, which is considered the symbol of the American *sprawl*, is one of the denser metropolises in North America (both in terms of population and built-up areas) (Bruegmann, 2006; Lang, 2003). Therefore, as various scholars have pointed out, it is not possible to consider ‘density’ as an index through which to measure urbanity (Keil, 2017, 2018; Tonkiss, 1994). Based on that consideration, a definition of *sprawl* which seems to be more open to interpretations and understandings is the one given by George

Glaster (2001): “sprawl (n.) is a pattern of land use in a UA [Urbanised Area] that exhibits low levels of some combination of eight distinct dimensions: density, continuity, concentration, clustering, centrality, nuclearity, mixed uses, and proximity” (p. 685). This paper doesn’t not aim to discuss further in detail the large body of literature on *sprawl*, however it is still necessary to point out that “the word ‘sprawl’ is that it can mean many things [...] there are many dimension to sprawl. It relates to everything from density, to land use, to pedestrian orientation” (Lang, 2003, p. 101). For this reason, and since “the term sprawl is as uncertain as the slippery urban reality it seeks to describe” (Bruegmann, 2006, p. 223), a wide variety of names have been coined to label the process of suburbanisation in North America, each one of them referring to a specific characteristic of this phenomenon. According to Robert E. Lang (2003) forty-four names have been coined between 1960 and 2000; however the same scholar affirms that in 1992 a census taken during a conference held at Columbia University more than two hundred words used for describing the American (sub)urbanisation have been registered. A similar work was done by Alan Berger (2007) who has catalogued fifty names.

- 7 Even in the figure of the ‘American lawn’ is possible to recognize the paradigm of the *machine in the garden*. In fact, as claimed by Mark Wigley (1999) “all the macho rhetoric with which automobiles had long been credited for domesticating American landscape is applied to mowers. [...] A sense of technological mastery is carefully constructed as the precondition of domesticity” (p. 157).
- 8 In relation to the suburbanisation occurring in the 1990s, Robert Fishman (1990), by recovering some concepts already expressed by Frank Lloyd Wright in the Broadacre City, affirms that: “the structure of the new city [...] [is] based on *time* rather than space [...] Families create their own ‘cities’ out of the destination they can reach (usually travelling by car). [...] *The pattern formed by these destination represents ‘the city’ for that particular family or individual.* [...] The new city is a city à la carte” (p. 38).
- 9 This term refers to the movie *Suburbicon* (2017) by George Clooney, and Joel and Ethan Coen. In the last decades several artists of different disciplines have worked on this theme. Among all, some the most well-known novels and movies are: *Blue Velvet* (1986) by David Lynch, *The Virgin Suicides* (1993) by Jeffrey Eugenides, *American Pastoral* (1997) by Philip Roth, *The Truman Show* (1998) by Peter Weir, *American Beauty* (1999) and *A Serious Man* (2009) by Joel and Ethan Coen. In the paper *Electric Lawn* (1999) Mark Wigley investigates the wide varieties of movies that intended to subvert the symbolic value of the ‘American lawn’. Among them: *The Incredible Shrinking Man* (1957) by Jack Arnold, *The Stepfather* (1987) by Joseph Ruben, *Honey, I Shrunk the Kids* (1989) by Joe Johnston, *Poltergeist* (1982) by Steven Spielberg, and *Maximum Overdrive* (1986) and *Lawnmower Man* (1992) by Stephen King. For a more comprehensive study on the way in which the suburbia has been described in movies see *SuburbiaNation* (2016) by Robert Beuka.
- 10 In fact, the city of Detroit has been identified as a symbol of the American economic and urban crisis as it has been portrayed by the aerial pictures of Alex MacLean in early 1990s, documented by Heidi Ewing and Rachel Grady in 2012 in *Detropia*, and transformed into a setting by movies such as *Lost River* (2015) by Ryan Gosling.
- 11 According to Alan Berger (2007) “drosscapes are the inevitable wasted landscape within urbanised areas that eternally elude the overly controlled parameters and the scripted programming elements that designer are charged with creating and accommodating their projects” (p. 12).
- 12 As claimed by James Corner (2006), “the process of urbanisation – capital accumulation, deregulation, globalization, environmental protection, and so on – are much more significant for the shaping of urban relationships than are the spatial forms of urbanism in and of themselves. The modernist notion that new physical structures would yield new patterns of socialization has exhausted its run, failing by virtue of trying to contain the dynamic multiplicity of urban processes within a fixed rigid spatial frame that neither derived from nor redirected any of the processes moving through it” (p. 28).
- 13 In fact, this research investigates, interprets and designs the la Great Lakes Magaregion by structuring several *territorial layers*, defined as *sheds*, each of them composed by urban elements, functions and actors. (GeoShed, EnviroShed, Agrished, CargoShed, CommodityShed, CommuterShed, EventShed, TechShed, MediShed, PowerShed, PotentialShed). According to the authors, every *shed* “define geospatial areas within which elements of a particular system retail a high degree of interconnettedness and interdependency and whose interaction can be understood through the frameworks of what ecological



scientist James Kay has termed Self-Organizing Holarchic Open (SOHO) System: hierarchically organized, nested system that operates through the self-organisational principle of complexity” (Thün et al., 2015, p. 30).

- 14 For instance, other examples of *urban diffusions* can be found in the territories resulting from the urbanisation processes that have affected various areas in South-East Asia (McGee, 2008, 2014; McGee et al., 1991). These places have been defined by Terry G. McGee as *desakota*, that is, heterogeneous territories located between major urban nuclei and rural areas, and characterized by micro-entrepreneurship, familiar business, and informal economy (McGee, 2002). A part from that areas, various *urban diffusions* worldwide have been investigated in the recent publication *The Horizontal Metropolis Between Urbanism and Urbanization* (2018) edited by Paola Viganò, Chiara Cavalieri and Martina B. Corte. Among them, several European territories such as: Belgium (Bruggeman, 2018; Gheysen, 2018; Wambecq, 2018), and in detail the metropolitan regions of Bruxelles (Vanhaelen, 2018) and Antwerp (Broes, 2018), the Italian regions of Veneto (Pagnacco, 2018) and Apulia (Toselli, 2018), and the north of Portugal (Travasso, 2018). A part from European territories, the research also includes some territories labelled as *desakota* in proximity to the major urban centres of the Pearl River Delta (G. Lin, 2018) and the Yangtze River Delta (Q. Zhang, 2018a); some areas in South America such as the edge of Bogotá in Colombia (Bernal, 2018), Estero Salado (Testori, 2018) and San Joaquin in Ecuador (Rivera-Muñoz, 2018); and, finally, the new urbanisations in Israel (Verbakel, 2018).
- 15 In particular the six territories studied by Xaveer De Geyter (2002) in the so-called Blue Banana: the London metropolitan region (Geisler & Najle, 2002), the Randstad (Nio, 2002), the Vlaamse Ruit (the Flemish Diamond) the Ruhrgebiet (Schmeing & Wall, 2002), the valley connecting Basilea, Zurigo e Berna (Christ, 2002), and the Veneto region in Italy (Munarini & Tosi, 2002). A more general investigation on the urban diffusions located in Belgium, France, Germany, Italy, Netherlands, United Kingdom, and Scandinavian countries was carried on by Caruso Geoffrey (2001) for the agency DATAR (Délégation à l'Aménagement du Territoire et à l'Action Régionale, Ministère de l'Aménagement du Territoire et de l'Environnement).
- 16 Among them: *campagna urbanizzata* (Samonà, 1976), *de tapijtmecropool* (Neutelings, 1991), *città diffusa* (Indovina et al., 1990), *after-sprawl* (De Geyter, 2002), *zwischenstadt* (Sieverts, 2003), *città infinita* (A. Bonomi & Abruzzese, 2004), *grünmetropolere* (Ter & Diedrich, 2008), *arcipelago metropolitano* (Indovina, 2009), *ville poreuse* (Secchi & Viganò, 2011), e *horizontal metropolis* (Viganò et al., 2018).
- 17 For further details on the genealogy of the processes of *urban diffusions* in the post-war period see *Urbanizzazioni Disperse* (2004) by Chiara Barattucci; and, specifically for the case of Italy, *L'Italia al Futuro* (2011) by Arturo Lanzani and Gabriele Pasqui.
- 18 According to Bernardo Secchi a 'society of minorities' (*società di minoranze*) takes shape when: “the distribution within the society of the political resources and the resources that can be used as exchange material in the economic logic are no more isomorph; when these two ways of distributing [wealth] define in the social fabric ‘countless subjects’, characterized by different opportunities and possibilities one from another” (Secchi, 1989, p. XVII).
- 19 For further details about this project see *La Ville Poreuse* (2011) by Bernardo Secchi and Paola Viganò.
- 20 “The *progetto di suolo* [i.e. ‘project of the ground’] defines in precise and coherent ways the technical, functional, and morphological characters of the open spaces, eventually by typologically classifying them; it defines their variations, it interprets the relations occurring between their physical characters and their possible uses and functions, as well as the uses and the functions of the neighboring buildings, it relates the grounds that are covered by the ones that are not [...]; it organizes [all these spaces] in sequences and patterns, according to systems that aggregate and oppose different signifiers; it defines the elements that regulate these organisations, and it mediates between them” (Secchi, 1989, pp. 273–274).
- 21 On this subject see the Ph.D. thesis *Lo Spazio fra le Cose*, by Monica Bianchettin (2015).
- 22 In *Il territorio abbandonato II* by Bernardo Secchi (1985), the author clarifies that this position refers to the European architectural design culture of the 1980s that identifies the territory as “a collection of places, substances or positions, or [...] a storage containing various objects and signs, [...] a list of heterogeneous places and objects only topologically connected, that can be labelled and connotated only

by considering them specifically one by one” (p. 13). According to Secchi, by adopting this approach the urban planning was restricted to “recognize the positional, representative and symbolic value of each single place” (Secchi, 1985, p. 13). On the contrary, a more operational approach to urban planning is to consider it the discipline that “divides and assigns spaces, defines the measures, the distances between objects, the boundaries, the figures and the forms” (Secchi, 1985, p. 13).

- 23** See on this subject the photographic campaigns: *Atlante dei Classici Padani* (2015) by Minelli Filippo, Galesi Emanuele and Francesco D’Abbraccio, and *Ugly Belgian Houses* (2015) by Hannes Coudenys.
- 24** Even if these consideration are focused on the European context, similar condition can be observed in other *urban diffusions*. In particular, the territories of South East Asia described by Terry McGee (2014) as *desakota*, in which several ‘family enterprises’ benefit of “‘invisible’ or ‘gray’ zones [...] [which are] encouraging to the informal sector and small scale operators” (McGee, 2014, p. 131).
- 25** Concerning debate on this theme developed during the eighties in Italy, see the position by Manfredo Tafuri (1986) in *Storia dell’Architettura Italiana 1944-1985*, particularly the chapter ‘trasformazioni strutturali e nuove esperienze di piano’, and the reflection my by architects and urbanists such as Vittorio Gregotti and Bernardo Secchio collected in the journal *Casabella* (1982-1996) edited by Vittorio Gregotti.
- 26** In particular, some examples are: the *Schema direttore del fiume Pescara* (2004) designed by Cristina Bianchetti and Rosario Pavia and the *Piano Particolareggiato Arenile di Sottomarina e Isola Verde* (2005) designed by Maria Pacchiani in collaboration with Cristina Bianchetti, Mariavaleria Mininni and the design offices Avanguardie Permanenti and Stalker, Tav, and Suburbia. Both these experiences are discussed in the publication *Urbanistica e sfera pubblica* (2008) by Cristina Bianchetti.
- 27** See *L’abitare Collettivo* (2011) edited by di Angelo Sampieri, *Territori della Condivisione* (2014c) edited by Cristina Bianchetti, and *Territories in Crisis* (2015) edited by Cristina Bianchetti, Agim Enver Kercucu, Elena Cogato Lanza, Angelo Sampieri and Angioletta Voghera.
- 28** Nikos Katsikis (2018a) identifies as *agglomeration landscapes* “the geographies where agglomeration economies, and in general agglomeration externalities and dynamics can unfold: these would normally include the metropolitan, megalopolitan and post-metropolitan areas of dense settlement, population concentration and infrastructural intensification” (p. 32). On the contrary, the *operational landscapes* are: “the geographies that are connected to land extensive and/or geographically bound and specific operations that are either not susceptible to, or impossible to cluster. These geographies include areas of agricultural production, resource extraction, forestry, as well as circulation infrastructures, energy production systems and grids and in general types of equipment of the earth’s surface that are largely point, or area bound” (Katsikis, 2018a, p. 32).
- 29** The ever-growing influence of infrastructures in designing and building the *physical space* has recently gained the attention in the field of architecture. For instance, see the articles published of the architectural journal *Domus* by Jason Hilgefort et al. (2019), Jason Hilgefort and Monteleone Davide (2019), Kagkuo Renia and Nikos Katsikis (2019), Winy Maas (2019), and, in particular, *Domus 1033* (March 2019) entitled *Le infrastrutture del potere/The infrastructure of power*.
- 30** The soybean production is concentrated in few country, in fact the sum of United States quota to the ones of Brazil and Argentina is 80 percent of total world production. In a more accurate way the Food and Organisation of the United Nations (FAO) (2019) reported that in 2017 the soy production amounted to 119.518.490 tons in United States (half of that were for export), and 114.599.168 tons in Brazil. On the contrary, China produced 7.343.963 tons and was the first importing country with more than 85 million tons in 2016, and the European Union cropped only 2.667.769 tons while importing 19 million.
- 31** Even if there are differences from the ‘light rare earth elements’ (easier to find) and the ‘heavy rare earth elements’ (harder to find) all these minerals can be found in different areas of the planet, in particular Australia, Canada, South Africa and United States. The latter had been one of the leading producers between 1965 and 1997, and the Mountain Pass Deposit, in California, is still nowadays the second largest deposit in the world (U.S. Geological Survey, 2014).
- 32** As reported by Marc Humphries (2013) “while more abundant than many other minerals, REEs are not concentrated enough to make them easily exploitable economically. [...] In general terms, costs of

mineral extraction are increasing because of lower ore grades and increasing capital costs” (pp. 2-6). To support this thesis, Pui-Kwan Tse (2011) affirms that in recent years Chinese government has reduced the extraction of rare-earth minerals to maintain their production economically viable.

- 33** This phenomena has been documented by several studies such as the ones carried on by Nikos Katsikis (2018b) at the Urban Theory Lab (see [www.terraurbis.com](http://www.terraurbis.com), accessed on February 4<sup>th</sup> 2020); or the ones by Richard Weller, Claire Hoch and Chieh Huang (see <http://atlas-for-the-end-of-the-world.com/>, accessed on February 4<sup>th</sup> 2020; and the article by Richard Weller (2019) on the architectural journal *Domus*).
- 34** According to Kieran Donaghy (2012), “five trends that characterize the most recent phase of globalization are (1) an accelerated reduction in transport and communication costs, (2) greater international specialization driven by trade liberalization, (3) increasing trade in services due to the revolution in information and communications technologies, (4) increasing integration of emerging markets into the world economy, and (5) the consolidation of production systems or the increasing domination of industries and markets by a small number of firms” (p. 396).
- 35** According to Jones Ronald and Henryk Kierzkowski (2001) “the process of vertical fragmentation is not confined to industry by industry. Instead, reduced costs of service links and advances in technology tend to spread horizontally over other sectors of the economy. Often this results in a two-way interplay between technological change and fragmentation. Technological improvement encourage fragmentation, and one consequence of fragmentation is that new inducements for further improving technology arise” (p. 49).
- 36** Jesse LeCavalier (2016) documented these conditions by studying the rise of Walmart supermarket chain in United States, and its logistic system. In fact, he affirms that: “Walmart always assesses the performance of an individual store relative to those in the larger network. New store locations are thus part of a dynamic system intent on encumbering territory and saturating a given market with the least amount of investment possible. [...] The single location is less important than the aggregate system of sites” (LeCavalier, 2016, p. 136).
- 37** With reference to the infrastructures of Western countries built in the early 1900s Stephen Graham and Simon Marvin (2001) argue that: “infrastructure network, widely seen through organic metaphor as the very ‘connective tissue’, ‘nervous systems’, or ‘circulation systems’ of the nation, became an essential focus of the power, legitimacy and territorial definition of the modern nation state” (p. 74).
- 38** These are defined as “new or retrofitted transport, telecommunication, power or water infrastructures that are customized precisely to the needs of powerful users and spaces, while bypassing less powerful users and spaces” (Graham, 2000, p. 185). According to Stephen Graham (2000; 2001; 2004) the formation of ‘premium networked spaces’ is the result of four phenomena. First, the formation of private networks of infrastructure at global scale that relate specific users and spaces, while cutting other segments of population and territories off. Second, the lack of faith in urban planning activities as instruments and actions able to organize and control the city in a holistic way. Third, the rise of the so-called ‘infrastructural consumerism’ that use infrastructures to give cultural and symbolic meanings to specific places. Finally, the formation of large ‘polynucleated urban regions’ in which is more difficult to provide homogeneous infrastructural conditions.
- 39** That is, in particular for the global cities, the use of infrastructure as instrument to ‘re-scale’ the (extra-state) global networks into specific territories (Brenner, 1998b).
- 40** Such as the International Organisation for Standardization (ISO), the World Trade Organisation (WTO), the World Customs Organisation (WCO), the International Communication Union (ICU), the International Electrotechnical Commission (IEC) or the International Maritime Organisation (IMO) (Easterling, 2016). In recent years scholars such as Deborah E. Cowen (2007, 2009, 2010) have brought to light how standards are used to consolidate position and dominate the market. In fact, even if these organisations are supposed to be independent from the governments, the public administrative bodies use to influence them to protect their own companies. By acting this way the “supply chain security is already reconfiguring border space. [...] Efforts in recalibrate security around ‘pipelines’ or corridors of trade – the networked space of supranational supply chains – challenge longstanding territorial notion of state sovereignty” (Cowen, 2013, p. 193).
- 41** The certification is issued by SEED Network. According to the websites [designcorps.org](http://designcorps.org),

publicinterestdesign.com, seednetwork.org “SEED’s goal is to provide a common standard to guide, evaluate and measure the social, economic and environmental impact of design projects”. The objective of the association are: “advocate with those who have a limited voice in public life, build structures for inclusion that engage stakeholders and allow communities to make decisions, promote social equality through discourse that reflects a range of values and social identities, generate ideas that grow from place and build local capacity, design to help conserve resources and minimize waste”.

- 42 The certification is issued by U.S. Green Building Council. According to the website usgbc.org: “LEED [...] is the most widely used green building rating system in the world. Available for virtually all building, community and home project types, [...] LEED certification is a globally recognized symbol of sustainability achievement 165 countries and territories. [...] LEED is in 165 countries and territories”. There are several certifications that change in relation to the field of application. Six are the main fields: ‘building design and construction’, ‘interior design and construction’, ‘building operations and maintenance’, ‘neighbourhood development’, ‘homes and cities and communities’.
- 43 As clarified by Mark S. Fox (2014) “the goal of our ontology research is to create a standard with which cities can openly publish their data on the Semantic Web, enabling intelligent agents to read and analyze it” (p.1).
- 44 Although the examples reported here refer to urban policies carried on by central governments and public administrations, even the design and construction of new (eco-)cities are influenced by non-government associations which operate at global scale. For example, as reported by Austin Williams (2017) in order to be labelled as eco-city “the United Nations Habitat Programme has forty-two items on the checklist, including a ‘eco civilization indicator system’; [...] the global BREEAM measurement system includes six urban sustainability criteria; the United Nations Environmental Programme has a huge list with twenty-three indicators concerned with native biodiversity alone; then there are the World Bank’s criteria and the ASEAN Model Cities spreadsheet” (p.79).
- 45 The document of the Chinese government containing the indicators is *The Trial Implementation of the Construction Indicators of the Ecological County, the Eco City and the Ecological Province*, revised and update in 2007 (Juke Liu et al., 2017).
- 46 Most of ‘performance indicators’, which have already been included in the China Low-Carbon Eco-City Strategy, are based on eight points: “(i) population density; (ii) connectivity of pedestrian and bicycle lanes; (iii) public transit’s share of total trips; (iv) proximity of transit stations; (v) availability of public facilities, housing, and jobs; (vi) block size; (vii) average commuting time and distance; and (viii) regulation of parking lots provision” (Baeumler et al., 2012, p. 41).
- 47 In 2012 the MoHURD approved founding of 50 million CNY for each of the eight projects claimed to be eco-cities. These projects are: the Sino-Singapore Tianjin Eco-City, the Caofeidian International Eco-City, the Guangming New District in Shenzhen, the Wuxi Taihu New Town, the Chongqing Yuelai Eco-City, the Changsha Meixihu New District, the Guiyang Zhongtian Eco-city, and the Cheggong New District in Kungming (F. Wu, 2015).
- 48 As reported by the websites [www.tianjinecocity.gov.sg](http://www.tianjinecocity.gov.sg) and [www.tianjineco-city.com](http://www.tianjineco-city.com): “the Eco-cells are designed based on the human experience of what is considered as comfortable walking distances. Each Eco-cell can accommodate some 2,500 dwelling units (DUs) with approximately 8,000 residents. In Eco-city, four Eco-cells form an Eco-Community with about 9,000 DUs and 30,000 residents. Four or more Eco-Communities will form a District” (accessed on February 4<sup>th</sup> 2020).
- 49 See the websites: [www.ecologicstudio.com](http://www.ecologicstudio.com) (accessed on February 4<sup>th</sup> 2020).
- 50 See the website: [www.future-cities-lab.net](http://www.future-cities-lab.net) (accessed on February 4<sup>th</sup> 2020).
- 51 See the studies collected in the book *Responsive Landscapes* (2017) by Cantrell e Holzman, and the ones by MIT Senseable City Lab (Picon & Ratti, 2019).
- 52 See for instance the website: <https://spacesyntax.com/> (accessed on February 4<sup>th</sup> 2020).
- 53 See the website: <https://multimedia.scmp.com/news/china/article/One-Belt-One-Road/index.html> (accessed on February 4<sup>th</sup> 2020).

- 54 See the video of Khorgos International Centre of Boundary Cooperation JSC at the following link: [https://www.youtube.com/watch?time\\_continue=80&v=vEeZrdQ6p6I](https://www.youtube.com/watch?time_continue=80&v=vEeZrdQ6p6I) (accessed on February 4<sup>th</sup> 2020).
- 55 The website: <http://en.khorgosgateway.com/> (accessed on February 4<sup>th</sup> 2020).
- 56 The reason why the dry port has been built is the different standard in track gauges. China railway system uses the 'standard gauge' equal to 1,435 mm; differently Kazakhstan, as part of former Soviet Union, adopts the 'five foot gauge' corresponding to 1,524 mm.
- 57 According to Ash Amin and Nigel Thrift (2002) the city is a *mechanosphere*: "a set of constantly evolving systems or networks, machinic assemblages which intermix categories like the biological, technical, social, economic, and so on, with the boundaries of meaning and practice between the categories always shifting" (p. 78).
- 58 According to the website <http://jafza.ae/> the annual cost ranges between 40 and 100 AED for square metre (accessed on February 4<sup>th</sup> 2020).
- 59 See the website <http://jafza.ae/> for the Jebel Ali Free Zone. Khorgos Gateway presents similar condition as reported in the brochure which is possible to download at the following link: [http://en.khorgosgateway.com/uploaded/APPLICANT\\_GUIDE2\\_new\\_cc\\_13.10.2015.pdf](http://en.khorgosgateway.com/uploaded/APPLICANT_GUIDE2_new_cc_13.10.2015.pdf) (accessed on February 4<sup>th</sup> 2020).
- 60 The *assemble to order strategy* combines some characters of the *make-to-stock strategy* (in which the commodity is produced before the ordination), and others of the *make-to-order strategy* (in which the commodity is produced after ordering). In the *assemble to order strategy* the components of the final product are manufactured before ordering, but they are assembled only after. In that way each buyer can customize the final output according to his own needs. One of the most famous example of this system is the DELL company, whose personal computer are assembled according to the requirement of each purchaser.
- 61 As pointed out by Clayre Lyster (2016): "the reality of post-Fordist culture is that services have replaced things. The city must no longer be conceived as a purely formal artifact but instead akin to a platform, a communication system that is generated by synergies between hard infrastructure, information systems and architectural space that supports the range of routines, lifestyles and experiences that globalization has to offer" (p. 117).
- 62 In the research *Integrated Infrastructure for Moving Goods in the Digital Age* (2004), Noel P. Greis inquires the definition of 'product'. By considering the way in which several companies are producing personal computer or smartphone, the author highlights how the main aspect of production nowadays has shifted from the construction of hardware to the supply of software, such as services, programs and applications.
- 63 Louise Wyman (2002) called *replandscape* "a technologically enhanced replication of landscape; [...] a composite structure, part real, part synthetic, created when organic material is 'optimized'" (p. 619) subjected to 'manipulation, fabrication, optimization, customization, industrialization e sublimation'. In *Harvard Design School Guide to Shopping* by Rem Koolhaas et al. (2001), *replandscape* the terms has been used by Wyman to describe the American shopping malls, and the casinos in Las Vegas.
- 64 In a similar way Keller Easaterling (2016) affirms that "zones offers a clean, relaxed, air-conditioned, infrastructure-rich urbanism that is more familiar to the world than the context of its host country" (p. 67).



## SECTION II

# **POLICIES, PLANS AND PROJECTS**



The second section of the thesis provides a diachronic narrative of the territorial transformations underway in the Central Plains of China since the last century. In reviewing the urban processes which have affected this territory, the main objective is to inquire into the relations between socio-demographic trends, economic and urban policies and planning activities. In doing so, I shall provide a brief overview of the main urban policies undertaken by central and local administrations in different time periods. Thereafter, I discuss their implications in constructing the territory of the Central Plains. Each chapter focuses on a specific case: the development of the central Plains from the early 1900s to the late 1980s by analysing the changes in the city of Zhengzhou; the urban policies implemented from the 1990s to the early 2000s and their outcomes are investigated by examining the Zhengdong New District, while the current design activities and territorial transformations are discussed based on the case of Zhengbian New District.

Located in the city centre of Zhengzhou, the Erqi Memorial Tower is a 63-metre high, pagoda-style building that rises in the middle of the main square of the city. The tower was built in 1971 to celebrate the strike by the General Workers' Union of the Beijing-Hankou Railway on February 6<sup>th</sup> 1923. This is considered a forerunner to the Chinese revolutionary movements. From the windows at the top of the tower, it is possible to observe Erqi Square and the surrounding area **[fig. S.2.1]**. Since the 1930s this neighbourhood has been the commercial heart of the city, and still nowadays it is home to numerous shopping malls that sell most of the well-known international brands. While the huge shops on the north side of the square are luxury shopping centres, all the buildings to the south facing Dehua Pedestrian Street have no facades. The reason is simple, since it is a historical area, in recent years, municipalities have asked to undertake a radical style remodel to make these malls look like 1930s buildings. This initiative, already adopted by other cities in the Central Plains, aims to rediscover and display the several stages of development experienced by this territory. In fact, historically the Central Plains region has been the cradle of the Han civilization, and it has always been among the most densely-populated regions in China (National Bureau of Statistics of China, 2018). It has always been considered by Chinese governments as the bread-basket of the country, as well as being of strategic importance for geographical position. Hence, since the beginning of the twentieth century, several policies had been implemented by different administrations in order to modernize this territory by improving infrastructural

networks, fostering industrial production, and promoting commercial activities. In the first half of the twentieth century, the Republican government built the national railways systems, and the territory of the Central Plains, due to its geographical position, was one of the main crossroads. As a consequence, numerous commercial activities flourished in the area, the major cities expanded, and several planning campaigns were carried out by administrations (Song, 2007). After 1949, during the socialist period, the area of the Central Plains, like many other territories of central and western China, was subjected to a process of heavy industrialization carried out by the central administration under the guidance of Soviet experts. Therefore, numerous plans to construct factories and industrial poles were drafted for the major cities (Hsu, 1996; F. Wu, 2015). Finally, soon after the economic reform, the area of the Central Plains regained importance as the gateway to the central and western provinces in the context of the development of the national infrastructural network. One of the most emblematic cases of all these transformations is the city of Zhengzhou. Zhengzhou had experienced a massive urbanisation as one of the major railway junctions in inland China: before 1949, the city was due to become one of the main inland trading ports; in the socialist period, it was developed as one of the major industrial centres for textile production at a national level; and after the opening up, the city regained its role as the main infrastructural hub of the inland (Hao, 2006; Ying Liu et al., 2008). As a result, from the early 1900s to the late 1980s the city grew from 5 to more than 70 square kilometres, and the population increased from 20,000 to 900,000 inhabitants. (Yanpu Liu, 1988; C. Zhang, 2007). In light of this, the first part of this section (chapter 4) investigates plans and policies that affected the Central Plains from the early twentieth century until the late 1980s by focusing on the urban development of Zhengzhou.



**S.2.1.** *The view from the Erqi Tower, Zhengzhou, April 23<sup>rd</sup> 2019, © Leonardo Ramondetti*

Six kilometres north-east of the Erqi Memorial Tower, another landmark dominates the landscape: the Zhengdong Greenland Plaza. The Greenland Plaza is a 280-metre high skyscraper located in the centre of the Central Business District (CBD) in the Zhengdong New District [fig. S.2.2]. Also known as the ‘big corn’ due to its iconic shape, the skyscraper was designed by the international firm SOM (Skidmore, Owings & Merrill LLP) in 2006, and completed in 2012. The ‘big corn’ is the icon of the Zhengdong New District, and from the 58<sup>th</sup> floor it is possible to observe the entire new town. Looking south, the scenery is dominated by the Zhengzhou East Railway Station, surrounded by factories, logistic zones, and a business area marked by two monumental skyscrapers. To the east, the new ‘university town’ spreads over a huge area in which eleven university campuses are located all around a central lake. Looking north, a grid of four-lane roads extends for miles defining plots in which residential compounds are now under construction. Finally, on the horizon, the Long Hu Lake appears: an enormous artificial lagoon containing a road island in which the skyscrapers of the sub-CBD are now under construction. All these areas are part of the Zhengdong New District: a new town of 150 square kilometres to be home to one and a half million people. Zhengdong New District is the result of the great urban transformations that have affected the Central Plains since the 1990s. In that period the first wave of globalization, which had surged through the coastal areas since the economic reform, finally reached inland China, and so the Central Plains. As a result, the major centres started to compete with each other in order to break into the national and international context (Ren, 2011; F. Wu, 2006b, 2015). Within this framework, under the impetus of ‘so-called ‘urban entrepreneurialism’ the municipalities of the major cities promoted the construction of economic and technological development zones (ETDZs), new towns, and new



**S.2.2.** *The view from the Greenland Plaza, Zhengdong New District, April 25<sup>th</sup> 2019, © Leonardo Ramondetti*



districts, such as Zhengdong, that are ideal sites for understanding the process of urbanisation and the design activities undertaken in the Central Plains from the late 1980s to the early 2000s (Hsing, 2010). Based on these considerations, the second part of this section (chapter 5) investigates these phenomena, by presenting the policies implemented by central and local governments, the emergence of the urban entrepreneurialism approach to city development, and the resulting ‘territorial competition’. In doing this, planning and design activities undertaken for building Zhengdong New District are presented in the last part as a case study for understanding the urbanisation process that occurred in that period in the Central Plains of China.

Just five kilometres south of Zhengdong Greenland Plaza, along the highway that connects the centre of Zhengzhou to the international airport, is the Zhongyuan Tower: a television and communications skyscraper 388 metres in height. After its completion in 2011, the tower was one of the twenty tallest buildings in the world, and the tallest steel structure building. The visit to the tower starts on the third floor, where the walls are painted with the largest mural in the world **[fig. 6.5]**. The painting, 18 metres in height and 164 metres in length, portrays an idealized landscape of the Central Plains of China: a romantic-style rural scenery composed of rugged mountains and flat agricultural fields in which the main cities and historical monuments are easily recognizable. Zhengzhou and Zhengdong stand out in the middle of the portrait. They are represented as an expanse of skyscrapers interspersed with parks and green areas as well as by huge infrastructures. After viewing the mural, an elevator takes visitors to the top of the tower, where, standing on a suspended glass bridge, it is possible to admire the entire territory of Zhengzhou and the surrounding municipalities **[fig. S.2.3]**. The view is breath-



**S.2.3.** *The view from the Zhongyuan Tower, Zhengbian New District, May 7<sup>th</sup> 2019, © Leonardo Ramondetti*

taking. Looking west to Zhengzhou, a dense urban fabric made up of high-rise residential compounds stretches to the horizon, revealing the huge dimensions of the consolidated city. To the North, the landscape is dominated by the Zhengdong New District and its iconic landmarks. Finally, looking in the other directions the entire panorama seems to be one huge construction site: high-rise compounds mixed with agricultural villages, industrial suburbia and farmland, worksites and demolished zones; in sum a heterogeneous landscape filled with different elements and crisscrossed by canals, parks, and huge infrastructural channels for mobility such as highways, motorways, and suspended railways. This landscape is the true face of the territory of the Central Plains: Zhengbian New District, a new urban development of 500 square kilometres spread over an area of 2,100 square kilometres, currently inhabited by four and a half million people. Zhengbian New District is the fruit of current policies that have shifted from ‘centripetal urbanisation’ to ‘centrifugal urbanisation’ in relation to the gradual regionalization of forms of economic competition (Xu-sheng Wang, 2007). In fact, since the mid-2000s several initiatives have been undertaken by central government to address the increasing disparity between Chinese regions, and segments of the population. Among them, two are the most relevant: the re-emergence of so-called ‘regional planning’: to promote a comprehensive and coordinated urbanisation, and new policies to develop rural areas such as the New Socialist Countryside program. Nowadays these initiatives are redefining the way in which the territory of the Central Plains, like many other ordinary territories of inland China, is urbanised. Hence the third part of the section (chapter 6) examines the current policies and transformations by investigating the case of Zhengbian New District, as an exemplary case of the new rhizomatic and polymorphic form of urbanity which is currently taking shape in the Central Plains of China.



# Chapter 4

## Zhengzhou Modern City

The memorial room on the top of the Erqi Memorial Tower displays a series of pictures that portray the monument in different periods of time **[figs. 4.1-4.2-4.3-4.4]**. In 1972, the Erqi Tower stand out within a landscape characterized by lush vegetation and small buildings. Beyond the tower, a tree-lined avenue connects the southern part of the square to the historical city centre of Zhengzhou by crossing a low-density urban fabric, similar to that of the typical Chinese countryside. The same area appears completely different in another picture that portrays Erqi Square in the 1980s. The tower is in the middle of a huge crossroads of five avenues full of people, cars and busses. The square is surrounded by multi-story buildings under construction that stand out within a dense urban fabric of small houses. Finally, a third picture illustrates the area in the nineties. The Erqi Tower is lit up by colourful lights, and it is overshadowed by new commercial buildings and hotels. A suspended footbridge adorned by billboards connects the buildings that surround the square. While the northern side is still a crowded crossroads, the southern side of the square is a pedestrian area whose surface depicts a political map of China showing the two national railway lines intersecting in Zhengzhou. This set of pictures clearly shows the radical transformations which the Central Plains of China have undergone in a short period of time. In fact, the city of Zhengzhou is an emblematic case that illustrates the incredible growth in terms of built area and population that characterizes most of the major inland Chinese cities from the early 1900s to the 1980s.

Historically, China was an agrarian society in which the majority of the population lived in rural areas, and the economy was mostly based on agricultural production (Kuhn, 2002).<sup>1</sup> The majority of Chinese cities (especially inland) were chiefly consumption-oriented administrative centres, whose authority was related to their political and military power, rather than their commercial or industrial activities (Haiyan & Stapleton, 2006; Skinner, 1977). In the late Qing dynasty (1644-1912) and the Republican era (1912-1949) two events began to change this



4.1. Erqi Square, Zhengzhou, Liu Yuping, 1960 ca

condition: the two Opium Wars (1839-1842 and 1856-1860) that forced the opening of China to foreign trade and the modernization of the country, coupled with the construction of new infrastructural networks (such as canals and railways) fostered interregional integration, and boosted commercial activities. Consequently, several new urban centres flourished, and “canal cities, treaty port cities, and railway cities [...] along the [commercial] route[s] formed a transregional network independent from the traditional urban system” (Ren, 2013, pp. 20–21). The urban growth that characterized these centres led various local governments to undertake planning activities in order to regulate and control the expansion of the major cities. In several cases foreign experts (in particular American consultants) were involved in this initiatives (Ren, 2011),<sup>2</sup> and under the influence of the garden city movement and modern planning theories, the plans drafted in that period promoted a polynuclear development based on organic urban patterns and low density settlements (Cody, 1996, 2005).<sup>3</sup> Despite these numerous projects, most of the plans drafted in that period were never implemented because of the several conflicts that affected China in the late 1930s, and the Japanese occupation in the 1940s.

Soon after the establishment of the People’s Republic of China in 1949, urban planning activities regained momentum in light of the new industrialization policies developed by the central administration.<sup>4</sup> As argued by Chor-Pang Lo (1980), since “the Communist Chinese government [...] regard[ed] most [of the existing] cities as ‘consuming’ because the city dwellers have been engaged in commercial activities which [were] not productive in the socialist sense, [...] [the task was] to convert them to ‘productive cities’ devoted to industries” (p. 132). As a consequence, with the financial support of the Soviet Union in the early 1950s the central administration promoted 156 key industrial projects based on larger state-owned enterprises (Fang & Yu, 2016). Most of the time these “enterprises dominated the economic [and urban] development and were even more powerful than the local government because the former had the resources to build their own infrastructure and services” (F. Wu, 2015, p. 22). To cope with the uncoordinated development, in 1953 the Urban Construction Committee was established, within the framework of the first Five-Year Plan; several Soviet experts were asked to collaborate in planning activities. The approach adopted by Soviet experts and Chinese institutions was mostly based on three operations: the construction of ‘satellite towns’ to foster a decentralized industrial development, the implementation of a ‘cellular urbanism’ based on independent *danwei* (i.e. work units), and the adoption of a ‘socialist monumentalism’ to celebrate public institutions (Fisher, 1962; Liang, 2014; F. Wu, 2015). Based on these operations, numerous urban plans were drafted during the socialist period both for major cities (such as Beijing and Shanghai) and minor industrial centres (such as Zhengzhou and Luoyang);<sup>5</sup> the number of cities increased from 135 in 1949 to 176 in 1957 (Fang & Yu, 2016).<sup>6</sup>

In spite of the efforts of the central government, the industrialization campaign did not achieve the expected results and, as a consequence, the second Five-Year Plan (1958-1962) and the Great Leap Forward rejected the Soviet model of development





4.2. *Erqi Tower*, unknown author, 1972



4.3. *Erqi Tower*, unknown author, 1980 ca



4.4. *Erqi Tower*, unknown author, 1990 ca

in favour of an ‘industrialization without urbanisation’ (Fang & Yu, 2016). The ‘agropolitan development strategy’ sought to promote an economy based on light industry and agriculture in small-medium sized centres, instead of heavy industries supported by large cities (Craciun, 2001; Kirkby, 1985). Thanks to these policies, by the end of 1958, “26,425 people’s communes had been organized, comprising more than 98 percent of the 122 million rural households in the country” (Knapp, 1992, p. 51). Between 1958 and 1960 several planning activities were carried on by local design institutes, administrations, and universities to design various people’s communes (Bolchover et al., 2013; Knapp, 1992; Lee, 2016a; Lu, 2007). The plans established low-density settlements, ranging in size between 2,000 and 12,000 people, that were composed of terraced houses with public facilities sited around a main central square.<sup>7</sup> Despite the planning initiatives most of the projects were not implemented or were just partially built. In the second half of the 1960s the ‘anti-urban movement’ gained momentum, and the third and the fourth Five-Year Plans (1966-1975) exacerbated the decentralization approach by promoting the Third Front Movement (1964-1978), a military strategy of defence that aimed to disperse the major industries in the mountainous and desert areas of central China (F. Wu, 2015). Moreover, in the same period, several policies were adopted to restrict urban growth and to control the migration from rural to urban areas, such as the establishment of the *hukou* (household registration) system in 1958 (Ren, 2013; F.-L. Wang, 2005).<sup>8</sup> Thanks to these measures, in 1964 the number of cities was reduced to 169, the number of towns decreased to 2,902, and the urbanisation level dropped to 17 percent (Fang & Yu, 2016). All these policies and the subsequent Cultural Revolution (1966-1976) caused the abandonment of any planning activities (F. Wu, 2015).

The planning institutions were re-established only in the early 1980s. Soon after the economic reform, Chinese urban development was characterized by a widespread ‘urbanisation from below’ mainly driven by the so-called Towns and Village Enterprises (TVEs) located in the medium and small centres (Gonghao & Ma, 1999).<sup>9</sup> This ‘grassroots urbanisation’ was the result of a fiscal decentralization process coupled with institutional adjustments, and the rise of overseas investments coming from the ‘open door’ policies (Ren, 2013) **[fig. 4.5]**. The new economic system based on a ‘local state corporatism’ had supported a place-based industrialization centred on small-scale production clusters (Oi, 1992). In light of the good economic performance achieved through this ‘rural industrialization’ in the early 1980s, the central government enacted policies that supported the development of TVEs and medium-sized and small townships, while curtailing the growth of large cities (Fang & Yu, 2016).<sup>10</sup> Hence, the urban plans drafted in the 1980s attempted just to regulate and control the urban growth of the major cities, while the expansion of the TVEs and the small and medium centres remained mostly unplanned. In spite of this, the urbanisation rate rose to 24 percent and in 1985 China had 9,140 towns and 324 cities.

This brief overview on the well-known and documented history of Chinese urban planning and policies until the 1990s is relevant in understanding how the Chinese territory has been shaped by different conceptions in different periods of time. The area of the Central Plains was influenced by all of these phases, which laid the foundations of a territorial structure that is now subjected to radical transformation. The most emblematic case for understanding how living environments and *physical spaces* have been shaped in the Central Plains is the case of Zhengzhou city. In fact, until the late imperial period, Zhengzhou was just a minor centre, however, in 1904 its destiny changed with the construction of the railway system. As a consequence, during the Republican era the city grew, and several planning activities were started by the administration to make the city the major trading port of inland China. In the socialist period, Zhengzhou was chosen to be one of the 156 key national projects; therefore, numerous factories were built, and several planning activities were instituted to transform the city into one of the major textile industrial poles in the country. Finally, soon after the opening up, the city developed planning activities to consolidate its role as one of the major infrastructural hubs of inland China [fig. 4.5]. Hence, by reviewing plans and projects for Zhengzhou, the following chapter discusses how urban policies attempted to modernize it and the Central Plains of China.



4.5. Purchased an electric fan, Zhengzhou, Wang Hao, 1985



## 4.1. The Republican Plans

### Building an inland trading port

At the end of the nineteenth century, the city of Zhengzhou covered about 2 square kilometres, and was home to 20,000 inhabitants (Hao, 2006; Yanpu Liu, 1988; Ying Liu et al., 2008). Although the city was founded in ancient times,<sup>11</sup> in that period Zhengzhou was a minor political centre which presented the typical urban layout of most historical Chinese cities: a walled regular grid with two main cardinal axes (Cao, 2019; F. Wu, 2015).<sup>12</sup> From the beginning of the twentieth century, this status abruptly changed following the upgrading of the Chinese infrastructural network carried out by the central government. In fact, in 1905 the Qing administration constructed two of the most important railway lines in China:<sup>13</sup> the Beijing-Hankou (opened in April 1906), which connects the northern provinces with the city of Hankou (one of the main mid-China trading ports as well as the starting point of the main routes for the southern provinces) and the Lianyungang-Lanzhou line (completed in 1909), which connects western China with the coastal regions. These two railway lines cross in Zhengzhou. As a result, in 1910 the state government established the largest marshalling yard of the Railway Administration and the National Railway Administration in the city (C. Zhang et al., 2010). In the meantime, to encourage the city development, the governor of the Henan province, Cheng Shenglong, recognized Zhengzhou as a major commercial centre at a provincial level (Hao, 2006; Junxian Zhu, 2012). Thus, “the city function of Zhengzhou changed rapidly after the late Qing dynasty and the early Republic of China, from a lower-level administrative centre to one of the most important commercial centres in mid-China and a product exchange centre among large regions” (Junxian Zhu, 2012, p. 67). As a result, during the following decade several trade companies settled in the city, giving shape to a new (mostly spontaneous) neighbourhood between the historical centre and the railway infrastructure [fig. 4.6].



4.6. Zhengzhou map, unknown author, 1905

In 1916 this new area of 1.5 square kilometres was as large as the ancient city centre (Cao, 2019; Junxian Zhu, 2012). The urban expansion continued, reaching 2.5 square kilometres and leading the municipality to tear down the city walls in 1928 [fig. 4.7].<sup>14</sup> In the same year Zhengzhou gained the status of ‘city’, and it was home to 81,360 inhabitants in a municipal area of 215,809 people (Busquets & Yang, 2019; Hao, 2006; Yanpu Liu, 1988). In that period, due to the growing importance of railway transportation, not only did the commercial activities gain momentum, but several industries also settled in Zhengzhou. Among these, the cotton industry was the most important (Busquets & Yang, 2019; Ying Liu et al., 2008). The cotton was collected in Zhengzhou from western China and then sorted for the major coastal cities (especially Shanghai, Tianjin and Qingdao).<sup>15</sup> The textile factories were mostly located in the northern part of the railway line (due to the different uses of the three railway stations present at the time);<sup>16</sup> while the main commercial offices were located along the central and the southern part of the new area.<sup>17</sup>

Thanks to several favourable circumstances such as an increase in the cotton trade, the urban status achieved by the city, and the stable political conditions within the country, Zhengzhou continued to expand. In 1930 the area located outside the historical downtown spread over 3 square kilometres, overtaking the ancient part of town which “turns into a suburb while the station area becomes the city centre” (C. Zhang et al., 2010, p. 50). Due to this, from the late 1920s the municipality drew up two urban plans: the Zhengbu Design Plan (1927) and the Draft Plan for Zhengzhou New Urban Construction Area (1928).



**4.7.** Zhengzhou street, unknown author, 1920 ca



路 线 房 基 线 公 共 建 筑 位 置

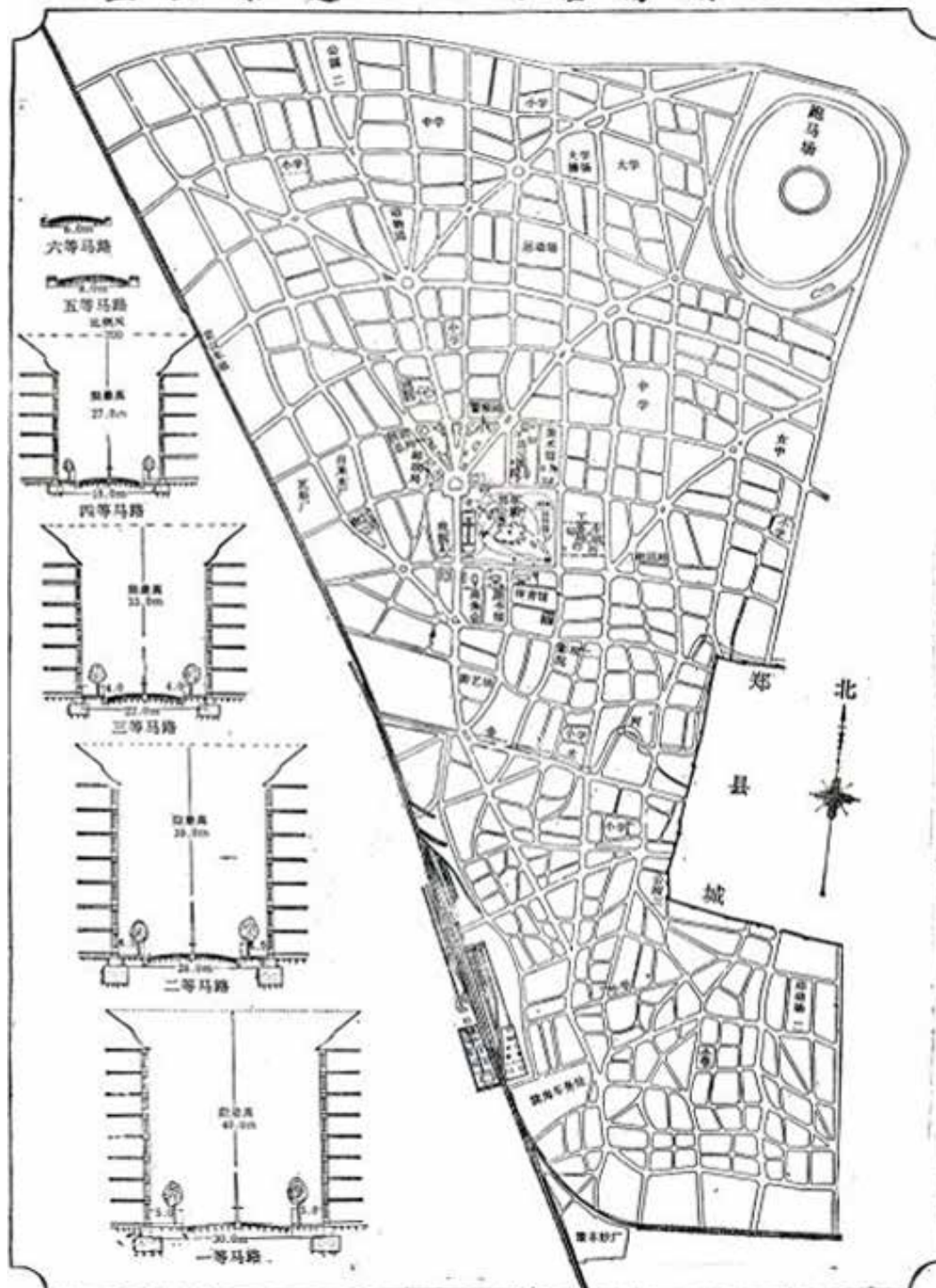


图 1 郑县设计图 (1927年编制)

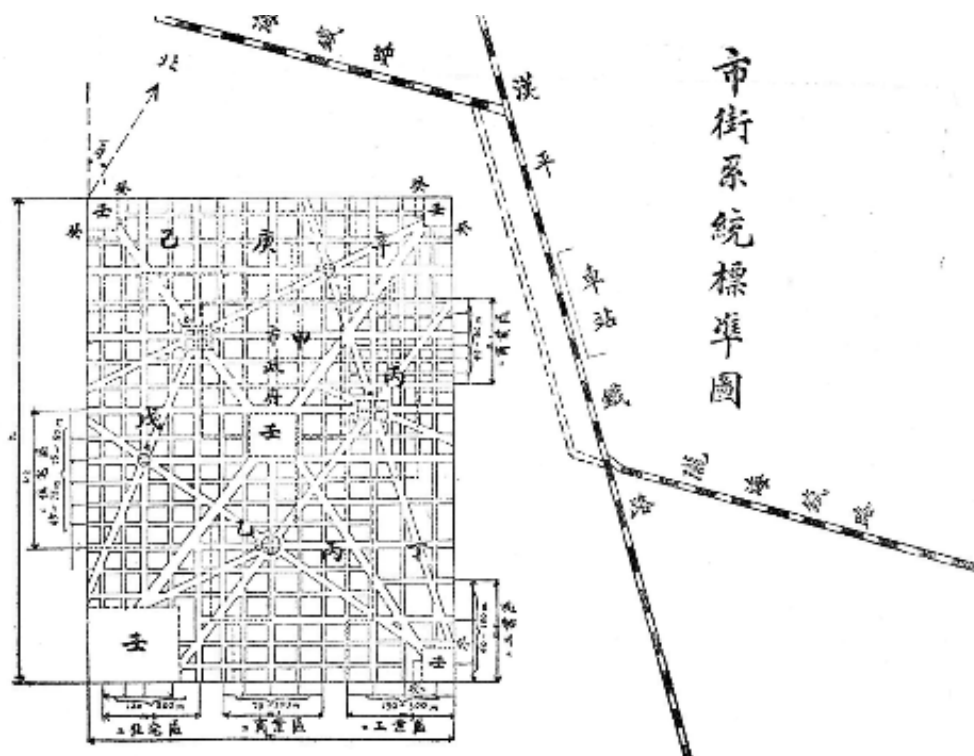
The first plan attempted to reorganize Zhengzhou's 'trading port' by redesigning the spontaneous urban expansion between the historical city centre and the main railway station [fig. 4.8]. The project planned to urbanize an area of 10.5 square kilometres located in north-south direction along the east side of the railways. The street layout proposed was similar to a 'fishbone scheme': a radial structure centred on the railway station and spreading north, whose north-south axis was cut by a circular pattern of minor roads (Hao, 2006; Yanpu Liu, 1988). According to the masterplan this zone would be home to new administrative offices, trading centres, places for cultural activities and residential areas for the 250,000 new inhabitants. In fact, "the plan mainly focused on the municipal construction of Zhengzhou City and the improvement of residents' life. The purpose was to provide the necessary infrastructure conditions for the commercial development of Zhengzhou. [...] At that time, few industrial activities were located in Zhengzhou and, therefore, the layout and location of the factories were not taken into consideration in the plan [...], whose main purpose was to build a commercial port in order to develop the trade activities" (Hao, 2006, p. 17).



4.9. Rural market, Zhengzhou, Wei Dezhong, 1960 ca

While the Zhengbu Design Plan attempted to redesign the urban expansion in progress since the early 1900s, the Draft Plan for the Zhengzhou New Urban Construction Area (1928) planned to urbanize 35 square kilometres located west of railway tracks in order to accommodate 170,000 new inhabitants (Yanpu Liu, 1988) **[fig. 4.10]**. The organisation of the new area was based on a grid layout zoned to site low-density residential plots in the western part, commercial and industrial activities in the eastern zone (close to the railways) and cultural and recreational facilities in the northern area. The regular grid was cut by diagonal boulevards to connect five parks, one located at the centre and the others at each corner of the area.

The combination of the two plans would lead to a massive urban expansion over 47.7 square kilometres for a total new population of 440,000 inhabitants (Busquets & Yang, 2019; Yanpu Liu, 1988). Zhengzhou was meant to be a city composed of three separate but interdependent nuclei: the ancient city, the ‘trading port’ and a new area for urban development.<sup>18</sup> However, neither the Zhengbu Design Plan nor the Draft Plan for Zhengzhou New Urban Construction Area came to fruition. In fact, in the 1920s, disorder and several revolts took place in the Central Plains.<sup>19</sup> Over the following decade the whole area was firstly involved in the Central Plains War (1930), then, from 1937 to 1945, it was occupied by the Japanese army. Wars and disorder caused a great economic and demographic crisis, which mostly affected urban centres such as Zhengzhou. In fact, soon after the Central Plains War, the city lost its ‘urban status’.<sup>20</sup> Meanwhile, due to the extension of the railway lines, different companies decided to relocate their cotton factories to western cities (C. Zhang, 2007).<sup>21</sup> The Japanese invasion worsened the situation. As a strategic railway junction, Zhengzhou was occupied and bombed several times. During that



**4.10.** Zhengzhou New Urban Construction Area Plan, Zhengzhou Municipality, 1928

period several key infrastructures were destroyed (such as the Huayuankou Yellow River embankment), causing enormous damage to industrial and agricultural production, as well as to the commercial activities (Yanpu Liu, 1988).<sup>22</sup> At the end of the Second World War the situation regained an apparent stability, and in 1946 the municipality of Zhengzhou established the Revitalization Planning Steering Committee, a new organisation in charge of urban policies (Yanpu Liu, 1988). The following year this organisation published the Outline for the Preliminary Planning of Zhengzhou City, a plan which mostly promoted the reconstruction and the maintenance of the urban spaces. In particular, the plan focused on building low-income housing in order to solve the housing shortage. At the same time, it also promoted the construction of several open spaces and large boulevards within the urban fabric in order to facilitate the evacuation of the populace in case of further conflicts. However, even this masterplan was poorly implemented due to financial difficulties and the weakness of the administrative cadres; conditions that persisted until the establishment of the People's Republic of China (Hao, 2006; Yanpu Liu, 1988).

The planning activities that characterized the city of Zhengzhou during the Republican period are exemplary of the urban policies implemented across the Central Plains of China. In fact, also other cities, such as Kaifeng, which was the provincial capital at that time, experienced several planning activities influenced by the modern approach.<sup>23</sup> The main driver of these initiatives was the new infrastructural networks, in particular the railway system [figs. 4.11-4.15], that boosted commercial activities sited in the major centres. In fact, outside the main urban areas, few changes affected the spatial organisation of the Central Plains, which remained as a constellation of small agricultural villages spread evenly over the territory [fig. 4.9].



**4.11.** Zhengzhou Railway Station, Zhengzhou, Liu Yuping, 1954

## 4.2. The Socialist Plans

### Building the industrial cluster

In October 1948 the Central Plains became part of the People's Republic of China. At that time Zhengzhou covered an area of 5.23 square kilometres and it was populated by 164,000 inhabitants (Yanpu Liu, 1988). From 1948 to 1950, the new local government promoted mainly remedial initiatives in order to improve the existing urban conditions. In fact, during this 'stage of recovery' "the urban construction mainly focused on housing and infrastructure provision [...] and urban growth was centred in the area between the old settlements and railways" (C. Zhang et al., 2010, p. 34). This because only after the political stabilization of China were the administrative offices fully operational. In Zhengzhou, most of the planning bureaus were established only after 1950, such as Bureau of Construction in Zhengzhou (January 1950), the Zhengzhou City Construction Committee (April 1951), and the Municipal Construction Commission (1951) (Yanpu Liu, 1988). In the following years these institutions appointed external experts to draft two urban plans. In 1951, Chen Huan and Zhong Hanxiong (both members of the Beijing Municipal Commission) drafted the Plan for the Future Development of Zhengzhou Municipality (1951-1981), which foresaw Zhengzhou to be a city of one million inhabitants over 108.9 square kilometres in the following thirty years (Hao, 2006; Yanpu Liu, 1988). This plan was soon set aside for two reasons: the relocation of the provincial government from the city of Kaifeng to Zhengzhou and the Symposium on Urban Development held by the State Financial Commission in 1952, which established Zhengzhou as one of the "fourteen cities to be restructured for major industrial development" (Hsu, 1996, p. 898). As a consequence, the municipality hired professor Huxiong Wen from the Shanghai Federation of Industry and Engineering to draft a new plan (Hao, 2006; Yanpu Liu, 1988). The Zhengzhou General Plan (1952-1972) expected the city to reach a population of one million and one hundred thousand inhabitants, and an urban area of 87.64 square kilometres over the following twenty years (Hao, 2006; Yanpu Liu, 1988). Influenced by the garden city movement, Wen's plan proposed a radial reorganisation of the road



**4.12.** Zhengzhou Textile Industrial Zone, Zhengzhou, Liu Yuping, 1960 ca



network. The main railway station was considered the new city centre, the new provincial administrative facilities were supposed to be located west of the railways, while the eastern part of the city was destined for residential use. A new boulevard was supposed to connect these two areas by entirely redefining the urban fabric of the historical downtown. Perpendicular to this road and parallel to the railway tracks, a north-west axis was planned to accommodate factories and warehouses, to be situated along the east railway line. All these areas were supposed to form a compact urban core surrounded by a 'green belt' as external boundary.

However, as was the case for the previous plans, even the Zhengzhou General Plan (1952-1972) was not implemented. In fact, during the 1950s a political agreement between the People's Republic of China and the Soviet Union led to Soviet influence into financial policies and urban planning activities. Moreover, within the framework of the first Five-Year Plan (1953-1957), the central government promoted various industrial projects in order to transform Chinese cities from 'centres of consumption' to 'centres of production' (Fang & Yu, 2016; F. Wu, 2015; Yeh & Wu, 1999). In light of this, Zhengzhou was to be one of the '156 national key construction projects', and the city became "one of the six national cotton manufacture [centres] based on the principle of cotton manufacture industry adjacent to material resources" (Junxian Zhu, 2012, p. 70) [figs. 4.12-4.13].

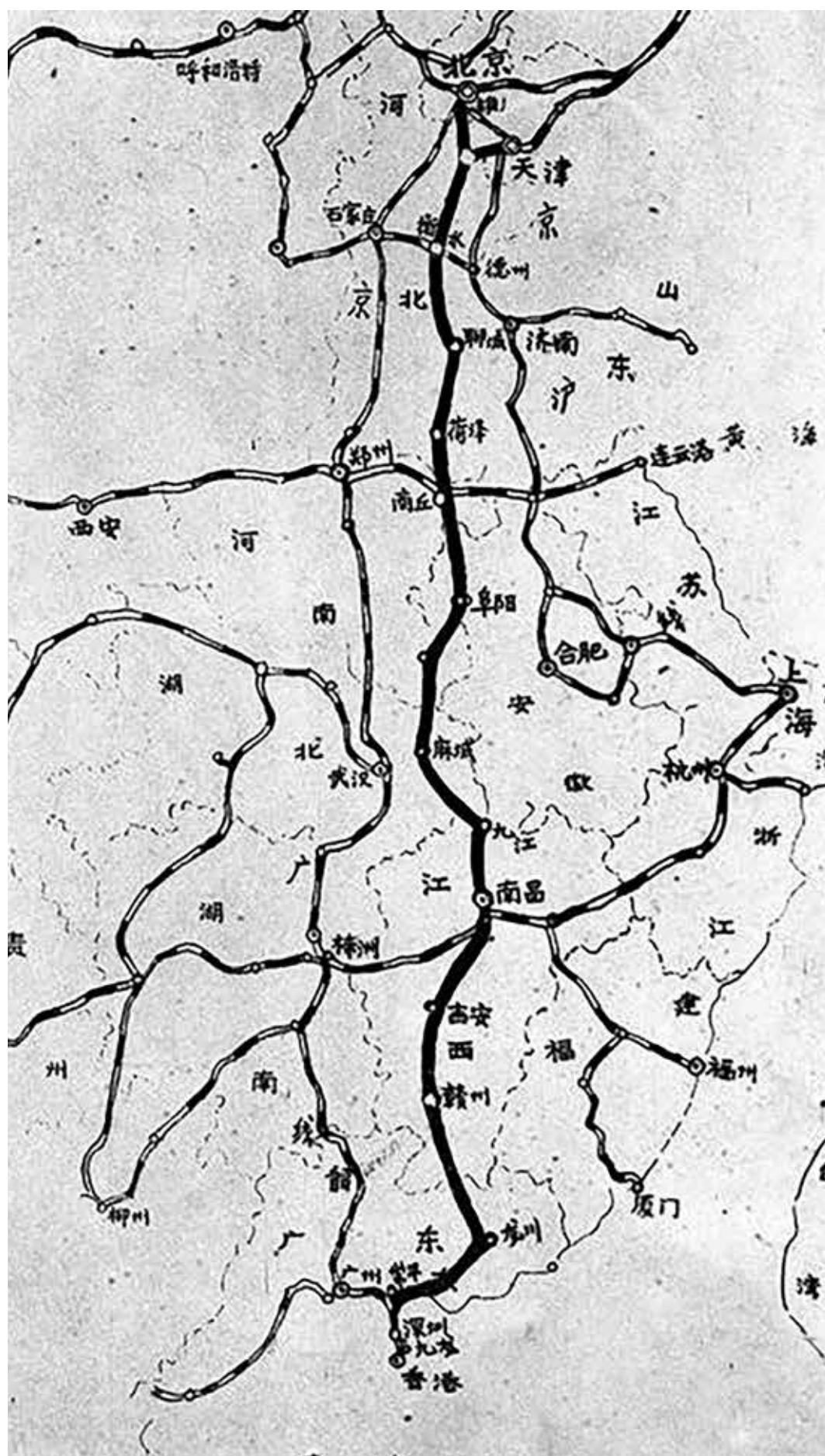


**4.13.** *Construction of the Zhengzhou Yellow River Bridge, Zhengzhou, Liu Yuping, 1960 ca*

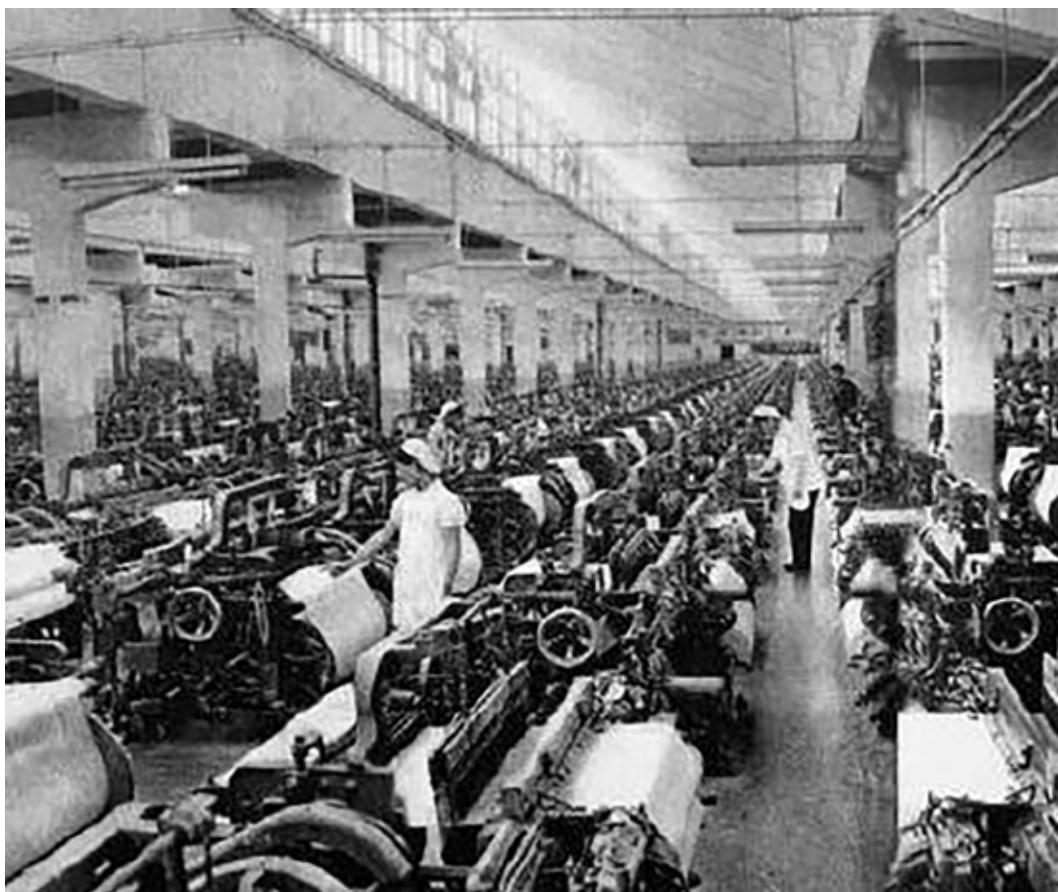
For this reason in 1952 five massive cotton processing factories were set up in Zhengzhou (C. Zhang, 2007).<sup>24</sup> Meanwhile, by launching the so-called Nanyang Road Industrial Park and the Huashan Road Industrial Zone, many other factories for agricultural, manufactory and steel production were established in the city (Hao, 2006).<sup>25</sup> In order to regulate this process of industrialization and the resulting urban growth, in 1952, the municipality promoted a new urban plan drafted under the guidance of the State Administration and Construction and the Soviet expert Mu Xin (Yanpu Liu, 1988; Junxian Zhu, 2012). Unlike the previous ones, Xin's masterplan planned to extend the city only on the east side of the railway in order to avoid the infrastructure dividing the city in two separate parts (Junxian Zhu, 2012). However, since the new textile factories were under construction, this decision was problematic. Therefore, the masterplan was significantly modified in 1954 and 1955 by another Soviet expert Bal Jin in collaboration with the Ministry of Construction and Civil Engineering of Shanghai (Hao, 2006). The new plan expected a population of 580,000 inhabitants, and a built-up area of 63.6 square kilometres in twenty years (Yanpu Liu, 1988). Zhengzhou was supposed to be "a city dominated by light industry, an important transport hub in the country and the political, economic and cultural centre of Henan Province" (Hao, 2006, p. 46). While maintaining a layout based on a circular pattern of three ring roads as it was in the previous plans,<sup>26</sup> the new design emphasized the morphology originating from the rail track intersection, which became the main element in structuring the urban layout.<sup>27</sup> In the 1955 plan, the new residential areas were located in two different zones: one east of the railways infrastructure, in order to implement the existing settlement; the other on the west side, as a new urban expansion based on a regular grid layout. The administrative offices were set on both sides: the municipal ones were supposed to



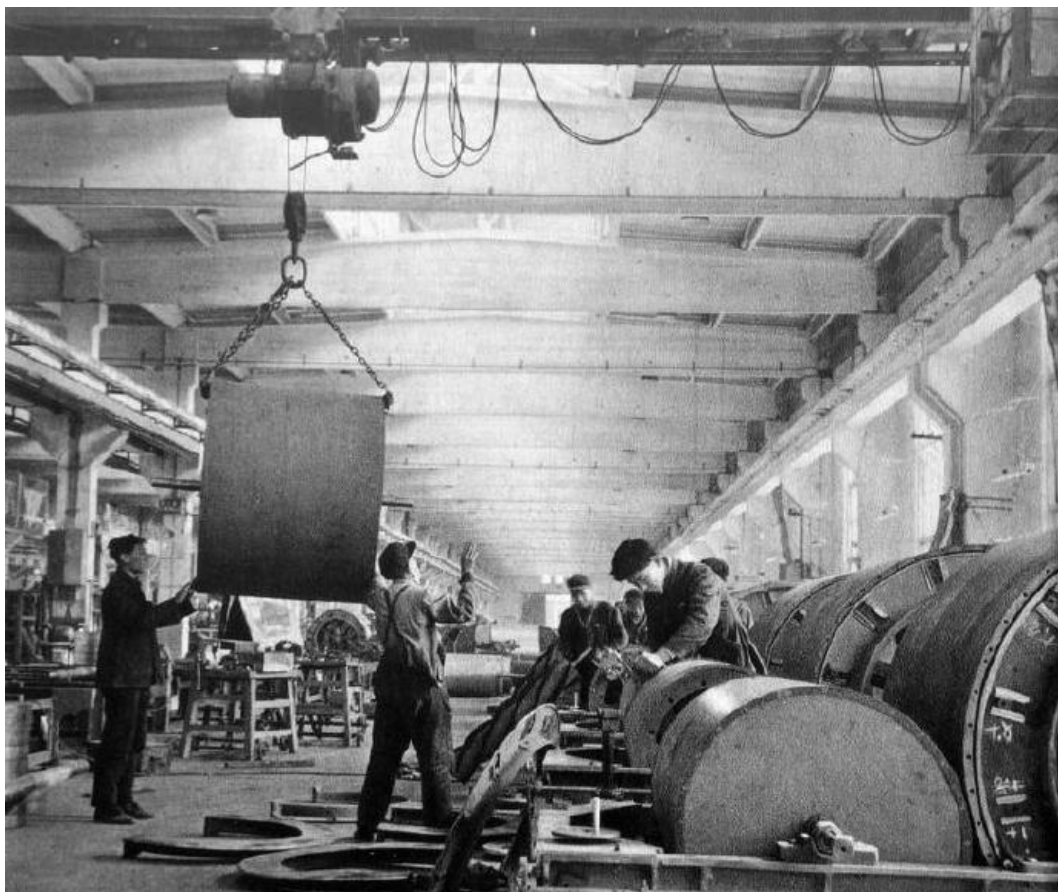
**4.14.** Map of the Zhengzhou, unknown author, 1970 ca



4.15. Map of the Beijing-Kowloon Railway, unknown author, 1960s



**4.16.** *Zhengzhou Cotton Factory n.5, Zhengzhou, Liu Yuping, 1960 ca*



**4.17.** *Zhengzhou Red Flag Commune, Zhengzhou, Liu Yuping, 1960 ca*

be relocated in the western area, while the new provincial government was planned north-east of the historical city centre. The industrial areas and the storage facilities were located in the western and the northern parts of the city, in proximity to the railway infrastructure (Ying Liu et al., 2008).<sup>28</sup> Finally, a green belt was planned all the way around the residential settlements in order to separate them from the heavy industries. The plan drafted by Bal Jin had a strong influence on the definition of Zhengzhou's urban layout. In fact, based on its guidelines, in the following years, the city developed on both sides of the railway lines, by expanding the urban core located around the historical centre and urbanizing an area west of the main station **[fig. 4.14]**. By following the plan, the comprehensive street layout was based on a radial system of roads centred on Erqi Square, while the new expansion was organized according to a grid layout. All these features are still recognizable within today's urban fabric.

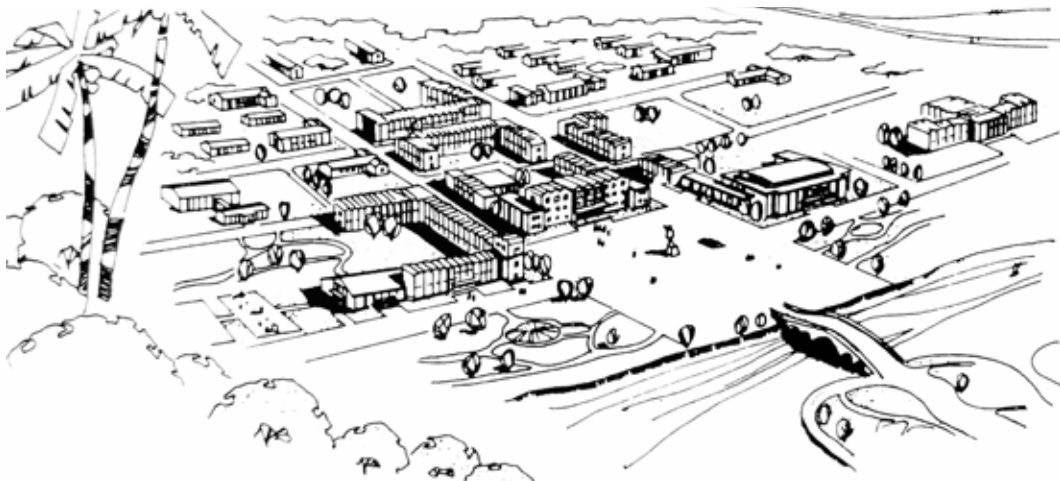
The plans drafted in the socialist period highlighted the numerous initiatives undertaken by the central government to promote industrial development **[figs. 4.16-4.17]**. As the inland provinces were the main beneficiaries of national investment in industrialization, most of the cities of the Central Plains experienced great urban transformations. Among all the other cities of the Central Plains,<sup>29</sup> another emblematic case is represented by the municipality of Luoyang, which, in 1954, was identified by the State Financial Commission as one of "the eight cities to receive major new industrial enterprises" (Hsu, 1996, p. 899). As a consequence, in 1954, the Ministry of Construction, under the guidance of a Soviet expert, urbanised an area six time bigger than the existing city to allocate five of the 156 key industrial projects promoted by the national government.<sup>30</sup> These examples show how the industrialization campaign in the 1950s had a great impact on the spatial layout of the main cities of the Central provinces, and boosted the development of several secondary urban centres in the inland. Hence, the territorial configuration of the Central Plains in that period polarized: while the territorial layout of the countryside remained almost unchanged. The urban areas were subjected to radical transformation as they were test-beds for the socialist industrial policies.



### 4.3. The Post-Reform plans

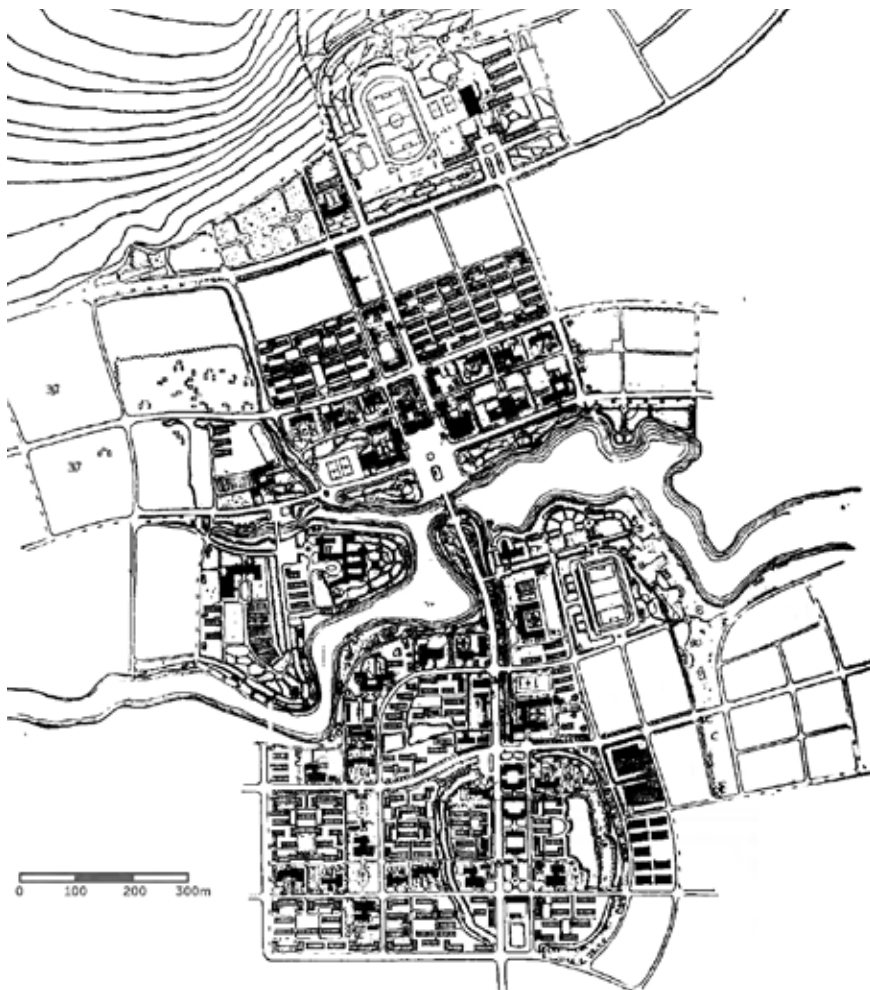
#### Building the infrastructural hub of inland China

Despite the city growing according to the 1955 plan, during the 1960s the city of Zhengzhou experienced great difficulties. According to Peng Hao (2006) “between 1958 and 1959 the population increased by 21,700 inhabitants. This fact, coupled with the natural disasters, caused great difficulties in urban supply and the municipality had to take adjustment measures in order to decentralize the urban population” (p. 52). This large-scale migration led to a reconsideration of the expected urban growth; therefore, the masterplan approved by the municipality in 1955 was successively updated twice, in 1959 and 1960. While retaining the previous zoning, the updated versions attempted to urbanize an area of 94 square kilometres in order to relieve excessive urban density. Moreover they foresaw the enlargement of the open spaces, by improving the Jinzhui River and Xiong’er River environmental corridors and creating a park where the ancient city walls were located (Hao, 2006). Apart from these minor initiatives, because of the ‘anti-urban’ policies of that period, the city expansion was denied, and the planning activities were progressively abandoned. Starting in the 1960s, the situation deteriorated, according to the China Urban Planning Society (1999) “in 1960 there were serious difficulties in the national economy. Many infrastructure projects were discontinued and the urban population was decentralized. Only in 1961 [...] the city of Zhengzhou decentralized 191.600 people, and the urban development registered a negative growth. These circumstances led the State Development Planning Commission to abandon planning activities, the urban planning agencies were dismantled and many documents had been lost” (pp. 219-221).



**4.18.** *View of Suiping People's Commune, South China University of Technology, 1958*

In light of the ‘agropolitan development strategy’, in the late 1950s various efforts were made by central and local governments to improve rural areas. Therefore, in that period most of the planning activities concerned the construction of the people’s communes located in the countryside. Since the Central Plains has always been one of the most populated and agrarian regions of China, the territory was subjected to a process of landscape restructuring related to the collectivization of the land. Thus, in the early 1960s, several initiatives were undertaken to promote new rural settlement. One of the most emblematic in the Henan province is Weixing People’s Commune, in Suiping County [figs. 4.18-4.19]. The plan for the Weixing commune was drafted in 1958 by the South China University of Technology to be home to eight production brigades, namely 5,000 people with another adjacent production centre for 3,000 residents (Knapp, 1992). The plan proposed to set up four main residential areas composed of terraced houses sited along a main north-south axis formed by public facilities and administrative buildings. The hospital was planned close to the river; sport facilities and orchards were located north and industrial and farming areas were sited both east and west of residential areas. The plan was only partially implemented, since it was roundly criticized by the Architectural Society of China in 1963 for being too expensive and land consuming (Knapp, 1992). Nevertheless, the spatial layout of the Weixing commune was typical of that adopted for most new construction in rural areas.



**4.19.** *Plan of Suiping People's Commune, South China University of Technology, 1958*

In spite of the planning activities carried out both in rural areas and in the major urban centres of the Central Plains during the late 1950s and the early 1960s, the great economic crisis of the 1960s, and the Cultural Revolution (1966-1976) completely halted any further planning activities and urban construction. However, even if the planning tools had been abandoned, the city of Zhengzhou had continued to expand. In the 1970s the urban growth remained largely uncontrolled and the city densified by saturating its inner spaces (Hao, 2006; Yanpu Liu, 1988). This situation changed in 1978 as a result of the opening-up and the economic reform carried out by the central government. Once planning activities were reintroduced within the administrative system, Zhengzhou municipality began to develop a new plan which was completed in 1982, and approved by the State Council two year later (Hao, 2006). In line with the Third National Urban Working conference held in 1978, it was established to “control the size of large cities, but encourage the development of small cities and towns” (Fang & Yu, 2016, p. 89), the Outline of the Urban Masterplan for Zhengzhou City aimed to restrict the urban expansion and to limit the population growth **[fig. 4.21]**. In fact, in 1981, Zhengzhou counted 780,000 inhabitants over 65 square kilometres, the masterplan established a cap of one million people over 105 square kilometres in 2000, and it was expected to reach 850,000 inhabitants and 71 square kilometres in 1985 (C. Zhang, 2007). Since the objective was to strictly control urban growth, the plan focused on redeveloping the already built-up areas and on redefining the roads system in order to improve the connections between the eastern and western parts of the city. This framework did not envisage any further urban expansion. Even if the Outline of the Urban Masterplan of Zhengzhou City attempted to constrain urban growth, its expectations were already off target in 1985. In fact, during the 1980s the city had regained its role of infrastructural hub, so both commercial and industrial activities



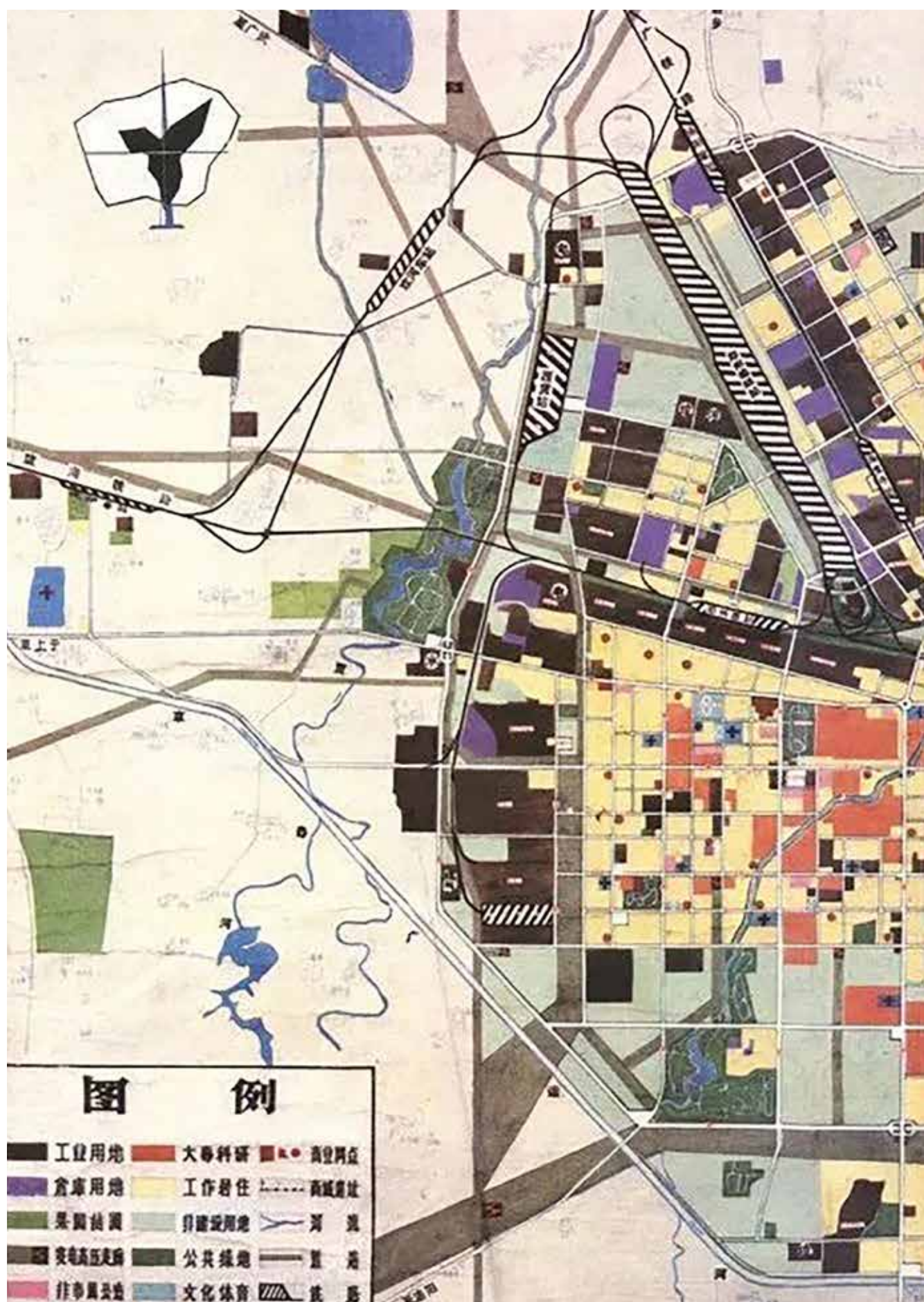
**4.20.** *Textile Factory, Zhengzhou, unknown author, 1970 ca*

had gained momentum. For these reasons, by exceeding the expected urban growth in 1985, Zhengzhou extended over an area of 72.2 square kilometres, and the population exceed 904,000 inhabitants (Hao, 2006). In the following years, despite the growth forecasts being reformulated several times, they always underestimated urban development.<sup>31</sup> As a consequence, the city was subjected to a “spread pie expansion” (Ying Liu et al., 2008, p. 62) which led to the formation of several suburban areas, the loss of agricultural land in urban fringes, and the failure to develop the green belt as promoted in the previous plans.

The impetus of construction during the 1980s not only affected the urban area, but it also spread to the countryside. According to Ronald G. Knapp and Dongqi Sheng (1992) “more housing was constructed between 1979 and 1985 in China than in the previous three decades, adding more than 5 square metres of housing stock per person” (p. 63). To cope with the resulting loss of arable land, numerous efforts to introduce land use planning were made at different levels of administration from 1985. As a result “by the end of 1985, it was claimed that 98 percent of the villages and 85 percent of towns had completed planning these exercises” (Knapp & Sheng, 1992, p. 64).<sup>32</sup> Most of these plans recommended consolidating dispersed hamlets and standardising housing patterns, in order to reduce land consumption.<sup>33</sup> In spite of the planning activities, both the rural centres as well as the main cities experienced an indiscriminate occupation of land, and, as a result, they expanded in an unplanned manner. Hence, the territory of the Central Plains was subjected to a reshuffle in land-uses, which also affected rural areas.

Although the changes in land policies made significant adjustments in the country areas, in the Central Plains the role of TVEs was not as strong as in the southern province of China.<sup>34</sup> Therefore, the main core of the economic development was still the main cities, especially Zhengzhou that in mid-1980s became one of the trans-shipment centres of the new Eurasian Continental Bridge, and one of the core cities along the Yellow River Economic Belt (Busquets & Yang, 2019; Yanpu Liu, 1988). In fact, as well as maintaining the industrial activities established in the first socialist period, during the 1980s, the city regained its importance as an infrastructural hub for inland China [fig. 4.20]. This condition had a great impact on the Central Plains, which had mostly been sheltered from the major transformations that affected the coastal areas in the early 1980s. On the contrary, between 1978 and 1990, the urbanisation rate had slowly grown from 13.6 to 15.5 percent (Henan Province Bureau of Statistics, 2018). Hence, at the beginning of the 1990s, the territorial structure of the Central Plains of China was made up of major centres sited along the main infrastructures (in particular along the railways), which supported a diffuse urbanisation composed of towns and villages homogeneously distributed in the whole area. While the main cities depended on industrial and commercial activities, most of the populace still relied on agriculture. This territorial structure as well as these socio-economic conditions have been subjected to radical transformations since the mid-1990s.



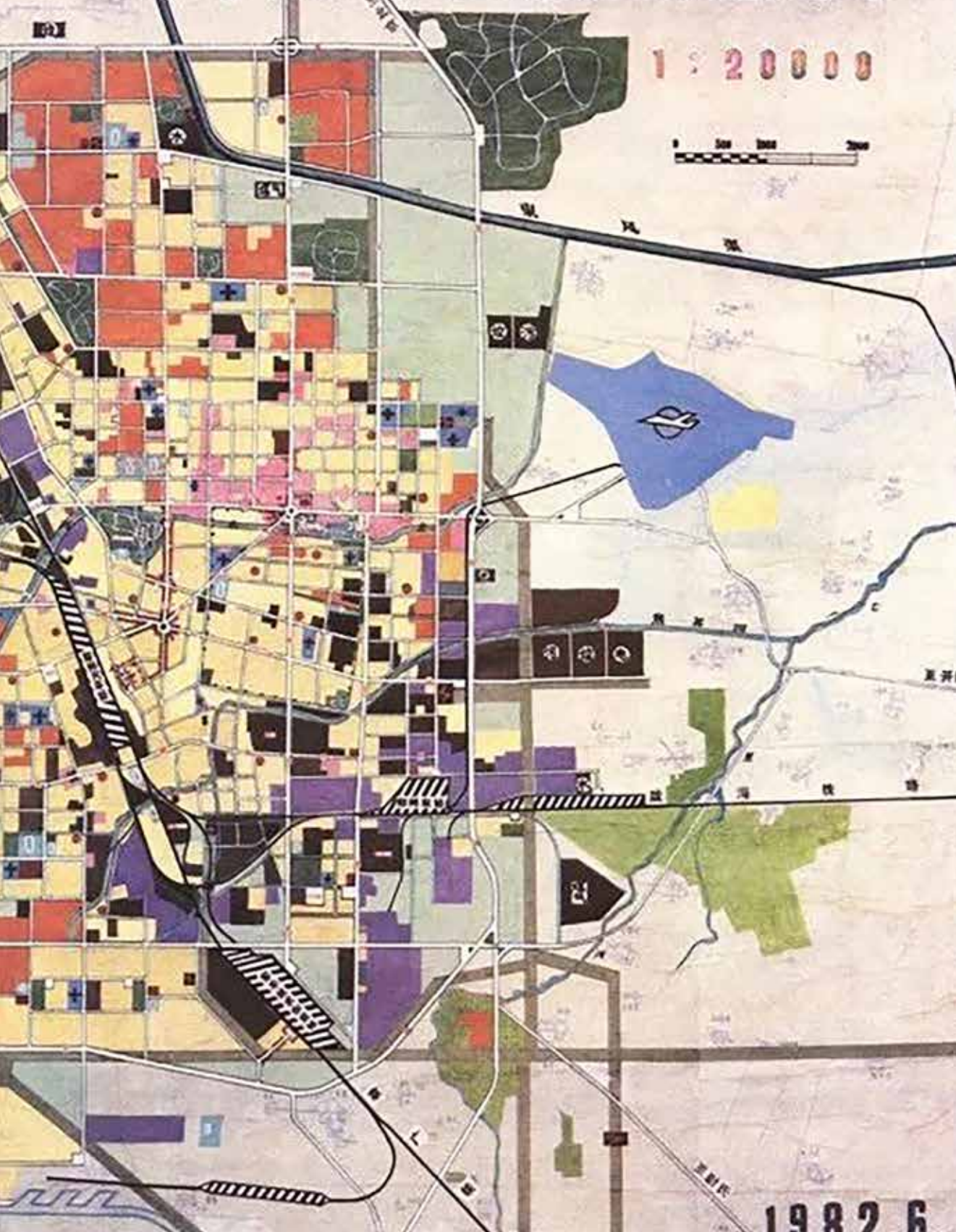


4.21. Zhengzhou City Urban Masterplan 1985, Zhengzhou Municipality, 1982



# 郑州市区规划总图

1:20000



1982.6

# Chapter 5

## Zhengdong. Doubling the City

From 1990 to the mid-2000s, China entered a new phase of economic and urban growth. While the process of administrative and fiscal devolution occurring since the previous decade continued, the pace of integration into the globalized economy accelerated and gained momentum after China joined the World Trade Organisation (WTO) in 2001. Unlike the industrial restructuring of the first opening-up period, the second wave of globalization pervasively invested the whole urban realm. In shifting “from state-led industrialization to urban based accumulation” (F. Wu, 2007a, p. 9) land became the most important asset for local governments, and the major cities began to compete in order to foster urban development and boost the real estate market. Moreover, even central policies such as the eighth Five-Year Plan (1991-1995) stressed the necessity to “build development zones to drive large cities’ development” (Fang & Yu, 2016, p. 90). Due to these factors, the number of cities increased from 479 to 640, and in 1995 the level of urbanisation reached 29 percent (National Bureau of Statistics of China, 2018). Despite the Asian economic crisis in 1997, this trend continued and in 2000 the urbanisation level rose to 36 percent. During that period, by adopting the urban entrepreneurialism policies already experimented in the early nineties by some of the major municipalities (in particular, in Yangtze River Delta and Pearl River Delta), several cities implemented development strategies to attract foreign and domestic investment by qualifying themselves as global trade centres **[fig. 5.1]**.<sup>35</sup> These self-promotion initiatives relied on urban development strategies characterized by the ubiquitous replication of emblematic spaces, such as central business districts (CBDs), economic and technological development zones (ETDZs), university towns, and so on (King, 2004; Ren, 2011; Sklair, 2006). Consequently, the tenth Five-Year Plan (2001-2005) advocated a “diversified and coordinated development of large, medium and small cities and townships” (Fang & Yu, 2016, p.



# CNG

**SPECIAL ISSME ON ZHENGdong  
NEW DISTRICT**

**THE MOST BEAUTIFUL PLACE  
IN THE CENTRAL PLAINS**

**A Model of China's Urban Planning  
and Construction**

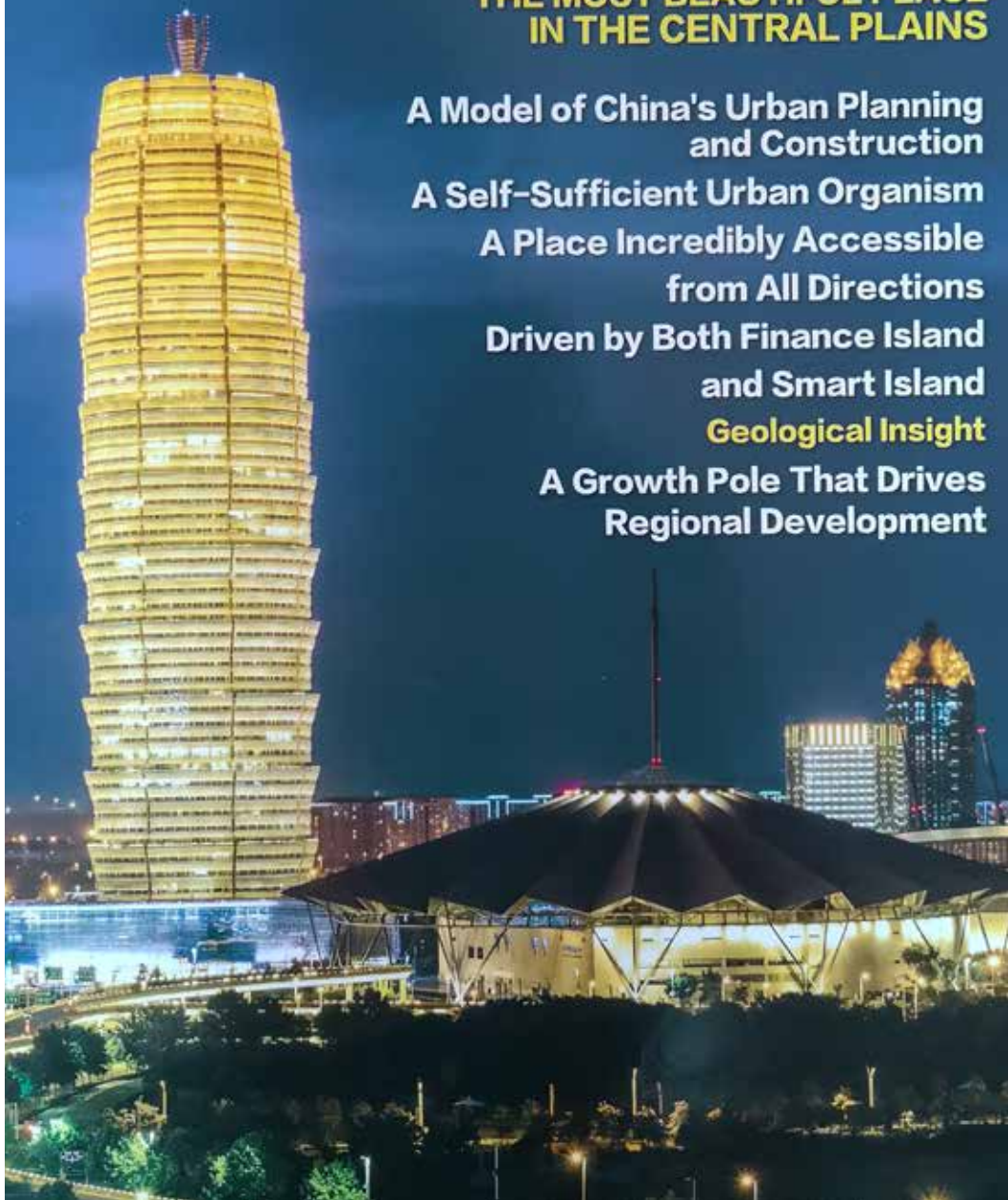
**A Self-Sufficient Urban Organism**

**A Place Incredibly Accessible  
from All Directions**

**Driven by Both Finance Island  
and Smart Island**

**Geological Insight**

**A Growth Pole That Drives  
Regional Development**



**5.1.** Cover of the Special Issue on Zhengdong New District, Chinese National Geography, 2015

91). Even if ‘diversified’, this approach continued to boost the urbanisation process and, by 2005, urbanisation had grown to 40 percent (National Bureau of Statistics of China, 2018). While globalization and fiscal decentralization have been the key-drivers in urban transformation from the 1990s to the mid-2000s, the most important implications of these phenomena have been the rise of a few major cities, and the emergence of strong territorial competition.

In fact, the territorial transformation resulting from the opening-up and the process of internationalization has greatly affected the Chinese landscape. As claimed by Arata Isozaki (2012), in washing over the Asian continent, “the global tsunami deposited an archipelago of cities” (p. 3). Under the great wave of globalization, these cities competed with one another to stay afloat. The result was a ‘grassroots urbanisation’, which has created a heterogeneous landscape comprising an assortment of central business districts, villages, art spaces, traditional spots, cultural centre, gated communities, developmental zones, industrial areas, university towns, eco-cities and so on (Ren, 2011, 2013). This landscape is radically different from that described in the mid-1980s by Warwick Armstrong and Terry G. McGee (1985) which considered Asian cities as “theatres of accumulation, but also as centres from which are diffused the cultures and values of westernization” (p. 41). On the contrary, since the opening-up, the Chinese city has become a mirror that reflects the dynamics and the contractions of globalization and its controversial impact on local context (F. Wu, 2006b). Hence, investigating the features of this landscape also helps us to understand some of the features of contemporary global urbanisation (Bonino et al., 2019; Ren, 2011).

At first the effects of globalization on Chinese cities were more evident in the major centres of the coastal regions. However, due to inter-city competition, cities in inland China subsequently adopted an urban entrepreneurialism approach from the nineties. Again, the Central Plains offers a good standpoint from which to examine these urban phenomena. From the mid-1990s, Zhengzhou municipality made significant efforts in order to emerge in a national and international context by qualifying itself as the major infrastructural hub for inland China **[figs. 5.2-5.3]**. The most important initiatives were: the promotion of special areas for industrial activities in the 1990s and the construction of Zhengdong New District, a new town designed by the Japanese architect Kisho Kurokawa after winning an international competition in the early 2000s.

Based on these considerations, this chapter is organized into three parts. The first looks at the urban entrepreneurialism policies, used by local governments to self-promote their own cities, and their spatial implications. The second part discusses the projects undertaken by minor centres and major cities given the emerging territorial competition, particularly the promotion of EDTZs and the construction of new towns. Finally, the last section describes the effects of the urban entrepreneurialism and the territorial competition on the Central Plains of China, taking Zhengdong New District (the new town of Zhengzhou) as an emblematic case.



**5.2.** *Telephone operators, Zhengzhou, Wang Mingxi, 1982*



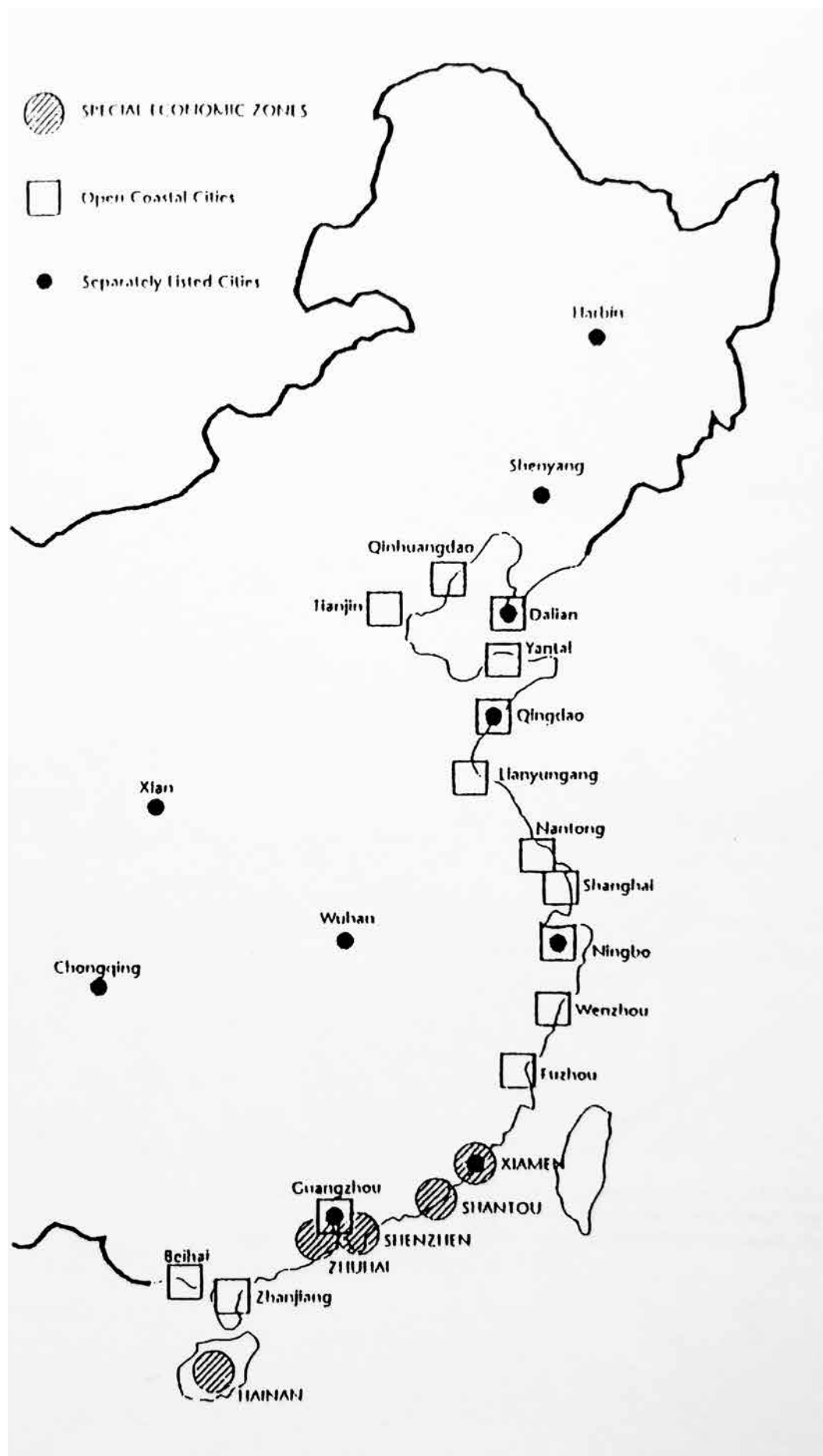
**5.3.** *Zhengzhou Post and Telecommunications Bureau, Zhengzhou, Wang Hao, 1985*



## 5.1. From Point to Point

### The rise of the major cities under the impetus of urban entrepreneurialism

From the 1900s, urban entrepreneurialism has been one of the most important phenomena affecting Chinese cities (F. Wu, 2003, 2006a). According to Fulong Wu (2015) “the Chinese ‘growth machine’ has been built upon the mechanism of the land market and the decentralized tax-sharing system” (p. 79). The latter has been in place since the economic reform, in particular during the 1980s and the 1990s which were characterized by increasing economic and administrative devolution (Ma, 2005) **[fig. 5.4]**. As reported by Shiuh-Shen Chien and Ian Gordon (2008), at that time “there was also substantial fiscal decentralization, with central government’s share of public expenditure falling from around 53 percent to 30 percent between 1982 and 1998” (p. 40). This condition caused financial problems for local governments, which were affected by an increasing fiscal deficit. In order to overcome this situation, in 1992 the central government promoted a tax-sharing reform that was enacted two years later. According to the new fiscal system, although local governments are now receiving only 25 percent of the value added tax, they could directly manage the incomes deriving from land administration and extra-budgetary revenues (Ren, 2013; C. P. Wong, 2000; F. Wu, 2015; J. Xu & Yeh, 2009). Hence, the land market became the major asset for local governments. Moreover, coupled with the process of fiscal decentralization, the central government has reformed both the land management and the leasehold system.<sup>36</sup> Among all the laws enacted for restructuring the land administration system, two could be considered the most important in laying the foundation for the urban entrepreneurialism policies (J. Xu & Yeh, 2005).<sup>37</sup> First, the Land Administration Law approved in 1986 (then revised in 1998) that “incorporated fragmented land units into the single control of territorial governments, which had substantial power in authorizing land expropriation, land supply and rural land conversion” (J. Xu & Yeh, 2009, p. 575). Second, the City Planning Act adopted in 1990 that set up the statutory planning system which “granted the local planning authority power to enforce development control over its territory, that is, regulation of land uses directly at the land parcel level” (F. Wu, 2015, p. 54). As argued by Jiang Xu and Anthony Yeh (2009), “as a result, the local governments control both the ownership and the development rights of urban space” (p. 565). Meanwhile, in 1988, article 10 of the Chinese constitution was amended in order to establish a ‘dual-track-land-management system’ based on the separation of land ownership (which remains public), and land use rights (that can be leased to private enterprise) (G. C. S. Lin & Ho, 2005; Ren, 2013).<sup>38</sup> The resulting leasehold system (similar to that of Hong Kong) allows municipalities to distribute land rights through tender, public auction or negotiation (F. Wu, 2003). In order to achieve the maximum benefit most of the land transitions occur through closed-door negotiations. For instance from 1995 to 2002, negotiation accounted for 86 percent of land transactions (G. C. S. Lin & Ho, 2005).<sup>39</sup> As a result, “between 1987 and 1994, China collected 241.8 billion



5.4. Map of Special Economic Zones and Open Coastal City, unknown author, 1980 ca

CNY from land conveyance, most of which was retained by governments at various local administrative levels” (G. C. S. Lin & Ho, 2005, p. 423). To make matters worse, this reliance of local governments on land revenue has intensified since the first decade of the twenty-first century. As reported by Wade Shepard (2015) “in 2000, the proportion of land sales to municipal governments’ other revenue was 9.3 percent; by 2011 it was up to 74.1 percent. To put it in stark terms, China’s current fiscal system forces local governments to depend on land sales, which creates a situation where cities need to keep expanding and developing in order to be able to afford to function” (p. 33).

These conditions have boosted the so-called urban entrepreneurialism, that has become the main driver of the great process of landscape transformation centred on the major cities and their fringes. In fact, although the ninth Five-Year Plan (1996-2000) aimed for “strictly controlling the development of large cities, encouraging the development of small cities and townships” (Fang & Yu, 2016, p. 91), the “market-oriented reform triggered downward rescaling and the rise of entrepreneurialism became centred on the country’s central cities” (F. Wu, 2016b, p. 1173). The major impacts of these transformations on the urban environment can be summarized in four points.<sup>40</sup> First, city centres have been affected by a great process of urban restructuring (S. He & Wu, 2007; Hsing, 2010; Shin, 2007; Tian & Wong, 2007).<sup>41</sup> Since each parcel of land is now valued according to its location, many factories and work units moved into the urban fringes in order to sell the land in central areas to real estate companies (Yeh & Wu, 1996). Relocations were supported by mechanisms of land leasing, which allowed administrative cadres and private companies to convert land uses at will (F. Wu, 2003). Moreover, even if the 1990 City Planning Act required the municipalities to provide general plans, “the land use zones of the master plans are too broad to control site specific development, leaving too much discretionary decision-making to the building administration and local district governments” (Yeh & Wu, 1996, p. 348). Hence, not only do local administrations facilitate the urban development in central areas by assisting and coordinating relocation, site clearance and infrastructure provision; they also change land-use through planning activities. Second, a great urban expansion has occurred in the urban fringes. On the one hand this process was related to the difficulties in undertaking large real estate projects in the central areas due to the high compensation fees required by urban citizens, and the impossibility in obtaining a large amount of land (Yeh & Wu, 1996). On the other hand, the majority of ‘development zones’ established by municipalities (i.e. places where municipalities offer incentives for factories and business enterprises) were located in the peripheral areas (Hsing, 2010). Therefore, since the mid-1980s, a huge amount of farmland in urban fringes has been rezoned for development purposes. In particular, between 1993 and 1996, the hectares of converted agricultural land ranged between 130,000 and 97,000 per year; which means a total area equal to that of Beijing municipality (G. C. S. Lin & Ho, 2005). Third, since the value of the new areas for residential development as well as the performance of the ‘developmental zones’ depend on the provision of infrastructure and services, the municipalities set

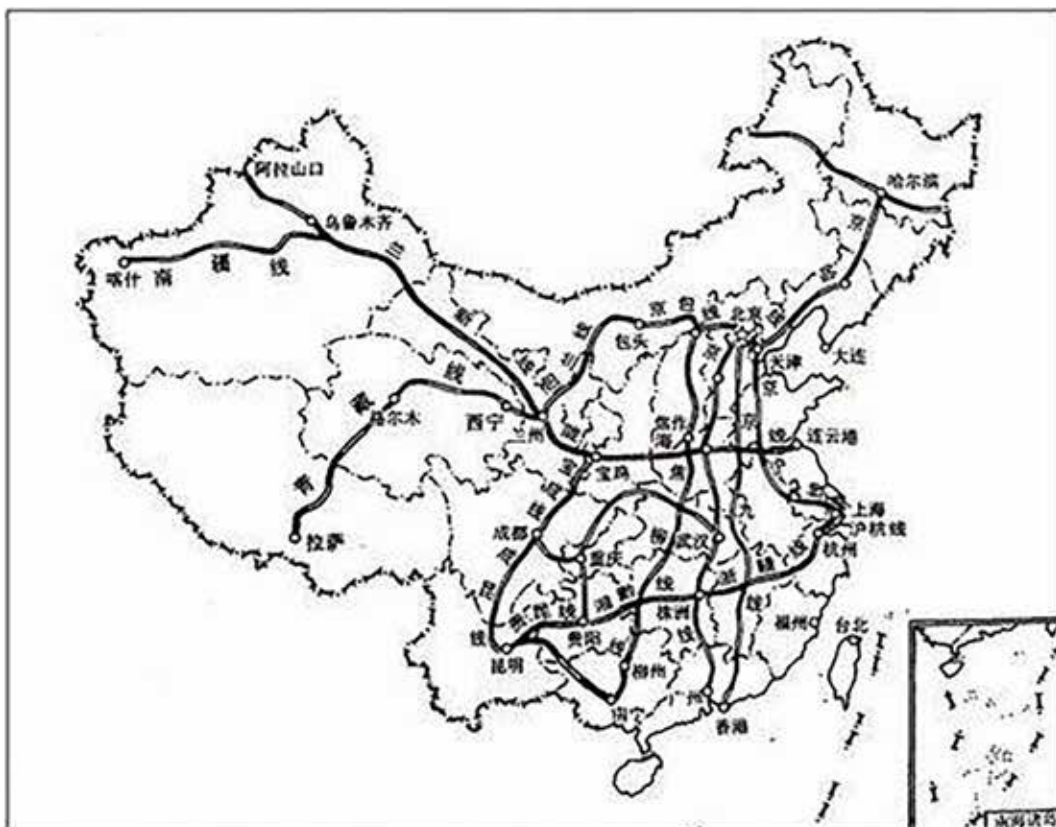
different strategies in order to promote the construction of new facilities. "As lands now have value, the city government is willing to invest in infrastructures to improve the environment and accessibility so as to further increase land value" (Yeh & Wu, 1996, p. 344); thus, local governments can supply infrastructures as an initial condition for urban development. Otherwise infrastructures can be realized in partnership with investors as a form of tax relief (F. Wu, 2003). In both cases the landscape has been radically transformed by creating airports, ports, parks, highways, railways, metro lines and canals in order to support the forthcoming urbanisation. Fourth, each leading local cadre adopts 'a new discourse' to promote its own city. These 'discourses' rely mainly on planning activities; in particular the draft of non-statutory plans and the promotion of international competitions for designing the new urban expansions (F. Wu, 2015). Plans and 'discourses' can change in time according to the 'leading discourse' promoted by central government. For instance, the emphasis on globalized business cities that encouraged the ubiquitous construction of CBDs in the past decades, has currently been superseded by an 'ecological discourse' which is boosting the development of eco-cities and low-carbon-cities (Ren, 2013; Williams, 2017). This phenomenon of 'city-branding' is not just a rhetorical ploy; on the contrary, several initiatives have been carried out by local governments, such as the beautification of areas inside consolidated urban contexts; the promotion of ecological corridors, leisure and cultural areas; and spaces catering for specific targets of population. In conclusion, what comes out from these four points is that "with the introduction of a market in land-use rights, an unintended consequence was for several authorities to effectively become property speculators" (Chien & Gordon, 2008, p. 40). Among them, municipalities, whose fiscal system relies on land management have been the main drivers of this radical process of restructuring which has affected the entire urban environment. Since all of them want to obtain the greatest benefits from this situation, urban entrepreneurialism has also provoked a strong territorial competition in which the built environment has been used as an instrument to attract domestic and foreign investment.

## 5.2. Defining the City Network

### ETDZs and new towns as form of territorial competition

According to Shiuh-Shen Chien and Ian Gordon (2008) “territorial competition emerged in post-Mao China, in the context of a strong push for national economic development, pursued via an asymmetric process of decentralization [...] and with acceptance that some regions would grow faster than others” (p. 41). Following Deng Xiaoping’s statement “let some regions and people get rich first”, since the 1990s the central government has promoted a ‘ladder-step approach’ to urban and economic development by relaxing the redistribution policies at the national level, while pursuing a process of administrative devolution (J. Xu & Yeh, 2005) [figs. 5.5-5.6]. Within this framework, local leaders become virtual CEOs of urban activities,<sup>42</sup> and compete with one another to get the highest revenue from the businesses related to land management (Ren, 2013; F. Wu, 2015). As a result, from the nineties to the mid-2000s, territorial completion gained momentum, and several bottom-up initiatives driven by the entrepreneurialism of villages, towns, municipalities and prefectures gave rise to a fragmented patchwork of urbanisation. This ‘grassroots urbanisation’ driven by the lower tiers of administration experienced two different stages.

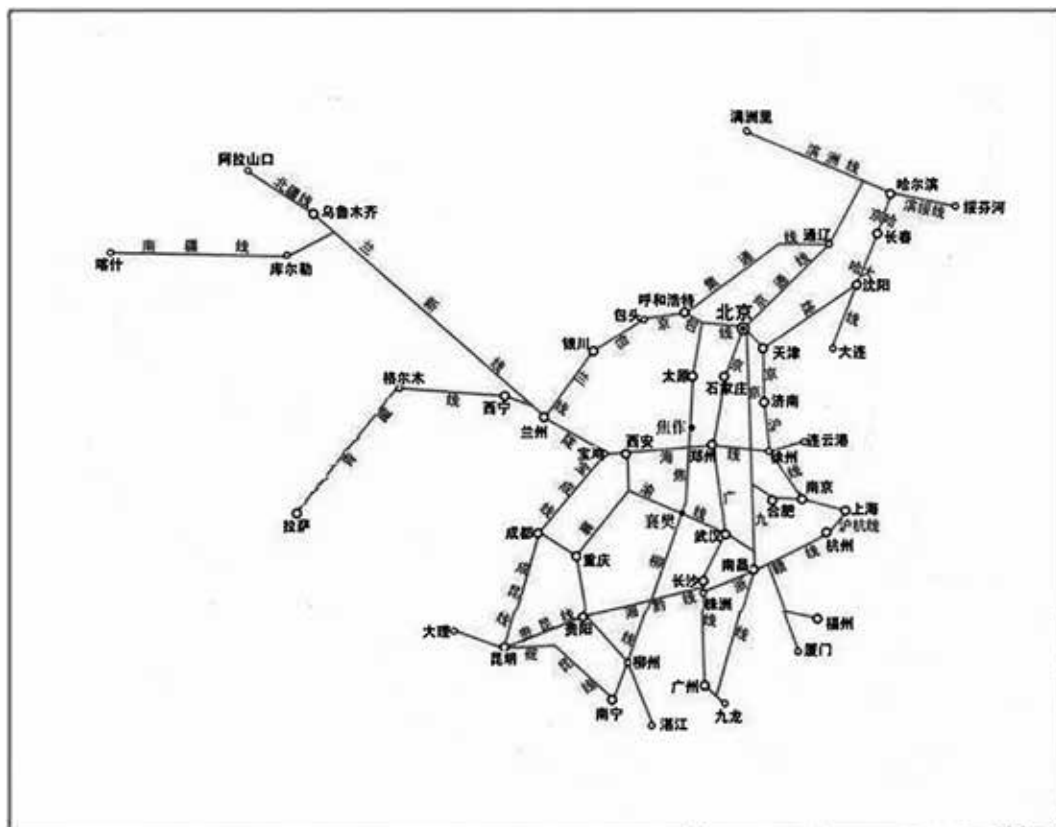
The first stage occurred during the 1990s, and it was characterized by a ‘land enclosure movement’ that boosted the so-called ‘development zone fever’ (Hsing,



5.5. Major railways line and port of China, unknown author, 2000 ca



2010). Since the economic reform, and based on the model of the Special Economic Zones (SEZs), several cities have established so-called Economic and Technological Development Zones (ETDZs) as forms of “economic reform laboratory” (Jian Liu & Xu, 2019, p. 65). As reported by Liu Jian and Xu Gaofeng (2019), “development zones are an economic policy zone specifically designated within a city where special policies (especially finance and taxation related to industries and enterprises) are implemented for the purposes of experimenting with innovative industrial development modes in the market economy, i.e. by attracting international investments, facilitating exports and trades and fostering new industries” (p. 65). Although ETDZs have existed since the opening-up, until the land reform of mid-1980s they had seen only a slow development. This changed abruptly in the late 1980s, when the mechanism of land leasing led local governments to promote ETDZs in order to obtain revenue by selling land-use rights (Yeh & Wu, 1996). As a consequence, a great process of land transformation occurred. In just two years, from 1990 to 1992, the number of ETDZs increased from 1,874 to 2,700, reaching a total area of 15,000 square kilometres, amounting to more than the total urban land area of the existing cities (Q. He, 2000; Yeh & Wu, 1996). Within this framework, between 1993 and 1996, the percentage of rural land converted per year for developing ETDZs (including industrial and mining areas) ranged between 35 and 40 percent of total land converted (G. C. S. Lin & Ho, 2005). This process was mainly driven by the lower tiers of administration (such as townships, villages, counties and municipalities)<sup>43</sup> that operated both legal and illegal transactions to get the maximum benefit from land management (Q. He, 2000; Yeh & Wu, 1996).<sup>44</sup>



5.6. Network of the major Chinese cities, unknown author, 2000 ca

Although the central government promoted several initiatives to cool down this ‘development zone fever’,<sup>45</sup> this trend continued, and, in 2003, the total area of ETDZs more than doubled to reach 36,000 square kilometres (Hsing, 2010). However, among all the 3,837 ETDZs registered in 2003, just a few of them were effectively operational; in most cases, the promotion of ETDZs was just an excuse to convert farmland to a different land-use. As reported by the Ministry of Land Resources, at the beginning of the 2000s, only 13.5 percent of the 20,000 square kilometres of designated ETDZs was effectively under development, while more than 85 percent remained idle (Hsing, 2010). Consequently, in 2004, the Ministry of Land and Resources launched an investigation into the status of ETDZs. According to You-Tien Hsing (2010) “the action resulted in the abolition of 4,813 *kaifaqu* [i.e. development zones], or 70 percent of the 6,866 *kaifaqu* nationwide. In terms of land area, about 24,900 square kilometres, or 64.5 percent of the total area earmarked for *kaifaqu*, was ordered into the state land reserve” (p. 102).

While the ‘development zone fever’ cooled down at the beginning of the 2000s, the process of rural land conversion has not let up. On the contrary, a second stage of ‘grassroots urbanisation’ has gained momentum. This new phase has mainly been driven by municipalities and prefectures which established control over their urban fringes by boosting urban development based on the construction of ‘new towns’ (Hsing, 2010; Jian Liu & Xu, 2019; Ma, 2005). While ETDZs attempted to promote industrial activities, in the development of new towns, “planners and developers treated the totality of urban space as a commodity” (Hsing, 2010, p.



**5.7.** Asia Mall, Zhengzhou, unknown author, 1990 ca

104). Hence, this new version of urban entrepreneurialism has been characterized by municipalities that competed with each other; acting like businesses boosting the city expansion through ‘mega-urban projects’ (F. Wu, 2016b). According to You-Tien Hsing (2010), it is possible to identify four main reasons for promoting ‘mega-urban projects’. First, due to the unpredictability of land policies, municipalities attempt to convert as much land as possible in order to meet market demand. Second, huge land areas allow to develop multiphase mega-projects that can be carried out over a long period of time. Thanks to this condition new towns can be modified to meet the changing needs of different stakeholders, and they can be home to various urban activities. Third, a great land reserve is required to exploit the economies of scale in infrastructure provision. Fourth, land reserves are used as collateral in order to obtain bank loans. Due to these characteristics, unlike the ETDZs movement that also involved minor urban centres, new town construction was mostly the realm of the major municipalities in relation to their administrative power. Indeed, in that period the main cities gained direct control over their neighbouring areas. Instead of the previous process of ‘converting county to cities’ promoted by the central government since mid-1980s, the administrative restructuring in the mid-1990s was encouraging the ‘city administering counties’ and the ‘annexation of suburban counties’ (Ma, 2005).<sup>46</sup> Consequently, “by the end of 1999, 97 percent of the cities at and above the prefecture-level had subordinate counties under their jurisdiction” (Ma, 2005, p. 487). As reported by Fulong Wu (2016b) “This process of ‘metropolitanization’ transformed the relationship between the central city and its suburbs from one characterized by scattered industrial satellite towns with a vast rural area for vegetable cultivation to one of suburban new towns and a globalizing central area that formed a unified global city-region” (p. 1139). In this framework, new urban projects were based on so-called ‘comprehensive development plans’ and ‘strategic planning activities’, a combination of urban planning and land management devoted to market (Hsing, 2010; Yeh & Wu, 1996). The main objective of these plans was ‘place production’, which became the major business for municipalities [fig. 5.7]. Therefore, planning, zoning, infrastructure provision and marketing were combined for the purpose of building global centres able to attract domestic and foreign investment within a context where cities compete in order to emerge in the national and international scene (F. Wu, 2016b).

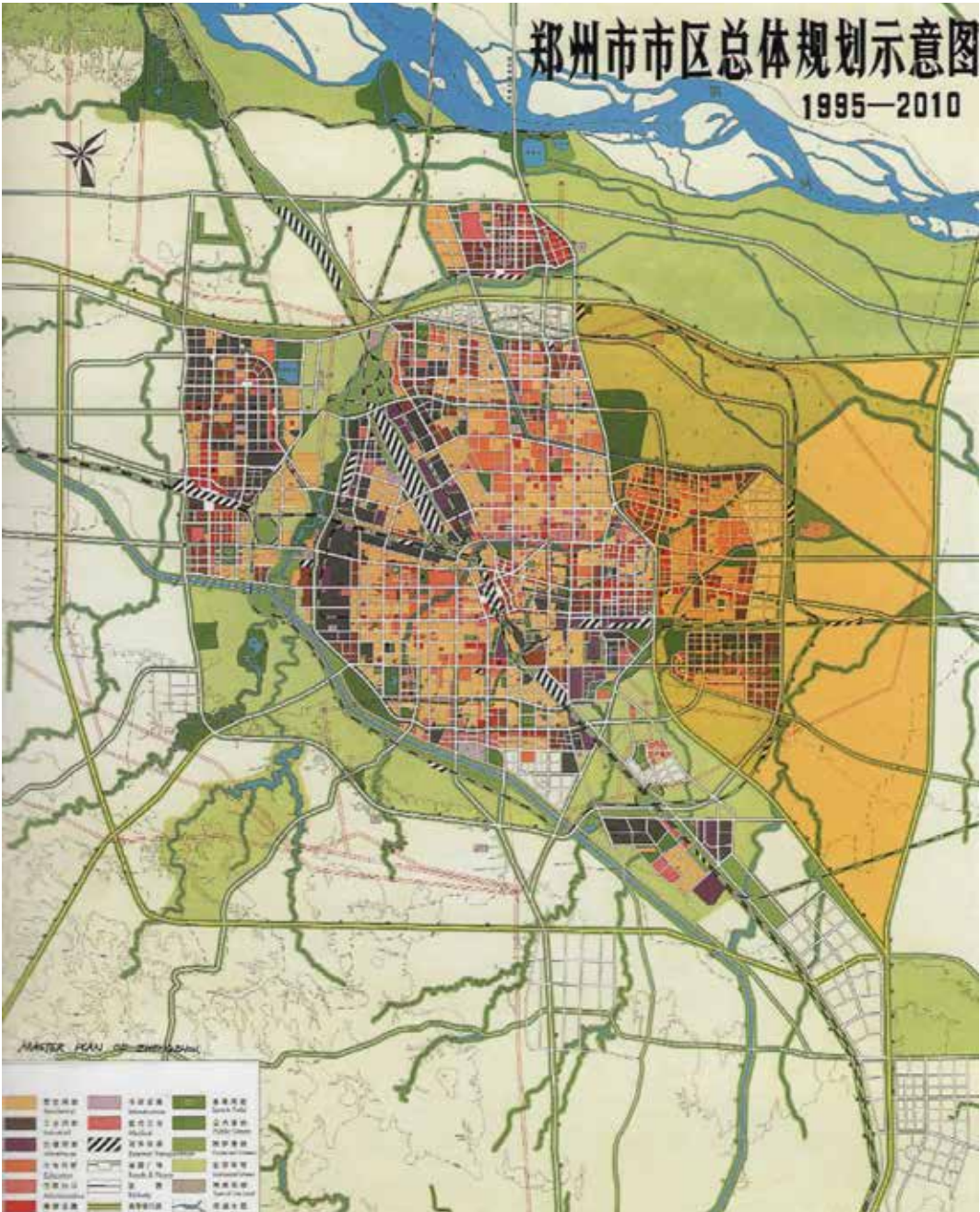
### 5.3. Zhengdong New District

#### Empowering the inland metropolis

While the plans drafted in the 1980s attempted to curb urban growth, a new phase of urban development in Zhengzhou started in the early 1990s. Due to its consolidated roles as the infrastructural hub of central China and main centre for the Central Plains, Zhengzhou municipality has adopted an urban entrepreneurialism approach in order to enhance its position in the national arena, and to emerge in the international context. Within this framework several initiatives have been carried out under the guidance of the Zhengzhou General Masterplan 1995-2010 presented in 1995 and approved by the State Council in 1998 [fig. 5.8]. Under the influence of ‘development zones fever’, the plan adopted a ‘decentralized multicentre development model’ which envisaged four ‘new development zones’ (D. Liu, 2006). These zones were organized in four clusters located all the way around the city centre, and separated from the urban core by open spaces and ecological corridors. On the western side, an area of 18.6 square kilometres between Lake Xiliu and the Jialu River was planned to become the Zhengzhou Hight-tech Industrial Development Zone (approved in 1991) (D. Liu, 2006; Ying Liu et al., 2008). The northern cluster, located between the G30 motorway and the Jialu river, was intended as a development zone for leisure and tourist facilities; while the southern site, along the railway line and halfway to the new international airport, was designated for relocating textile and electronics factories (Y. Chen et al., 2017; D. Liu, 2006). Finally, the Zhengzhou Economic and Technological Development Zone, 12.49 square kilometres in the eastern part of the city centre, was approved in 1993 to be home to automotive industries (D. Liu, 2006; Ying Liu et al., 2008). Except for the northern cluster, the others were expected to accommodate mainly factories and industrial activities, with just a few residential and commercial areas. At the end of the decade, the Zhengzhou General Masterplan 1995-2010 was partially implemented with the building of the Zhengzhou Hight-tech Industrial Development Zone and the establishment of new factories in the southern cluster. Meanwhile, in the city centre, the old textile factories of the 1950s were progressively dismantled and their sites converted to commercial and residential uses (C. Zhang, 2007). All these transformations stimulated Zhengzhou investments in fixed assets that rose from 2,010 million CNY in 1990 to 15,940 million CNY in 2000, with investments in real estate increasing from 90 to 3,420 million CNY (Zhengzhou Municipal Statistics Bureau, 2018).

The economic trends resulting from urban entrepreneurialism in the nineties encouraged the local government to boost urban expansion. Moreover, because of national investments in infrastructure, beginning in the 2000s, the Zhengzhou municipality fostered urban development to become the main infrastructural hub of central China (F. Wu, 2015). In light of this, in 2000 the government relocated the military airport to the east side of the city, and commissioned the local planning institute to draft plans for a new town (Xue et al., 2013).<sup>47</sup> Since the result of the first planning activity was not satisfactory, in 2001, the governor of the Henan province



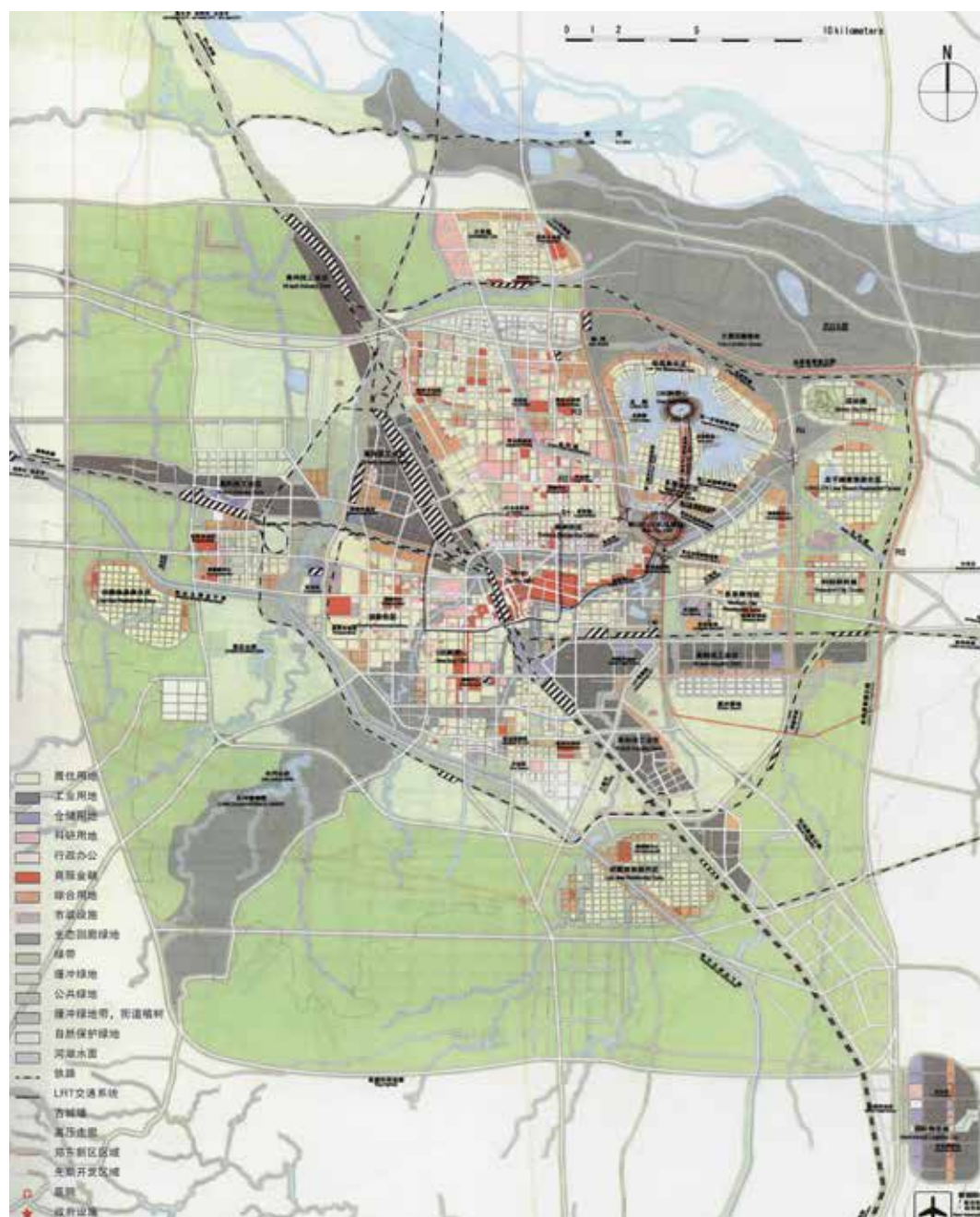


5.8. Zhengzhou General Masterplan 1995-2010, Zhengzhou Municipality, 1995



Li Keqiang (now Chinese prime minister) launched an international competition for planning the Zhengdong New District: a new town for one and a half million people centred around a Central Business District, technological parks and a high-speed railway station (K. Li et al., 2010b). The new town covers a 150-square-kilometre area located in two administrative districts to the east of Zhengzhou city centre.<sup>48</sup> It also includes the Zhengzhou Economic and Technological Development Zone established in 1993. In 2001, Zhengzhou occupied only 124 square kilometres and had 2.7 million inhabitants, but by urbanizing that area the city planned to double its territorial extension and to raise its population by more than a third. The architectural offices and urban planners involved in the international competition were: PWD Engineering Group (Singapore), Arte Charpentier (France), COX Group, SASAKI Corporation (Australia), Kisho Kurokawa Architects and Associates (Japan) and the China Academy of Urban Planning and Design (China) (K. Li et al., 2010b). Each of them was asked to draft a 'scheme' (i.e., a non-statutory plan) to be evaluated by a Chinese jury composed of the chief planner of the Ministry of Construction, academics, planners and professors in the field of urban architecture (Xue et al., 2013).

Kisho Kurokawa Architects and Associates won the competition proposing the creation of a 'symbiotic, metabolic and ecological city' (W. He & Zhang, 2007). The metabolist-style project attempted to create a rhizomatic urbanisation based on a poly-nuclear layout able to evolve in time by adding further nuclei **[fig. 5.9]**. Kurokawa proposed this solution in light of some of his previous architectural and urban projects, such as Hawaii Dreamland (1966), Housing Plan in Al-Sarir, Libya (1979-1984), Hishino New Town Plan (1967), Shonan Life Town in Fujisawa (1967) and, in particular, the New Tokyo Plan 2025 (1987) (Kurokawa, 1991, 2005; Xue et al., 2011). The poly-nuclear layout proposed for Zhengdong New District organizes the area into five clusters separated by 'ecological corridors' hosting the major mobility infrastructure (K. Li et al., 2010c). The main cluster (40 square kilometres) is located in the northwest part of the new town, hosting the main-CBD (south), the sub-CBD (north) and the majority of the residential areas **[figs. 5.10-5.11]**. Both the CBDs consist of a double ring of high-density buildings connected by a pedestrian, air-conditioned shopping street.<sup>49</sup> While the main-CBD (3 square kilometres) is a circle 1 kilometre in diameter nestled in a park separating it from the existing city **[fig. 5.12]**; the sub-CBD (1.5 square kilometres) is a round island of 0.7 kilometres diameter set in the middle of an artificial lake (whose name is Long Hu Lake). These two CBDs are connected by a 3.7-kilometre canal bordered on either side by buildings for commercial and tertiary activities, which represents the north-south axis of the new town. The land in the remaining portion of the main cluster is divided into lots using a regular grid envisaging low-density residential compounds. The second cluster extends over 50 square kilometres in the south-east portion of the area and it is bordered by existing road networks leading east from the city centre. The project envisaged that a new railway station be constructed here to separate the residential area to the north from the High-Tech Industry Area in the southern part of the lot (what was supposed to be the Zhengzhou Economic



5.9. Zhengdong New District in Zhengzhou City Plan, Kisho Kurokawa, 2001



**5.10.** *Superimposing the main cluster to the existing territorial configuration, Kisho Kurokawa, 2001*



and Technological Development Zone). The three remaining clusters are located along the east green belt and are occupied by a Sport City Cluster (north), the Long Zhi Lake Resort Residential Cluster (centre), and the Research City Cluster (south) (K. Li et al., 2010b, 2010c, 2010e, 2010d, 2010a). The plan also presents some morphological elements referring to traditional Chinese culture such as the artificial lake in the shape of a dragon, and the form of the CBDs rings connected by the central canal that resembles a *ruyi*, namely a talisman symbolizing power and good fortune (Gui, 2012). In 2002 the plan was awarded ‘best urban planning’ at the World Architects’ Congress in Berlin (Xue et al., 2013).

The implementation of the plan led to several changes to the original project. Although the relocation of the military airport avoided some problems of land collection and relocation, in the first phase of the realization, the new town suffered from a severe shortfall in funding. The administrative committee earned 1.05 billion CNY from airport land compensation and requested a 5.55 billion CNY loan from banks; together with other funds, it invested 18 billion CNY (Xue et al., 2013; Xue & Wang, 2010). However, by taking advantage of partnerships with banks and developers, local government managed to supply the basic infrastructure.<sup>50</sup> As a consequence, in August 2003 land prices in the Zhengdong New District were the highest in the Henan province, reaching a value of 4,000 CNY per square metre, and the local government began to earn huge profits from land leasing. During this phase Kurokawa designed the convention and exhibition centre and a pilot residential compound, while the urban design of the other clusters was assigned to other professionals. In fact, from 2002 to 2009 several Chinese design institutes began to work on the individual nuclei,<sup>51</sup> while international designers competed for the construction of buildings or parks (almost always in partnership with a constellation of state institutes and groups of local architects).<sup>52</sup> At the end of this process the main cluster and the layout of the two CBDs were the only parts that remained of the original project; all the other parts had repeatedly been modified.



**5.11.** View of the main cluster of Zhengdong New District, Kisho Kurokawa, 2001

The ‘ecological corridors’ were downsized, the south cluster was revamped to host the new high speed railway station, and the two clusters along the eastern green belt were redesigned by the Zhengzhou Urban Planning and Design Institute as a single nucleus where the University Park and Science and Technology Park is now located over an area of 22 square kilometres. Instead, the rest of the new town’s area was organized based on a grid layout. In 2010, three years after Kisho Kurokawa passed away, the Administrative Committee of Zhengdong New District entrusted the completion of the clusters to the architect Arata Isozaki, who is currently working on the sub-CBD and the eastern area of the main railway station.

Soon after the construction of the main-CBD, Zhengdong New District came to fame as one of the most notorious ghost towns in China in the international media and several reports.<sup>53</sup> In the same period, Kisho Kurokawa’s design was subjected to severe criticism for several reasons: in the first place, in relation to the water shortages caused by the extensive water system of the new town that overexploits the Yellow River’s capacity (Qin, 2009); then, concerning traffic problems and the non-human scale of the new urban environment (Gui, 2012). Despite this criticism, nowadays the new town is gaining momentum (Miller, 2012; Shepard, 2015). The main-CBD is home to 821 enterprises and more than 25,000 employers; the industrial and commercial activities of the Zhengzhou Economic and Technological Industry Zone provide work for more than 75,000 people; while the University Town hosts fifteen campuses accommodating more than 240,000 students (Henan Province Bureau of Statistics, 2018). In 2017, the Zhengdong New District absorbed 72,130 million CNY in investment in real estate, the highest value in the Henan province; and a gross output of construction<sup>54</sup> of 137,568 million CNY; more than the total sum of the other districts in the Zhengzhou municipality (Henan Province Bureau of Statistics, 2018). In spite of this, there are still doubts about the real success of the new town as the economic benefits seem to fall short of original predictions, and the development performance insufficient so that the project cannot rely only on the market (D. Zhao, 2013). Due to these conditions, in 2016, the Zhengzhou municipality decided to enlarge the area of Zhengdong New District by adding 110 square kilometres and building the so-called Baisha Town.



**5.12.** *Main CBD under construction, Zhengdong New District, unknown author, 2005*



Even though the Zhengdong New District is still under construction, since the mid-2000s, national policies have begun to change, in turn, affecting the methods employed in urbanizing new areas. Nowadays Zhengdong New District looks like the result of an outdated idea that considered the construction of new towns as a way to boost vast regions (Ramondetti, 2019). Within this framework, urban plans and iconic architecture are still tools to self-promote the city: ‘window displays’ prepared by important international architectural firms, reflecting the need to provide precise visions where every scale and every detail is meticulously controlled (and as a result extremely inflexible). In spite of this, even if Zhengdong New District looks like a monument that celebrates the apotheosis of urban entrepreneurialism policies, it also highlights some features which are still relevant in today’s Chinese urbanisation. Among them, the shift from urban growth based on industrial development to one based on the market economy. Therefore, since “the city is used as a fix to absorb [global] capital” (F. Wu, 2007a, p. 9) the entire urban space is treated as a commodity. This condition which became evident in the early 2000s, is still radically affecting the way the *physical space* is produced and perceived. There are two main philosophies. One is the adoption of international models in explaining Chinese urbanisation: this has led several scholars to considered Chinese cities as the results and the promoters of a mainstream westernized culture (Armstrong & McGee, 1985, p. 41). In adopting this position the *physical space* is nothing more than a *trivial space* composed of (distorted) replicas of international models (Bosker et al., 2013; Sklair, 2005). The second approach regards the Chinese city as a “specific site in which to examine global transformations” (Ren, 2011, p. 177), not only because of economic conditions but also in relation to the production of new *physical spaces*. In fact, Chinese cities could be considered as experimental sites in which an international design culture engages with the challenges of contemporary global society, just as Kisho Kurokawa (1991) considered Zhengdong New District as an opportunity to design a new urban environment for what he identified as the *Homo Movens* resulting from the globalization process.<sup>55</sup>



# Chapter 6

## Zhengbian. Spreading the urbanisation

From the mid-1990s, several negative consequences of the territorial competition and the urban entrepreneurialism began to show. Despite the central government adopting various measures in the late nineties to curtail land speculation, such as the establishment of the Ministry of Land and Resources and the enactment of the Land Administration Act, both in 1998, “the new management system has not achieved the expected results because of counter-measures at the bottom to resist central orders” (J. Xu & Yeh, 2009, p. 574). Hence, the resulting uneven urban development was causing great social and economic disparities among different areas of the country and segments of the population. To cope with these problems, from the beginning of the 2000s, the central government has taken various measures in order to reorganize land management and to promote regional patterns of urbanisation (F. Wu, 2015; J. Xu & Yeh, 2009). This new approach can be seen in the light of current international and domestic conditions, and it has three main objectives. First, to cope with the geographical and social disparities caused by the ‘global tsunami’ in progress since the opening-up (F. Wu, 2006b). Second, to restrict internal migration by developing backward regions (Chan, 2013; Miller, 2012). Third, to produce and redistribute wealth by boosting domestic consumption and internal demand (Garnaut et al., 2013; J. Y. Lin, 2011).

In order to achieve these objectives, in 2003, a new generation of leaders such as the president Hu Jintao and premier Wen Jiabao launched the so-called ‘scientific approach to development’. As distinct from the previous ‘growth-first approach’ adopted by Deng Xiaoping, the new strategy called for greater coordination between the main drivers of the urbanisation process (F. Wu, 2015, 2016b).<sup>56</sup> Hence, the ‘coordinated urbanisation’ already advocated in the tenth Five-Year Plan (2001-2005), became the cornerstone of the eleventh (2006-2010) which explicitly stipulated a “healthy and coordinated development of large medium, small cities



**6.1.** *View of Zhengbian New District, Zhengzhou Municipality, 2009*



and townships” (Fang & Yu, 2016, p. 92). As clarified by Hu Jintao in a speech on October 15, 2007 for the 17<sup>th</sup> Congress Report of the Communist Party, the ultimate goal of the coordinated and balanced approach is “[to] get larger cities to help smaller ones [...] [by] form[ing] urban agglomerations with mega cities as the core so that they can boost development in other areas and become new poles of economic growth” (Hu, 2011). Therefore, both the twelfth and thirteenth Five-Year Plans (2011-2021) encourage the adoption of an ‘hub-and-spoke’ model based on ‘urban agglomerations’ as the “ultimate spatial organisation for a coordinated development among large, medium and small cities and towns” (Fang & Yu, 2016, p. 92). Within the framework provided by these general policies, two initiatives have had the greatest impact on contemporary Chinese urbanisation: the adoption of national and regional planning activities, and the enactment of policies to develop rural areas such as the New Socialist Countryside program.

Nowadays, these two initiatives are reshaping large portions of Chinese landscape. On the one hand, by adopting a top-down approach, the national and regional planning sets the infrastructural layout, and establishes the basic guidelines for any future urbanisation. On the other hand, by promoting bottom-up initiatives, the New Socialist Countryside program is the main driver of the ongoing landscape transformations at lower levels. Thus, the urbanisation trend of the previous decades has changed radically. Instead of being centred on the major cities and their fringes, the new large-scale urban projects are carrying out a comprehensive process of territorial restructuring by organizing different settlements, collecting several planning programs and establishing the layout for the forthcoming urban development. Due to these initiatives, new infrastructure and amenities are being built everywhere, laying the foundation of ‘an available space’ which can be indiscriminately occupied by different programs, morphologies and urban materials (Sampieri, 2019). As a result, nowadays “when we look at the new map of China



**6.2.** *View of Zhengbian New District, Zhengzhou Municipality, 2009*

we will no longer see large independent cities functioning as singular urban entities, but a continuous amalgamation of interconnected urban zones that blanket the country” (Shepard, 2015, p. 87). By spreading all over the map of China, these interconnected urban zones are giving place to a “relational space [...] where every scale (and every space) is not an independent entity” (Governa, 2019, p. 224). A new territory in which the formal distinctions between urban and rural, city and countryside, global and local are increasingly blurred.

Since the final outcomes of these transformations are at present still unclear, several questions arise: what are the spatial implications of these policies? What are the features that characterize the emerging urbanisation? What will be the relationships between the new urbanities and the existing environment? Once more the urbanisation process occurring in the Central Plains of China is a case study of the effects of the ongoing territorial transformations. In fact, due to the establishment of the so-called ‘Central Plains urban agglomeration’, since 2006, several projects have been undertaken to foster an integrated and coordinated development between urban and rural areas, industrial, productive and cultural zones, and logistic and infrastructural facilities. In light of this, nowadays, the Central Plains can be considered as a specific viewpoint from which to inquire contemporary Chinese urbanisation.

Based on these considerations, this chapter is organized in three sections: the first examines the regional planning activities promoted in recent years by the central government and their spatial implications; the second discusses and problematizes the New Socialist Countryside program by focusing on landscape transformations resulting from this policy. Finally, the last part describes how these trends are affecting the process of urbanisation occurring in the Central Plains of China taking into consideration the case of Zhengbian New District **[figs. 6.1-6.2]**.

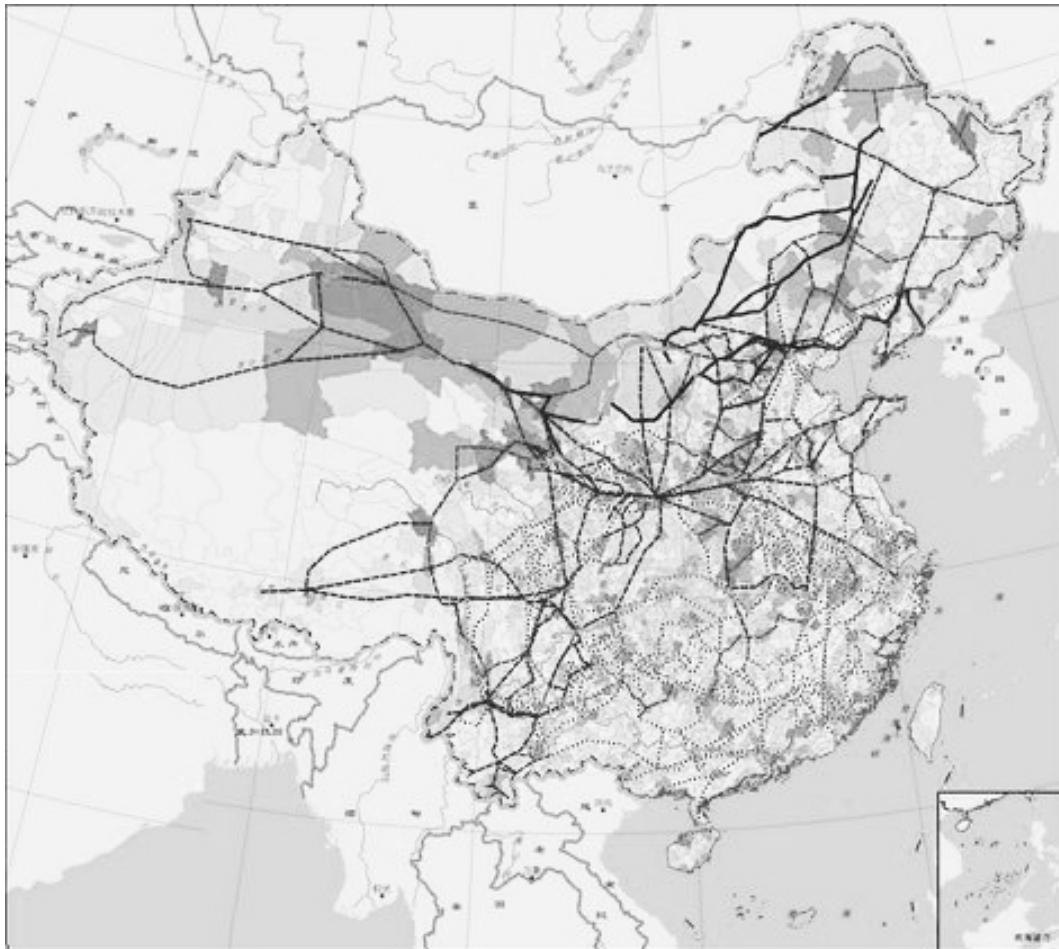




## 6.1. From Points to Fields

### Urbanising regions by fostering agglomerations

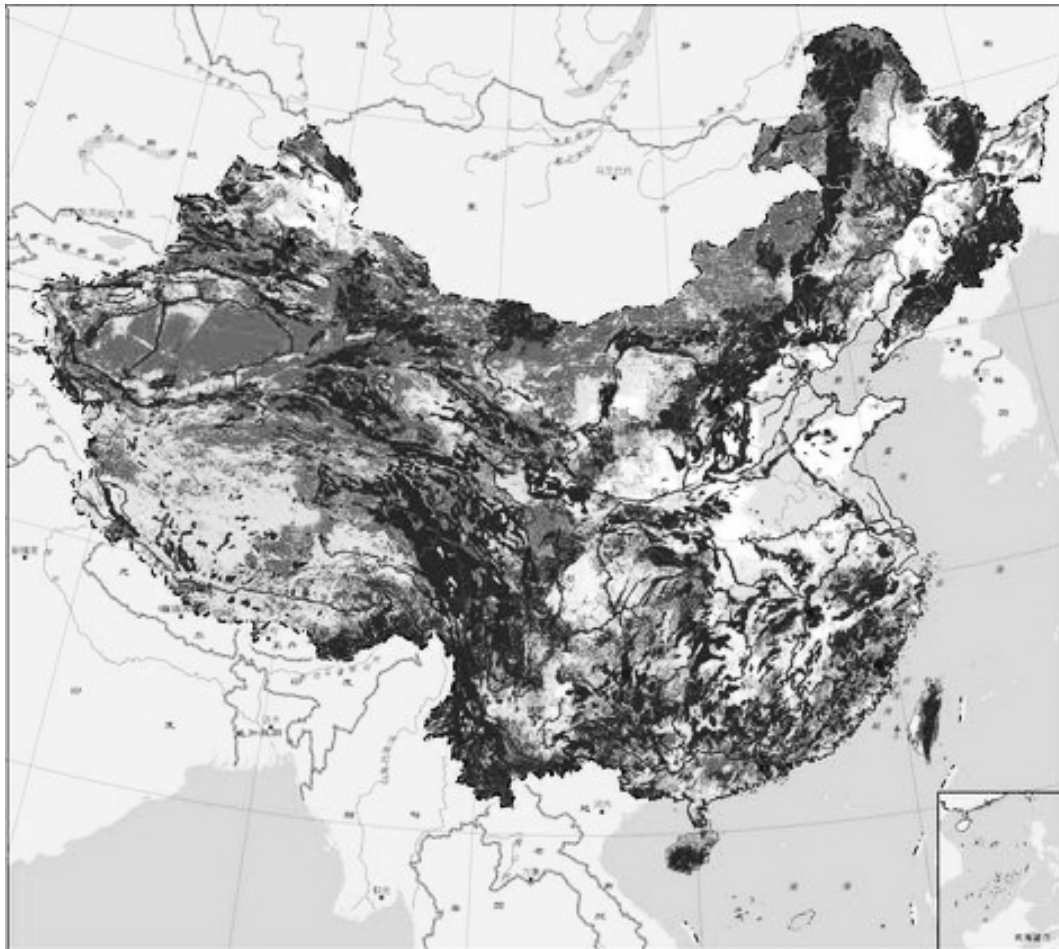
Since the mid-2000s, one of the major changes in urban policies has been the re-appearance of regional planning as an instrument for coordinated and integrated development of infrastructural networks and urban agglomerations [figs. 6.3-6.4-6.6]. Regional planning is not something new in China. Several planning policies at regional level were adopted during the socialist period; however, they mostly focused on economic aspects and resource allocation, with little regard for territorial conditions (Fan et al., 2012).<sup>57</sup> Only after the economic reform was a ‘territorial planning notion’ which took into account *physical spaces* and landscape elements introduced in the planning activities (F. Wu, 2015; Xiao, 2016).<sup>58</sup> Thus, several territorial plans at provincial, regional and national levels have been drafted, in particular under the guidance of the State Land Administration Bureau established by the State Council in 1986 (Yeh & Wu, 1996). In spite of this, beginning in the 1990s, an increasing downscaling of territorial governance, coupled with a process of economic devolution has progressively weakened the top-down system. Therefore, the drafting of territorial plans has ceased (F. Wu, 2015; Xiao, 2016; J. Xu & Yeh, 2009). Within this framework, planning activities have mostly been performed by the major municipalities in order to attract foreign and domestic investments by



6.3. Cultural protected areas, National Ecological Security Pattern Plan, Turenscape, 2007

self-promoting large-scale urban projects (F. Wu, 2015, 2016b). By considering urban planning as a marketing strategy, these ‘urban entrepreneurialism’ initiatives have fostered inter-city and inter-regional competitions that have brought several negative consequences such as the economic crisis of several municipalities, the growth of inequality between urban and rural areas and increased land consumption. As a measure to cope with this situation, since 2005, national and regional institutions have been promoting a process of governance upscaling centred on land policies (J. Xu & Yeh, 2009).<sup>59</sup> Thus, in recent years new planning activities adopt a more comprehensive approach to urban and economic development by fostering the creation of so-called ‘urban agglomerations’. Nowadays, these initiatives are gaining momentum, as they are considered the main instruments to address at least two main issues. First, they are expected to rebalance the economic and urban disparities caused by the ‘ladder-step approach’ and the urban entrepreneurialism initiatives of the previous decades (F. Wu, 2015, 2016b). Second, they seek to improve living conditions in less developed areas of the country so as to prevent migration from rural to urban areas, and from inland to coastal regions (Chan, 2013; Kanbur & Zhang, 1999; Kirkby, 1985).

The reappearance of regional planning activities happened in 2005, when the Ministry of Housing and Urban Rural Development (MOHURD) together with the



**6.4.** *Environmental protected areas, National Ecological Security Pattern Plan, Turenscape, 2007*

Chinese Academy of Urban Planning and Design (CAUPD) drafted the National Urban System Plan (2005-2020). The plan emphasized the role of the so-called ‘urban clusters’, namely large urban agglomerations evenly distributed within a comprehensive infrastructural system (F. Wu, 2015). However, because of the MOHURD’s lack of instruments for implementing regional level policies, the plan was published in 2010 without a statutory status (F. Wu, 2015).<sup>60</sup> In spite of this, in 2006, the State Council required the NDRC to prepare the National Main Functional Area Plan, which was drafted in collaboration with the Institute of Geographical Research of the Chinese Academy of Sciences (CAS) and published in 2010. The spatial layout of the National Main Functional Area Plan is similar to the one established by the National Urban System Plan (2005-2020). Essentially the layouts of both plans are based on the so-called ‘two horizontal, three vertical axes’ network of infrastructures, which is considered the backbone of the ‘axes link agglomerations, while agglomerations support axes’ strategy (Fang & Yu, 2016). Namely, the two horizontal axes are: the Yangtze River corridor, which connects Shanghai to Chengdu; and the so-called Eurasian Land Bridge, which links the Shandong peninsula to Urumqi, and then to central Asia. Among the vertical axes, two of them connect northern China and the Beijing-Tianjin-Hebei agglomeration (Jing-Jin-Ji Region) to the Pearl River Delta, one going through the coastal areas while the other crosses the inland regions. Finally, the last vertical axis links inner Mongolia to Yunnan province passing through the cities of Xi’an and Chongqing. Based on this infrastructural network, the National Main Functional Area Plan adopts a zoning based on ‘four main functional areas’: the ‘optimized development



**6.5.** *Splendid Central Plains* (detail), Li Fulai, Yan Yang, Li Wu, Zhou Fuxian, 2010

areas', 'prioritized development areas', the 'constrained development areas' and the 'forbidden development areas' (Fan et al., 2012; Fang & Yu, 2016).<sup>61</sup> The latter group includes the 'natural and cultural protection zones', which consist of minor cultural and natural spots spread all over the Chinese territory, coupled with large nature reserves sited in the western regions. The 'constrained development areas' are listed as 'key ecological function zones' and 'major food-production zones'. The former are mostly located in the western and the northern regions, while the latter are situated in the centre and the southern areas. The 'optimized development areas' are the three major national level agglomerations: the Yangtze River Delta, the Pearl River Delta and the Jing-Jin-Ji Region. Finally, the 'prioritized development areas' consist of seventeen other urban agglomerations located along the main infrastructural axes. Based on this layout, on March 16, 2014 the State Council approved the National Plan of New Urbanisation (2014-2020) (Jian Liu & Xu, 2019). The new plan classified the territory into six categories: 'urban agglomeration areas', 'major food producing areas', 'farming, forestry and animal husbandry areas', 'poverty contiguous areas', 'ethnic minority and autonomous regions', and 'national key ecological function regions' (Fang & Yu, 2016).<sup>62</sup> Regardless of the new classification, the New National Urbanisation Plan (2014-2020) is basically a blueprint for the National Urban System Plan (2005-2020). As with the previous one, the new plan promotes an infrastructural pattern spread all over the country in order to connect urban agglomerations, which are expected to be the main drivers of economic and urban development by absorbing 75 percent of newly added urbanities (Fang & Yu, 2016).

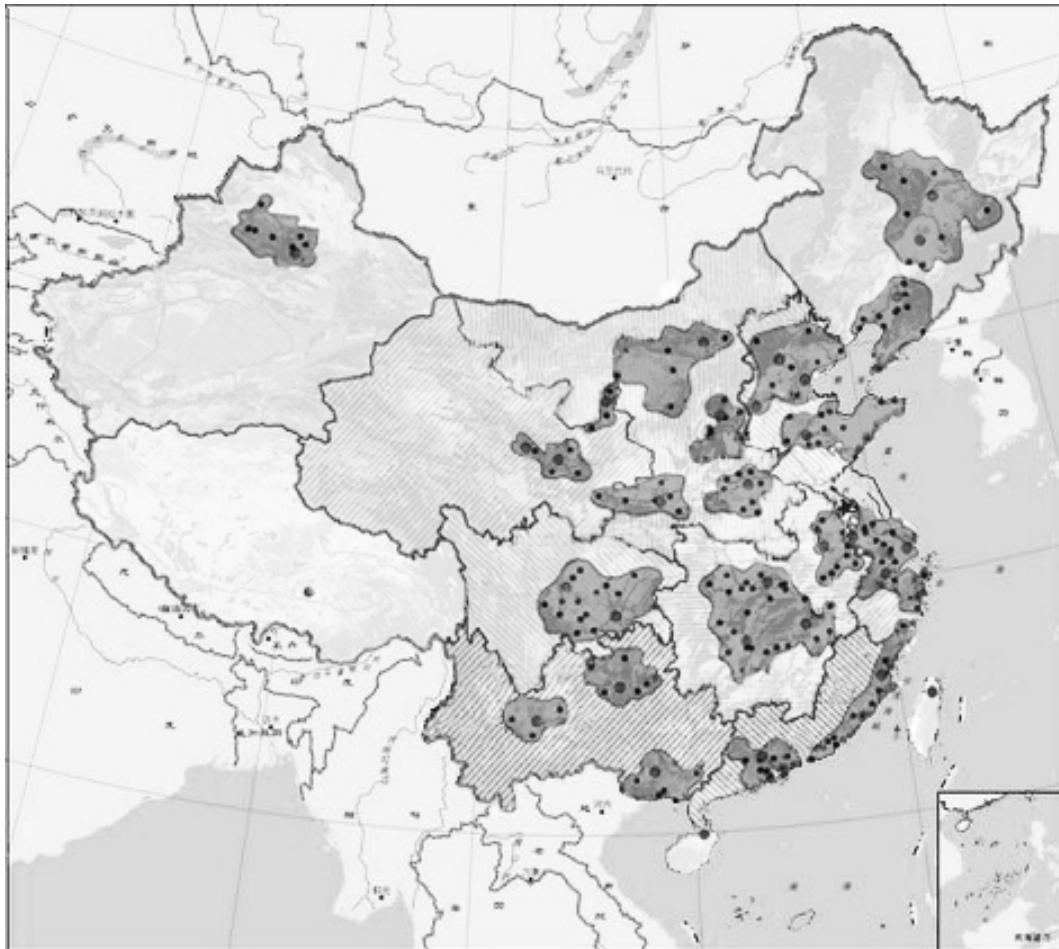


While the regional planning activities establish the overall layout and the general guidelines for the forthcoming urbanisation, several forces are acting to ground these initiatives. In fact, several large-scale urban projects which have been drafted within the framework provided by regional plans are now under construction. In particular since 2014, 106 new areas and new districts are under development. Among these, most of the national level new areas are located in coastal and western regions,<sup>63</sup> while central China hosts the majority of new municipal and provincial districts (Fang & Yu, 2016).<sup>64</sup> Moreover, also new infrastructural policies such as the Belt and Road Initiative (BRI) and the Go West program are promoting new forms of urbanity (Berta & Frassoldati, 2019; Lai, 2002). ‘Development zones’ or ‘free trade zones’ have been established in the western provinces (for instance Kasghar or Khorgos Economic Development Zone), ‘airport cities’ are under construction in the central regions (such as Zhengzhou International Airport City or Chengdu Tianfu International Airport), and ‘port-cities’ are being built in the underdeveloped coastal areas (such as Dalian or Fuzhou Port City) (H. Liu et al., 2015).

Even if the territorial governance and the land leasing system remain unchanged, new districts and new areas promoted in the last decade are different from the so-called ‘mega-urban projects’ developed by municipalities under the impetus of urban entrepreneurialism. Unlike previous attempts, which sought to promote specific sites, since the mid-2000s, new projects attempt to reorganize large portions of Chinese territory including different administrative areas characterized by multiple spatial features. This new comprehensive approach has been adopted for two main reasons. First, territorial planning is now considered by different stakeholders as one of the main instruments to negotiate the future landscape transformations. In fact, since the 2000s, several ‘soft institutions’ (such as regional associations, city-region governance and majors’ forum) have appeared in order to enhance coordination among several territorial actors and different levels of governance (F. Wu, 2015, 2016b; J. Xu & Yeh, 2009).<sup>65</sup> These institutions are considered ‘soft’ due to the impossibility of establishing a specific administrative status, so they do not correspond to an official level of governance (such as regions and provinces, or municipalities and counties).<sup>66</sup> As a result, the foundation and the coordination of these initiatives is mainly related to planning activities. Therefore, plans are now considered as instruments able to define “the ‘new state space’ [which] is a ‘soft’ space built up not by jurisdictional boundaries, but rather by being bound by the spatial plan” (F. Wu, 2015, p. 134). Apart from that, a second practical reason for adopting a comprehensive approach in territorial planning is the enormous dimensions of the new districts and the new areas under development. In fact, among the 106 new urbanisation currently under construction, two-thirds of them are larger than 100 square kilometres, and, of these, 19 are larger than 1,000 square kilometres each (Fang & Yu, 2016). Due to the heterogeneity of spatial features within each site, new urban projects are not only supposed to enlarge existing cities or to create new ones, but also to accommodate both new urban and rural areas, as well as to organize logistic and industrial zones, amenities, farmland and natural resources.



In conclusion, the planning strategies drawn up over the last decade by central and provincial governments have fostered the construction of a widespread infrastructural network while promoting territorially comprehensive projects that embrace most of the Chinese territory. As a result, nowadays new urban agglomerations host 63 percent of Chinese population, while accounting for more than 25 percent of Chinese territory and 64 percent of Chinese cities (Fang & Yu, 2016). Within this framework, while “differentiated regional policy targets strategic areas and zones of exception [still persist]” (F. Wu, 2015, pp. 140–141), the regional planning activities are acting in order to ensure the same living conditions and opportunities by fostering the spread of industries, amenities, infrastructures and cultural facilities throughout the country. Hence, Chinese territories appear as a homogeneous and integrated landscape, radically different from that of the previous decades. In fact, while the urban entrepreneurialism policies have given rise to a network of a few cities competing with one another, nowadays the network intensifies, cities increase in number, and the points on the map become clumps which include most of the Chinese territory.



**6.6.** *China Urban Agglomeration New Spatial Pattern*, Chuanglin Fang and Danlin Yu, 2016

## 6.2. No Space Behind

### The urbanisation of the rural areas

While regional planning activities and urban agglomeration policies are reshaping Chinese territory based on a large-scale approach, several initiatives have been undertaken at lower local levels. Even if the construction of new towns, new districts and economic zones continues, other bottom-up urbanisation processes are gaining momentum. Among them, the most relevant are current urban policies which invest in the countryside as the new frontier for boosting urban and economic development. The rural-urban divide that characterized China is a cause for concern to central and local government, as it is considered mostly “responsible for the broadest form of social inequalities” (Lee, 2016b, p. 211) [fig. 6.7]. Statistical data report that since the early 2000s the gap between the incomes of urban and rural citizens has constantly increased, and, in 2005, urban income was 3.2 times higher (National Bureau of Statistics of China, 2017).<sup>67</sup> Several surveys conducted in that period document the high level of social inequality between rural and urban residents, in particular, related to medical care and education (Y. Li & Hu, 2015; Ye, 2009).<sup>68</sup> Moreover, in the early 2000s, the central government officially voiced its concern for the so-called ‘three agricultural problems’: “decline in agricultural output, deterioration of rural villages, and destitution of peasants” (Hsing, 2010, p. 100). For all these reasons, “the widening gap between urban and rural areas is no longer just an economic issue, but has become a politically charged matter as well” (Su, 2009, p. 133).



**6.7.** *Qiliying Brigade, Xinxiang County, Zhao Bonian, 1960 ca*

To address this situation in recent years several initiatives have been adopted by Chinese administration. For instance, since 2003 a guaranteed minimum procurement price for several agricultural products has been established by the government,<sup>69</sup> most agricultural taxes have been abolished,<sup>70</sup> and numerous subsidies have been established for rural areas (Lee, 2016a; Su, 2009; Ye, 2009).<sup>71</sup> Coupled with these economic measures, in 2006, the New Socialist Countryside program was launched by China's leaders Hu Jintao and Wen Jiabao to reorganize rural areas and create a new living environment for rural citizens. The main objectives of the New Socialist Countryside program are: to provide amenities in rural areas, to preserve agricultural land, to guarantee secure food production, to reverse migration from the countryside to the cities, and to boost domestic consumption (Lee, 2016a; Su, 2009; Williams, 2017; F. Wu, 2015). As a starting point, based on Wen Jiabao's assumption (2006) that "in order to build a new socialist countryside, we must accelerate development of rural infrastructure", several initiatives have been undertaken to improve the water supply system, the electrical power grid and the road network in rural areas (Ye, 2009).<sup>72</sup> Even though these initiatives have been promoted at the national level, their implementation has been the task of local governments, in particular, thanks to the City and Countryside Planning Act approved in 2008. In fact, the act extends to the countryside the planning practices already applied by the municipal institutions in urban areas.<sup>73</sup> Consequently, since 2008, "villages are subject to two kinds of coordinated planning: first, each is required to produce a long-term master plan setting out land use, functional zoning, infrastructure provision, transport development, and environmental protection within its territory for the following 20 years; and second, each becomes subject to 'strategic' regional plans developed at higher government levels" (Bray, 2013, p. 56). Within this framework the 'long-term masterplans' (which are developed by the design institutes of major municipalities) generally promote two different approaches for improving the living conditions of country dwellers. One strategy foresees redeveloping the existing villages by improving the basic sanitation systems and energy infrastructures (such as sewers and electricity), as well as by integrating cultural and economic amenities (such as schools, markets and entertainment halls) (Bray, 2013; Lee, 2016a; Su, 2009). The other consists of demolishing the old settlements and relocating the villagers to the so-called 'new agricultural towns' (Lee, 2016a). In both cases planners and administrative local cadres act in order to reduce land consumption by decreasing the total footprint occupied by villages. In fact, while the first approach promotes the densification of the existing settlements by substituting part of the housing stock with high-rise buildings,<sup>74</sup> the second attempts to replace several villages with one denser 'agricultural town'.<sup>75</sup> Hence, both solutions reduce the amount of land used for residential purposes. Thus, municipalities save 'land quotas' that can be redistributed in other locations.<sup>76</sup> At that point the system of 'strategic plans' such as the 'town and village location plan' at the lower jurisdictional level, or the 'urban system plan' at provincial level is called upon to manage the allocation of the new urban development areas (Bray, 2013). These plans can be considered as the lower tiers of the comprehensive planning activities of large-scale urban projects.

The New Socialist Countryside program has come in for criticism. Due to the practice of collecting land quotas from rural area and relocating them in large-scale urban projects, several scholars such as Fulong Wu (2015), Jiang Xu and Anthony Yeh (2009) argue that the ‘urban entrepreneurialism’ employed during the nineties is still persisting, and the New Socialist Countryside is just an alibi to cannibalize rural areas for urban development purposes. In particular, referring to the City and Countryside Planning Act, Fulong Wu (2015) claims that “[although] the effort to increase the coverage of planning did help to give more consideration to infrastructure development and public services in rural area, [...] it reflects the interest of local government in the ‘new’ land resources in the countryside [especially in terms of land quotas]” (F. Wu, 2015, p. 58). There is no doubt that prefectures and municipalities still play a key-role in urban development since they are the ones responsible for managing large-scale territorial plans and the territorial distribution of land quotas. However, the coordinated planning activities promoted by the New Socialist Countryside program also contains some advantages for rural areas. Above all, they are improving territorial cohesion by overcoming the formal distinction between city and countryside (Lee, 2016a). In fact, the new agricultural landscape resulting from planning activities not only hosts new amenities, facilities, and services, but it contributes to develop a capillary network of roads, sewages, and other infrastructures. This dense integrated network permits a high degree of mobility. As a result, within the urban agglomerations, every space is easy to reach regardless of whether inhabitants live in rural or urban areas. Moreover, as part of urban agglomerations, even small settlements, such as the new agricultural towns, are directly linked to national and international systems thanks to their proximity to international airports, new highspeed railway stations and development zones located in the neighbouring areas. Therefore, in light to this process of ‘townization’ (Rowe & Kan, 2016; D. Yang, 2014), “China is transitioning from being a geographically lop-sided country with a few massive, rich cities in the east to being one with major population centres evenly dispersed across the land” (Shepard, 2015, p. 47). Thus, nowadays, it is possible to rethink “the countryside as a city” (Lee, 2016b), a condition which is well represented in renderings produced by design institutes to promote the new agricultural towns **[figs. 6.8-6.9]**. These show villagers driving luxury cars to reach their own suburban-style villas, or ‘new peasants’ dressed up in fine clothes while shopping in a supermarket branded by some of the most famous international firms. Even if these images do not fit the current reality, they demonstrate the effort in rethinking the urbanisation of rural China in order to leave no man and no space behind.



**6.8.** *View of Tushan New Agricultural Town, Zhengzhou, Zhengzhou Architectural Design Institute, 2013*



**6.9.** *View of Tushan New Agricultural Town, Zhengzhou, Zhengzhou Architectural Design Institute, 2013*



### 6.3. Zhengbian New District

#### Spreading the urbanisation

Although the Zhengdong New District was still under construction in 2005, national policies began to change, in turn affecting the methods employed in urbanizing new areas. In contrast to the urban entrepreneurialism of the previous decades, the current urban agglomeration policies are promoting a widespread urbanisation by coordinating minor centres and major cities. In this framework Zhengzhou becomes important given its role as the capital of the Central Plains urban agglomeration, also known as the Zhongyuan City Group. The Central Plains urban agglomeration is a ‘regional level agglomeration’ made up of nine prefecture-level cities (Zhengzhou, Luoyang, Kaifeng, Xinxian, Jiaozuo, Xuchang, Pingdingshan, Luohe, and Jiyuan), 23 cities and 413 townships (Fang & Yu, 2016). It has an area of 58,400 square kilometres, accounting for 3.06 percent of China’s GDP and is home to 45.5 million inhabitants of which 30 percent (13.7 million) is considered ‘urban population’ (Fang & Yu, 2016). In order to support the territorial integration within the urban agglomeration, provincial government and municipalities adopted a development strategy based on three points: the creation of the major integrated infrastructure and logistic hub of central China; the promotion of coordinated development between industrialization, urbanisation and agricultural production; and the development of a tourism industry related to the historical sites (Fang & Yu, 2016; Xuefeng Wang et al., 2013).

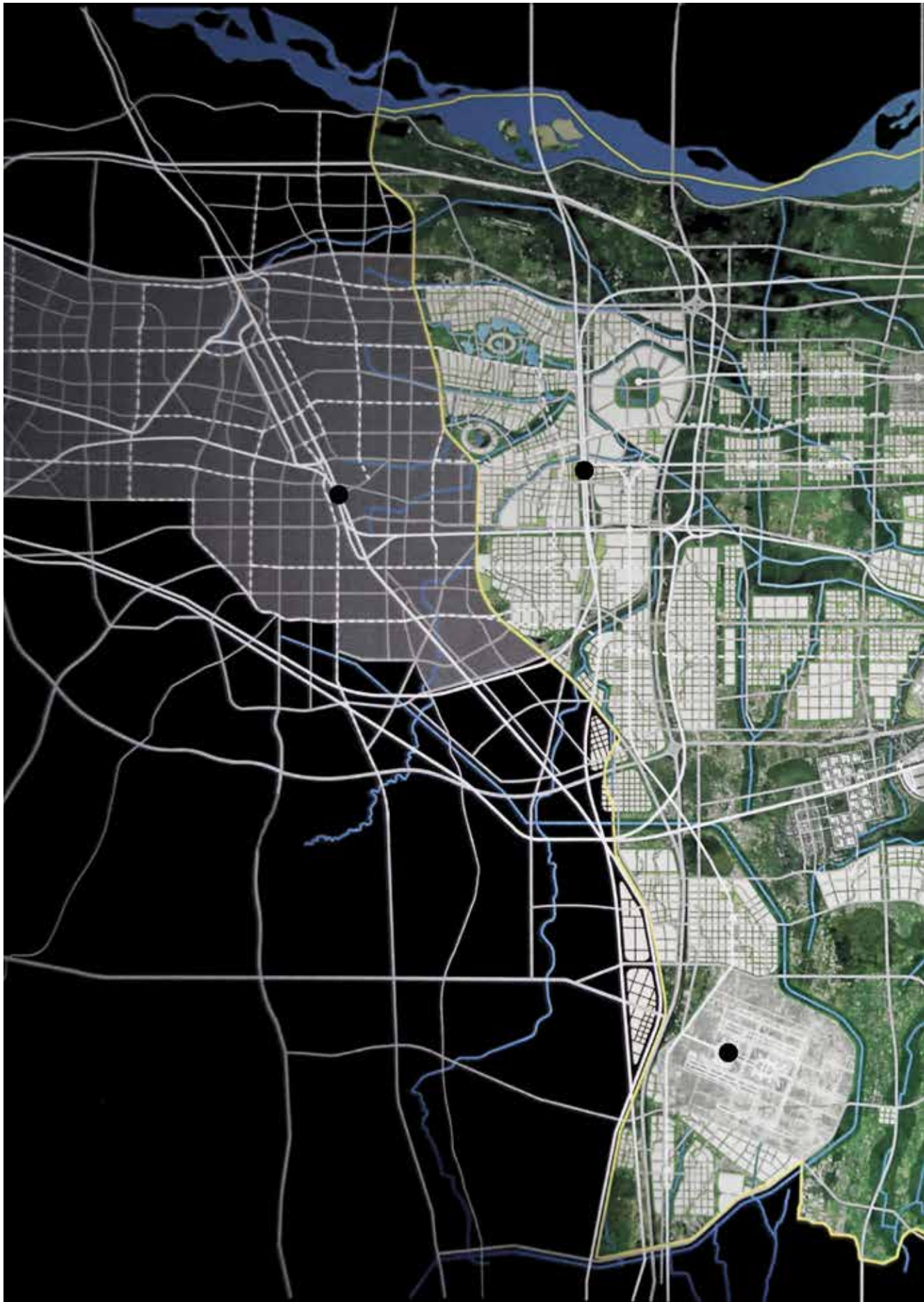
In light of this strategy, in 2005, the municipality of Zhengzhou engaged in numerous planning initiatives such as the design of the Zhengzhou Integrated Transportation Hub (which includes the new high speed railway station, new dedicated railway lines and a highway logistic hub), the Zhengzhou Airport Economic Zone, and the Zhengzhou-Kaifeng Industrial Belt (K. Li et al., 2010a) [fig. 6.10].<sup>77</sup> Although these projects had initially been developed within the framework of the planning activities for Zhengdong New District, in 2006, the Zhongyuan City Group



**6.10.** Zhengzhou-Kaifeng Industrial Belt Scheme, China Urban Planning Association, 2005

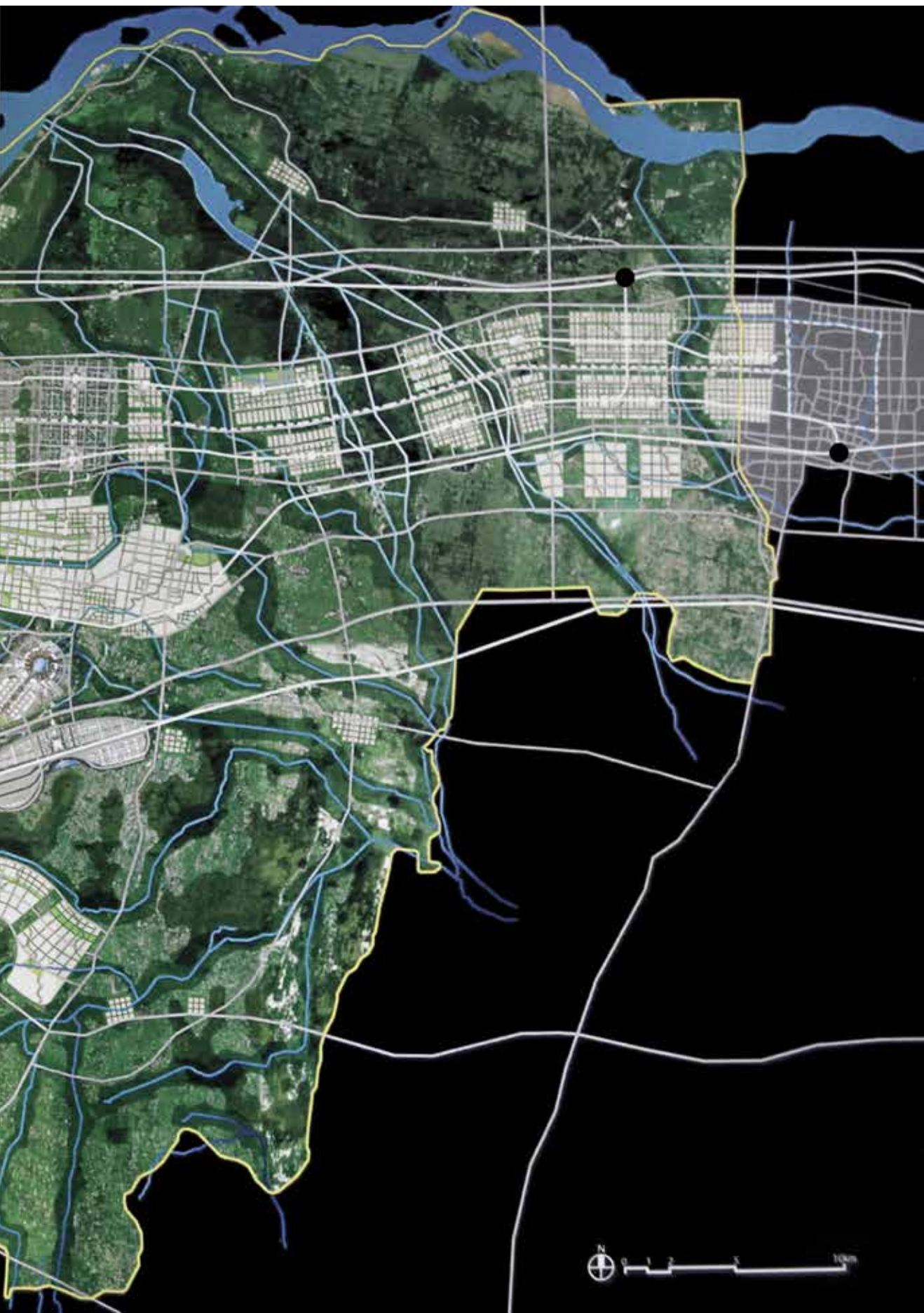
and the government of the Henan province decided to gather all these projects into a comprehensive program of urbanisation by promoting the creation of Zhengbian New District. The new district covers an area of 2,100 square kilometres between the cities of Zhengzhou and Kaifeng, that are currently populated by four and a half million inhabitants, of which four in the Zhengzhou municipality (Jinshui and Guancheng Districts, Xinzheng City and Zhongmu County) and the remainder in the Kaifeng jurisdiction (Longting District). The main core of the Zhengbian New District is a linear urbanisation along a new infrastructural corridor that connects the two cities (ARUP Engineering Consulting Company et al., 2009, 2010; Xu-sheng Wang, 2007; Zhengzhou Municipality, 2009). In 2008, the new district was included in the Henan Province Urban System Planning (Xuefeng Wang et al., 2013), and in the following year an international competition was launched for its design. The competition was won by the London studio Arup with a project entitled Planning for Low-Carbon Urban System: the Zhengbian New District Plan, which in 2010 was awarded a prize by the International Society of Cities and Regional Planners (ISOCARP).<sup>78</sup> In the same year, the project was included in the Regional Strategic Plan of the Central China Economic Region, in turn part of the National Main Functional Area Plan published by NDRC in 2010 (F. Wu, 2015).

The design adopted is radically different from the Zhengdong New District; Zhengbian is a series of localized projects united in a big, sprawling shape [fig. 6.11]. The proposal by ARUP planned to develop 500 square kilometres (24 percent of the total area), while the remaining 1,600 square kilometres would be devoted to open spaces, agriculture areas, green zones and leisure activities. Half of the urbanised area is planned for residential use (230 square kilometres), while the remaining part is home to several functions, such as industry (72 square kilometres) and logistic infrastructure (50 square kilometres) (Zhengzhou Municipality, 2009). The plan organizes the territory based of two axes: an east-west urban development axis located in between two environmental bands, and a north-south industrial axis (ARUP Engineering Consulting Company et al., 2009, 2010). The east-west axis, which connects the city centres of Zhengzhou and Kaifeng, is the core area of the forthcoming development. It is an eighty-kilometre long linear city composed of the Kaifeng New Area and the Zhengdong New District as eastern and western CBDs, an Innovative and Creative Zone which includes both the Henan University Town and the logistic hub of Zhengdong New District, and a Community and Development Zone organized in four main clusters [fig. 6.12]. The backbone of this urbanisation is an infrastructural corridor made up of two highways<sup>79</sup> and three railway lines [fig. 6.13].<sup>80</sup> The urban layout of each cluster is a grid of four-lane roads, in which the industrial zones are in the southern part, while commercial, administrative and cultural activities are in the centres. This east-west axis is sited in between two ecological areas. The northern belt, called the Recreation and Resort Zone, is an environmental buffer along the southern bank of the Yellow River which is dedicated to leisure activities, luxury compounds and agricultural areas. The other ecological area is located on the south-east border of Zhongmu County, from the international airport to the southern part of the Kaifeng New Area. This territory



**6.11.** *Zhengbian New District Plan*, Arup and Zhengzhou Municipality, 2009





is planned as a New Agricultural Zone, including both new agricultural towns and industries related to agricultural production. Perpendicularly to the east-west urban corridor, the industrial axis runs north-south along the Jingzhu Expressway and the S1 Airport Highway. By spreading over the western border of Zhengbian, this axis will connect Zhengdong New District (north) to Zhengzhou Airport City (south). Within this general framework provided by ARUP's plan, since 2006 several detailed plans have been developed for each area.<sup>81</sup>

Although during the first stage of development, the north-south axis was considered a side project compared to the main east-west urban corridor between Zhengzhou and Kaifeng, over the last five years it has become increasingly important. In fact, in 2014, the Henan province drafted the Zhengzhou Airport Economic Comprehensive Experimental Zone Development Plan (2014-2040)<sup>82</sup> that was officially approved by the State Council in 2016 (Xuefeng Wang et al., 2013). In the same year, the Zhengzhou Airport Economic Zone became the first airport zone to be included in the national development strategy, as the thirteenth Five Year Plan (2016-2020) explicitly pointed out the necessity “[to] accelerate the development of the Zhengzhou Airport Economic Zone [...] [in order to]



**6.12.** *View of Zhengbian New District, Zhengzhou Municipality, 2009*



support the development of an open, inland economy [capable of supporting] the rise of the central region” (Central Committee of the Communist Party of China, 2016, p. 106). As a result, while the first drafts of the Zhengbian New District plan foresaw an urbanised area of 100 square kilometres,<sup>83</sup> nowadays, the area of the Airport Economic Zone is 415 square kilometres (Kasarda, 2018; Xuefeng Wang et al., 2013; Zhengzhou Municipal Bureau of Urban and Rural Planning, 2018).<sup>84</sup> The urban layout promoted by the Zhengzhou Airport Economic Comprehensive Experimental Zone Development Plan (2014-2040) is a radial grid pattern centred on the airport and expanding to the east [figs. 6.14-6.15]. The plan organizes the area in three parts: the Urban Comprehensive Services Area (north) which is home to the majority of services, cultural activities and residential areas; the High-End Manufacture Area (south) planned to accommodate industries; and the Henan Free Trade Zone (centre) which covers an area of 40.6 square kilometres (Zhengzhou Municipal Bureau of Urban and Rural Planning, 2018). Hence, this ‘aerotropolis’ is to be a huge integrated infrastructural hub which not only includes the airport, but also a high-speed railway station, intercity railways, subways, expressways and logistic areas for freight transport and allocation (Kasarda, 2018, 2019). Due to the increasing importance of this logistic pole, nowadays, the Zhengbian New District



**6.13.** *View of Zhengbian New District, Zhengzhou Municipality, 2009*

is considered a starting point to promote the rise of the so-called ‘growth triangle of the Central Plains’ which not only includes the cities of Zhengzhou and Kaifeng, but also Xuchang, a city located 60 kilometres south of Zhengzhou which is the fourth largest economy in Henan province (Xuefeng Wang et al., 2013).

While the planning activities for Zhengbian New District continue, since 2010, this new development is gradually taking shape. Nowadays the infrastructural corridor between Zhengzhou and Kaifeng is complete, as well as the infrastructural grids of Zhengdong and Kaifeng New Districts and Baisha New Town (the three main nuclei of the east-west axis). Meanwhile, in just two years, between 2013 and 2015, the second terminal of the international airport was built, and it is expected to handle 70 million passengers and 5 million tons of cargo per year by 2030 (more



**6.14.** *Zhengzhou Airport Economic Zone Plan*, China Urban Planning and Design Institute, 2014



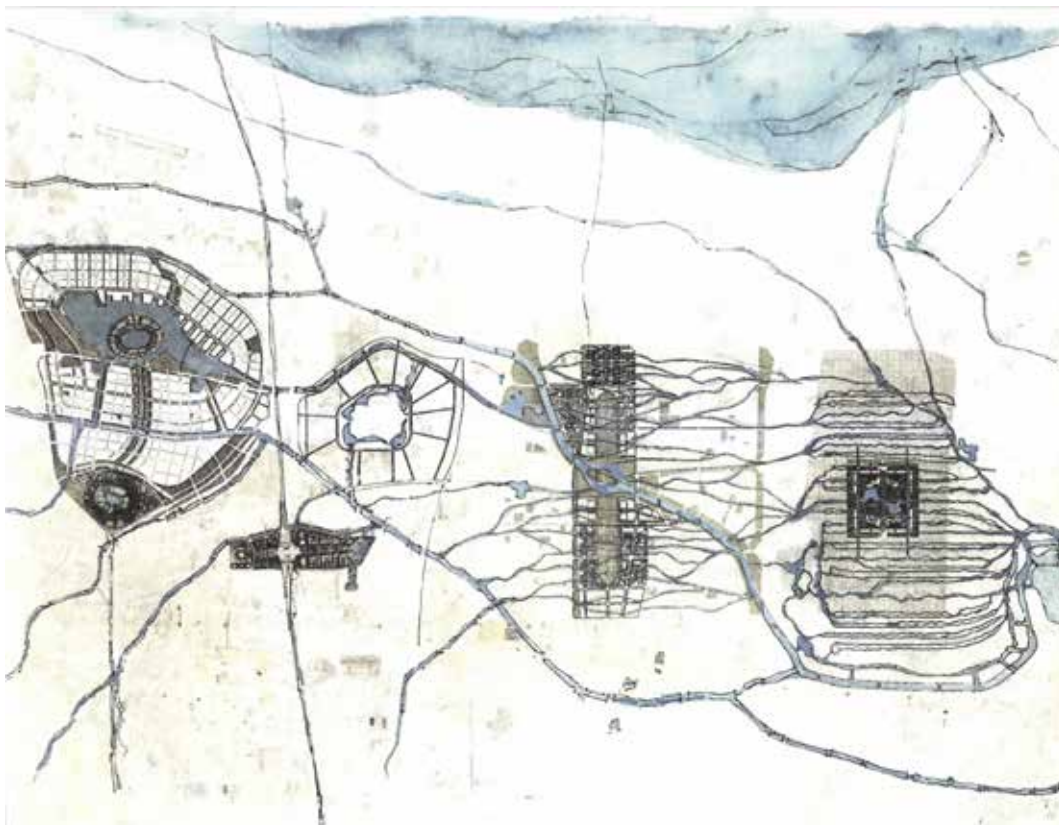
than Heathrow-London airport) (Kasarda, 2018; The Economist, 2015; Williams, 2017). In the meantime, multiple factories have been located in the industrial cluster south of Zhengdong; and the logistic hubs are expanding east and north. Moreover, alongside the transformations related to the large-scale urban nuclei, a multitude of minor projects are changing the territory of Zhengbian New District. In the last five years more than three hundred villages have been demolished, and more than one hundred new agricultural towns are currently under construction.<sup>85</sup> These new settlements are planned by several design institutes in Zhengzhou and Kaifeng to accommodate between 3,000 to 5,000 inhabitants each (Lee, 2016a). The urban layout commonly adopted is based on organic grids of dead-end roads which accommodate rows of semi-detached villas: the size is normally between 150 and 280 square metres. Public areas are located at the centre of each settlement, which is also home to commercial activities and the main institutional buildings (such as the town hall, the hospital and the schools). Like, urban and suburban compounds, new agricultural towns present clear boundaries, and they are usually enclosed by walls with monitored gates. Besides these settlements, the farming landscape is also being reshaped by the establishment of experimental zones for modern agriculture and new agricultural parks. Finally, to ensure cohesion between the new agricultural landscape and the large-scale development areas, a capillary network of parks, canals, public areas, scenic spots and leisure facilities is enveloping the whole territory of Zhengbian New District.

In conclusion, due to the multiple urban projects and the radical territorial transformations currently underway in this area, the Zhengbian New District offers a peculiar viewpoint with which to investigate the urbanisation process affecting the Central Plains of China. However, Zhengbian is not a unique case, for a decade, the government of Henan province has been the main promoter of a widespread urbanisation based on the construction of new districts. In just three years, from 2010 to 2013, fourteen new provincial districts have been approved, and the Henan



**6.15.** *View of Zhengzhou Airport Economic Zone, Beijing Tsinghua Planning and Design Institute, 2014*

province now counts sixteen new districts (over 40 percent of the national total) which occupy a total land area of 4,902 square kilometres (Fang & Yu, 2016).<sup>86</sup> The rise of multiple districts is the result of agglomeration policies which are defining the shift from a ‘centripetal urbanisation’ to a ‘centrifugal urbanisation’ in relation to the gradual regionalization of forms of economic competition, as “the monomer (enterprise) competition gradually evolved into a regional competition” (Xu-sheng Wang, 2007, p. 2). Hence, while in 2015 the Zhengbian New District was still considered an example of how “urban entrepreneurialism became hegemonic in so-called socialist countryside planning” (F. Wu, 2015, p. 79), today it appears to primarily represent new policies which not only and no longer invest in the creation of strong polarities, but attempt to redesign more plastic and pervasive spaces (Ramondetti, 2019). In particular, through the numerous projects under construction, the case of Zhengbian emphasizes this slippage. In contrast to the holistic approach of the Zhengdong planning activities, the plans for Zhengbian are currently indistinct tools, capable of containing everything: industrial districts, eco-cities, central business districts, agricultural towns, large stretches of countryside, and major infrastructure and logistic areas. Hence, the multitude of projects drafted for Zhengbian are giving shape to a loose, deformable space (Ramondetti, 2019). In fact, since “the program [...] does not function in terms of morphological constructions” (Governa & Sampieri, 2019, p. 10), urban forms and spatial layouts are simplified to “dynamic surface[s] [...] [that] change according to the demand and opportunity” (Sampieri, 2019, p. 210). This condition has been well interpreted



**6.16.** *Solaris*, Arata Isozaki, 2012



by the Pritzker award winning architect Arata Isozaki,<sup>87</sup> who recently compared the urbanisation occurring in Zhengbian to the planet described by Stanisław Lem in his novel *Solaris* (1961): a sensitive entity in the form of a liquid surface that generates complex and precarious structures (Isozaki & Administrative Committee of Zhengdong New District, 2012) [figs. 6.16-6.17]. Within this context, the relationships that these new rhizomatic and polymorphic urbanisations will establish with existing cities, villages, new towns, infrastructural spaces and other environmental elements are extremely important vis-à-vis the new urbanisation pattern of the Central Plains: how and to what extent these relationships will be localized, fragmented or continuous.



**6.17.** *Sub-CBD of Zhengdong New District model (detail), October 10<sup>th</sup> 2017, © Samuele Pellecchia*

## Notes

- 1** According to Xuefei Ren (2013) this condition was related to three factors. First, Chinese cities lacked of political autonomy, therefore none of them compete to have a predominate role within the country. Second, the major importance of their political and administrative role compare to the commercial activities in organizing social life and shaping urban space. Third, at that time China was characterized by a lack of a rigid division between urban and rural areas due to a strong connection related to cross-regional trades and population movements.
- 2** For instance: American architect Herry Murphis, who designed the plan for the capital of Nanjing in 1930; the American planner Heinrich Schubart, who drafted a plan for the ‘canal city’ of Hangzhou; or the American planner Norman Gordon, who collaborated in drafting the Chongqing Satellite City (Busquets & Yang, 2017; Cody, 1996; Lu, 2006).
- 3** See for instance the plans of that period for Hangzhou, Nanjing, Tianjin and Zhengzhou (Busquets & Yang, 2017, 2019; Cody, 1996; Liang, 2014; F. Wu, 2015).
- 4** According to Fulong Wu (2015) in 1949 only 4 percent of Chinese population was employed in the secondary sector, and this condition was hardly criticized by the Cominter and the Soviet Union which called on China to foster the development of the industrial sector.
- 5** For more details on the planning activities during the socialist period in Beijing and Shanghai See Samuel Y. Liang (2014), and Fulong Wu (2015); in Luoyang see Mei-Ling Hsu (1996); and in Zhengzhou see Joan Busquets and Yang Dingliang (2019).
- 6** The administrative definition of cities in Chinese context has changed in time, and city is primary a status designated by the government. For more details on this topic see Richard J. R. Kirkby (1985), L. Zhang and Simon X. B. Zhao (1998), and Laurence J.C. Ma (2005).
- 7** Apart from the well-know Dazhai People’s Commune (Shanxi) celebrated as an exemplary case by Mao in 1964, other examples of communes planned in that period are: the Dongfanghong People’s Commune (Beijing) designed by the Beijing Department of Urban Planning; the Xianfeng Agricultural Cooperative (Shanghai) designed by the Tongji University; the Xiaozhan People’s Commune (Tianjin) Designed by the Tianjin University; the Qiyi People’s Commune (Shanghai) designed by the Shanghai Municipal Institute of Civil Architectural Design; the Gongzhuang People’s Commune (Guangdong) designed by the Architectural Design and Research Institute of Guangdong; the Suicheng People’s Commune (Hebei) designed by the Hebei Construction Group; the Weixing People’s Commune (Henan) designed by the South China University of Technology; the Fanyu People’s Commune (Guangdong) designed by the South China University of Technology; the Caoyang People’s Commune (Shanghai) designed by the Shanghai Department of Urban Devepolment; the Jinyangxiang People’s Commune, Gansu designed by

the Gansu Construction and Investment Group; the Hongqi People's Commune, Shanghai designed by the Tongji University; and the Longtan People's Commune, Sichuan designed by the China Southwest Architectural Design and Research Institute Corp. Ltd (Bolchover et al., 2013; Knapp, 1992; Lee, 2016a; Lu, 2007).

- 8 The *hukou* system is a household registration system “dividing the national population in urban and rural segments” (Ren, 2013, p. 25) which first “emerges and is imposed [in the Mao era] to divide and organize people, to manage and allocate resources, including labor, and to enable political and social control” (F.-L. Wang, 2005, pp. 5–6). Although this system is still in force, during the time it has been subjected to several changes and today “the current dualism created by the *hukou* no longer appears to be [...] [the main cause of controversies, since] the intricacy of the relationship between social actors in cities requires a more in-depth analysis to reveal all the nuances of the contrasts between owners, wealthy urban inhabitants, tenants, and the dispossessed” (Bideau & Pagani, 2019, p. 90)
- 9 By establishing the Household Responsibility System in 1979 the People's Communes of the socialist period were progressively replaced by TVEs, until their complete dismantling in 1984 (Ren, 2013).
- 10 This trend was developed under the guidance of the three Five-Year Plans enacted after the economic reform (1976-1990). More specifically, the fifth and the sixth Five-Year Plans (1976-1985) advocated for “control the scale of large cities, rationally develop medium-size cities, and actively develop small cities”, while the seventh Five Years Plans (1986-1990) advocated for the necessity to “firmly prevent the excessive expansion of cities and focus on the development of small cities and towns” (Fang & Yu, 2016).
- 11 Zhengzhou was founded 3.600 years ago as an imperial city by Shang Tang(emperor of the Shang Dynasty), and from 1600 to 1046 BC it was the capital city of China . The city declined soon after the Han Dynasty (c. 200 BC). And until the Qing Dynasty it was just a minor administrative centre (Busquets & Yang, 2019; Ying Liu et al., 2008; Junxian Zhu, 2012).
- 12 According to Zhu Junxian (2012): “the Qing Dynasty, the city wall built in early Tang Dynasty enclosed the entire city[...] which had the layout of the traditional Chinese cities. The city walls defined a regular rectangle, with a longer east-west side and a shorter north-south side. They present four gates and a surrounding moat. The east and the west gates were connected by a straight road, while the north and the south gates were not in a straight line thus forming a double-cross street layout. Other roads in the city formed a regularized grid structure” (p. 66).
- 13 Both the railway lines were promoted by the Qing dynasty and financed by several Belgian companies (Hao, 2006). According to Yang Guang (2016) the process for the realization of the railways took place as follows: “In 1889 the provincial governor of Huguang [the actual province of Hubei and Hunan], Zhang Zhidong, wrote a letter to the Qing court proposing the construction of the Beijing-Hankou. The proposal was approved. In 1897 the construction of the Luhan railway line started. In 1904, the Zhengzhou railway station was built about five miles west of the Zhengzhou city centre. In November 1905, the Zhengzhou Yellow River Bridge was completed, and the line between Beijing and Zhengzhou opened for trial operations. In April 1906, Beijing-Hankou Railway was completely operational, thus, Zhengzhou was connected to Beijing, Shijiazhuang, Xinyang, and Hankou. In 1899, China Railway Corporation supervised by minister Sheng Xuanhuai wrote a letter to the Qing court proposing the construction of Miluo railway (the former Longhai railway line), and the same year the proposal was approved. However, due to the problems caused by the Yihetuan Movement, and the invasion of China by the Eight-Power Allied Forces, the project was not realized. In 1904, the General Engineering Bureau of the Miluo railway was established in Zhengzhou. In 1906, the Miluo railway came to fruition.[...] Finally, in January 1913 the Beijing-Hankou line and the Lianyungang-Lanzhou line were finally merged” (p. 31).
- 14 The demolition of the city walls in Zhengzhou, approved on February 20<sup>th</sup> 1928 by General Feng Yuxiang, was completed on February 29<sup>th</sup> 1928 (Junxian Zhu, 2012).
- 15 According to Yang Guang (2016) “the Beijing-Wuhan railway line and the Longhai railway line fostered the development of Zhengzhou cotton market .[...] In 1927 the Bulletin of Zhengzhou Cotton Deposit pointed out that Zhengzhou was the main trade centre of the Henan province for the cotton industry, since the majority of cotton produce in western China were transferred to Zhengzhou and then redistributed in Tianjin, Shanghai and other coastal areas” (p. 32).

- 16** Since the two railway lines were owned by different companies, at that time three railway stations were in Zhengzhou: the Zhengzhou Railways Station, the Zhengzhou North Railways Station e Zhengzhou South Railways Station (G. Yang, 2016).
- 17** According to Hao Peng (2006): “the differentiation of passenger and cargo stations greatly affected the development of Zhengzhou. Thanks to passenger flow, Zhengzhou South Station gave rise to an urban area composed by hotels, restaurants, commerce and financial offices. [...] Differently, a large number of warehouse were settled close to the Zhengzhou North Railway Station, that was a freight station” (p. 30).
- 18** This tripartition, as well as the urban design adopted by the plan, was similar to other Chinese experiences of that time, such as the urban plan for Jinan city drafted in 1932(Hao, 2006).
- 19** From 1922 to 1929 the Central Plains as well as the Henan province had been involved in twelve conflicts caused by the Chinese warlords (Hao, 2006; Yanpu Liu, 1988).
- 20** According to Hao Peng (2006): “after the end of the Central Plains War, in January 1931, Zhengzhou was downgraded to ‘county level’” (p. 37).
- 21** According to Hao Peng (2006): “the extension of the railway lines in 1934 weakened the role of Zhengzhou as inland trading port” (p. 35).
- 22** According to Hao Peng (2006): “during the War of Resistance against Japan, the agriculture production of the Henan province had decreased of 57.4 percent, the cotton production had diminished of 84.9 percent, and soybeans production dropped of 71.4 percent” (p. 36).
- 23** For instance, similarly to that of Zhengzhou, also the plan drafted for Kaifeng in 1928 established to organize the city in three parts. In fact, based on a monumental streets layout of large boulevards, the plan envisaged the construction of a new trading port close to the south railway station, and a new urban area north from the historical city centre.
- 24** According to Hao Peng (2006): “in 1953 the first textile factory (464,800 square metres large)was operational, while the following year other two factories (560,000 e 444,000 square metres large) came to fruition. Finally, in 1956 other two factories (410,000 and 328,000 square metres large) were realized. Therefore in 1957 the total land surface occupied by the textile industry accounted for 2,227,400 square metres situated along the southern side of the Longhai railways line” (p. 52).
- 25** According to Cai Anning, Liang Jinshe, Liu Yang e Zhang Wei (2012): “during the first Five-Year Plan (1953-1957), the government invested in constructing over 60 large and medium-sized key enterprises mainly based on light industry; while during the first half of the second Five-Year Plan(1958–1962), 47 large and medium-sized enterprises(heavy industry), were built in Zhengzhou” (p. 55).
- 26** According to Zhang Cai-li (2007) “centred on Erqi Square, the entire urban development spread in all directions. Six symmetrical arterial roads and three loops were planned as streets layout of the city. In addition, according to the nature of the various functional areas, different networks of infrastructure were planned in order to connect each area with the main urban core” (p. 23).
- 27** According to Song Xiao-qing, Zhang Cai-li e Zeng Fan-pu (2010): “the entire city was organized in two parts: the east part and the west part, with Erqi Square and the railway station in the middle. The new west part was envisaged as industrial zone, with administrative and cultural facilities in the northeast area. ” (p. 34)
- 28** This decision was related to the fact that several factories were already built in those areas, such as the cotton and the textile factories located along the west side of railway line.
- 29** For instance, in 1958 an urban plan was drafted for the city of Kaifeng. The project aimed to double the territorial extension of the existing settlement by organizing a new urban area east from the historical city centre. The plan was based on a grid layout, and the industrial areas were located south, close to the railway infrastructure.
- 30** The plan approved in 1956 envisaged the city to be organize in three areas: the eastern historical downtown, the western industrial area for the large factories, and the central area for warehouses, commercial and transport facilities (Hsu, 1996).



- 31** According to Hao Peng: “the population forecast for Zhengzhou was adjusted to reach 1.05 million inhabitants in 1990, and a total built-up area of 84 square kilometres, [...] in 1993 Zhengzhou accounted for an urban population of 1.15 million inhabitants in a built-up area of 93.1 square kilometres, plus a floating population of 400.000 people” (Hao, 2006: 64)
- 32** According to Ronald G. Knapp and Dongqi Sheng (1992): “the exercise involved two stages, the preparation of a ‘town and villages masterplan’ (*cunzhen zongti guihua*) and then the drawing up of a ‘town and villages construction plan’ (*cunzhen jianshe guihua*)” (p. 64). The first was a systematic plan at larger scale, while the second was a detailed plan specifically drafted for each settlement containing guidelines and targets for the following fifteen years.
- 33** For instance the case of Baojian Brigade (Jiangsu province), Aladi Village (Jilin province), and Qiangaokan village (Liaoning province) as reported by Ronald G. Knapp (1992).
- 34** See the case of Dacaiyuan Village, in Henan province as reported by Nancy Jervis (1992).
- 35** China Foreign Direct Investments (FDIs) increased from 3.5 billion dollars in 1990 to 60 billion dollars in 2005 (National Bureau of Statistics of China, 2018).
- 36** For a more detailed description of the different types of transaction in Chinese land market see Anthony Gar-on Yeh and Fulong Wu (1996).
- 37** Another relevant law is the Provisional Measures for the Administration of Foreign Investors to Develop and Operate Plots of Land approved in 1990, which allowed foreign investors to acquire from municipalities the land use right over idle land, and then develop the land at a later stage (Yeh & Wu, 1996). Considering that in the first half of the 1990s approximately 90 percent of all foreign investments were absorbed into the land market, this law made a substantial contribution to the great transformations occurring in that period (Q. He, 2000).
- 38** As reported by George C.S. Lin and Samuel P.S. Ho (2005) the article 10 of the Chinese constitution declared that no organisation or individual may appropriate, buy, sell, or unlawfully transfer land in other ways. In 1988 “the state reconciled with the interests of globalization and amended Article 10 of the Constitution on 12<sup>th</sup> April 1988 by adding a clause that reads ‘[T]he right to use land may be assigned in accordance with the provisions of the law to legitimize the commercialization of land use rights’” (p. 420).
- 39** For instance, as reported by Qinglian He (2000) “on 4<sup>th</sup> February 1992, the first land auction arranged by the Beijing municipal government is convened. And yet over the course of the next four days, nobody shows up! Why? For the simple reason that if one could spend a small amount of money to bribe the officials overseeing the auction to assure gaining a parcel of land at a reasonable price, why bother going to the auction itself where prices were bid astronomically high?” (p. 63).
- 40** This four points have been identified by Fulong Wu (2003) in studying the case of Shanghai urban development in the 1990s, however they could be adopted also to describe several experiences in different contexts, such as the case of Caofeidian Eco-City as reported by Austin Williams (2017).
- 41** For instance the cases reported by Samuel Y. Liang (2014) or Fulong Wu (2007b).
- 42** According to Shiu-Shen Chien and Ian Gordon (2008): “political conformity, which was the only important promotion criterion in pre-reform days has now clearly given way to assessments of competence, particular in terms of local economic performance as represented by some standard local growth measures” (p. 41).
- 43** According to You-Tien Hsing (2010): “by 2002, among the 3,837 registered *kaifaqu* [development zone] in China, 68 percent were approved by local governments at the municipal, district and county levels, and more than half were operated by townships and villages” (p. 99).
- 44** As reported by George C.S. Lin and Samuel P.S. Ho (2005), between 1995 and 2002 “a total of 945,213 cases of illegal land occupation, conversion, and transaction were uncovered, a number not far from the cases of land conveyance (964,868 cases). These illegal activities involved a total land area of 189,792 hectares, or 42 percent of the land obtained through legal conveyance” (p. 428). For a deep study on the mechanism of illegal land see Qinglian He (2000).

- 45 According to George C.S. Lin and Samuel P.S. Ho (2005) “the State Council and the Central Committee of the Chinese Communist Party (CCCCP) announced in May 1997 a one-year moratorium on arable land conversion; this moratorium was subsequently extended to 1999” (p. 411).
- 46 As reported by Laurence J.C. Ma (2005) from 1984 to 1994 the number of counties has decreased from 1926 to 1560, while the number of cities has more than doubled from 300 to 622. From 1994 this trend has slowed down, and in the following five years counties had moved from 1560 to 1510 while the cities had reached quota 663.
- 47 The economic resources for the new town development came primarily from Hong Kong, Macau and overseas Chinese investors (Xue et al., 2013).
- 48 Two-thirds of the new town is located in the eastern side of Jinshui District, while the remaining part occupies the northern part of Guancheng District.
- 49 The design of the two CBDs recalls Kiyonori Kikutake’s projects for the marine and ocean cities (1958, 1960, 1963, 1971), as well as Kisho Kurokawa’s New Tokyo Plan 2025 (1987) (Busquets & Yang, 2019; Xue et al., 2011). As theorized by Kisho Kurokawa, these projects emphasize the use of infrastructural corridors (*roji*) as main intermediaries between different urban spaces. The Japanese architect tested this urban configuration in Zhengdong CBDs, where both pedestrian areas and vehicular loops are the main connectors between various urban elements (Koolhaas & Obrist, 2011; Kurokawa, 1991).
- 50 As described by Charlie Q.L. Xue, Ying Wang, Luther Tsai (2013) after receiving financial support by the banks the administrative committee of Zhengdong had adopted two strategies for boosting urban development. On the one side, by use land as mortgage, it had required banks loan in order to provide public facilities. After their construction the land price increased, therefore the local government leased land to developers at higher price and returned money back to the banks. On the other hand, developers provided the basic infrastructures, and in turn local government lease them plots of land as compensation.
- 51 After the competition several plans were drafted: the detailed plan of the Start-up Area and the Longhu Area by Kisho Kurokawa Architects and Associates, and a revised plan of the University Park and Science and Technology Park area together with two schemes: the first by Kisho Kurokawa Architects and Associates, the second by the Architecture Design Institute of South China University of Technology. Then came regulatory plans for specific areas: the Regulatory Detailed Plan of the Extension Area of Zhengdong New District; the Regulatory Detailed Plan for Longhu Area by Kisho Kurokawa together with the Zhengzhou Urban Planning Design & Survey Research Institute, and the Regulatory Detailed Plan for Longzihu Area by the Zhengzhou Urban Planning Design & Survey Research Institute (K. Li et al., 2010b, 2010c, 2010e, 2010d, 2010a).
- 52 Competitions, planning activities and projects either completed or still underway have been collected in the series of five volumes by Li Keqiang, the Administrative Committee of Zhengdong New District and the Zhengzhou Urban Planning Bureau (2010b, 2010c, 2010e, 2010d, 2010a).
- 53 See for instance the report *China Real Estate Bubble* by the CBC program 60 minutes (March 2013), or the article by Gus Lubin (2011).
- 54 The gross output of construction refers to the total value of all inputs to construction work and the value added by the construction industry itself.
- 55 *Homo Movens* is the title of a book published by Kisho Kurokawa in 1989. The concept has been further developed by the Japanese architect in the following years, in particular in relation to his proposal for the New Tokyo Plan 2025. As Kurokawa (1991) wrote: “in our information society, mobility has begun to possess considerable value for its own sake. [...] The city of the future, as we continue to evolve into an information society, should be a city that guarantees freedom of choice and makes positive provision for movement” (p. 179).
- 56 Under this approach several policies have been developed to control urban development by tightening the regulation on the land market and management. For instance, as reported by Jiang Xu and Anthony Yeh (2009) “the ‘Directory of Allocated Land’ was announced in 2001 to abolish administrative land allocation to commercial projects. In March 2002, the Ministry of Land and Resources (MLR) issued the decree No. 11 (‘Regulation of Granting State owned Land Use Right by Tender, Auction and Quotation’)

which required all land for business purposes (commerce, tourism, entertainment and commodity housing) to be transferred publicly after 1 July 2002 either through tender, auction or quotation. [...] In March 2004, MLR released the No. 71 decree, which set 31 August 2004 as the deadline for all cities to ban the negotiated conveyance for commercial development. In November 2004, the State Council issued the 'On Deepening Reform and Strengthening Land Administration Circular', regarded by many as the strictest land policy ever to reiterate the orders of the No. 11 and No. 71 decrees" (p. 565). The same authors (2009) also report that most of these policies didn't manage to achieve the expected results.

- 57** For instance the Third Front Movement occurred during the 1960s.
- 58** According to Fulong Wu (2015) and Zhang Xiao (2016) the implementation of the spatial planning in the planning activities was based on the experiences of territorial planning first developed in Japan and South Korea.
- 59** In particular, according to Jiang Xu and Anthony Yeh (2009) "land administration has undergone a recentralisation process, in which the central state has actively promulgated various land policies to restrict local behaviour" (p. 573). Within this framework, the scholars identified six main factors "that drive the trends of re-hierarchisation and recentralisation of statehood in land governance" (p. 564). Among them, three are directly related to the administrative body: the local disobedience emerging from the decentralization process occurred during the nineties, the emerging of powerful public-private partnership (PPP) and the consequent formation of the so-called 'growth coalitions', and the competitive strategies developed by some institutions (for instance the entrepreneurialism of some municipalities such as Shanghai's). The other factors are: the management of the real estate capital, the problems related to an increasing marginalization and social stratification, and the creation of a fragmented space. All these reasons have led to a re-articulation of the government structure that also includes planning activities.
- 60** According to Fulong Wu (2015): "there is no mechanism to implement the plan in national macroeconomic management. In particular, in terms of resource allocation, the National Reform and Development Commission (NDRC) plays a significant role. The plan prepared by MOHURD has limited or virtually no influence over this NDRC centred national strategy formulation. Its implementation relies on the translation of the rank-size distribution of the urban system, functions of the core cities, and infrastructure framework into the approval procedure of individual provincial plans or the master plans of key cities listed in the National Urban System Plan" (pp. 122-123).
- 61** According to Jie Fan, Wei Sun, Kan Zhou and Dong Chen (2012) "The identification of types of territorial functions [i.e. the 'main functional areas'] is based on the evaluation of the suitability of territorial function by using the indicator system. [...] The indicator system consists of ten indicators, among which nine are measurable: available land resources, available water resources, environmental capacity, ecological vulnerability, ecological importance, natural disaster hazard, degree of population agglomeration, economic development level, and degree of transportation dominance; the 10<sup>th</sup> indicator, the strategic selection, is a qualitative indicator that monitors the whole evaluation process. Every indicator is made up of several factors" (pp. 203-204).
- 62** As reported by Chuanglin fang and Danlin Yu (2016), based on 2012 statistical data the 'urban agglomeration areas' account for 62.83 percent of the Chinese population within 25.82 percent of Chinese territory, and they produce 80.57 percent of China's GDP. The 'major food producing areas' account for 18.97 percent of the Chinese population within 20.80 percent of Chinese territory, and they produce 13.02 percent of China's GDP. The 'farming, forestry and animal husbandry areas' account for 6.77 percent of the Chinese population within 6.21 percent of Chinese territory, and they produce 4.12 percent of China's GDP. The 'poverty contiguous areas' account for 8.82 percent of the Chinese population within 18.25 percent of Chinese territory, and they produce 1.13 percent of China's GDP. Finally, the 'ethnic minority and autonomous regions' account for 2.61 percent of the Chinese population within 28.92 percent of Chinese territory, and they produce 1.16 percent of China's GDP.
- 63** Until 2010 China accounted just for two national level new areas located in the coastal regions (namely Pudong New Area in Shanghai and Binhai New Area in Tianjin), from that year sixteen national level new areas have been planned all over the country (Jian Liu & Xu, 2019).
- 64** Among them, 40 percent of new provincial districts are located in the Henan province.

- 65** Jiang Xu and Anthony Yeh (2009) argue that “reconstructing economic-regulatory institutions to attract central attention has become a major issue. As intercity competition for national status escalates, provinces believe that creating new regional spaces of economic regulation is a better way to stand out strategically” (p. 570).
- 66** For instance the twenty urban agglomerations rely on the coordination and partnerships between different cities, and they do not correspond to any level of governance (Fang & Yu, 2016; F. Wu, 2016b).
- 67** In 2010, urban income was less than three times the rural one. In 2017 this value decreased to 2.7 (National Bureau of Statistics of China, 2017).
- 68** As reported by Xingqing Ye (2009): “according to media reports, after completing junior middle school, 67.1 percent of children with urban-resident household registration continue in further education, and 15.9 percent achieve university degrees or higher. Only 26.8 percent of children with rural household registration achieve university degrees, and only 3 percent of them complete higher degrees. [...] [Furthermore] according to the third national health survey, the number of cases of farmers who needed hospital treatment but were unable to afford it rose from 64 percent to 75 percent between 1998 and 2003” (p. 135-136).
- 69** According to Xingqing Ye (2009): “beginning in 2004, China began to implement a guaranteed minimum procurement price for the main grain sorts, meaning that under conditions of a basic balance in grain supply and demand, the grain prices are set by the market; the government has determined a minimum procurement price, and when the market price decreases below this price, the Central Grain Reserves Corporation, directly or through other grain buyers, carries out market-stabilizing procurement in order to temporarily withdraw the surplus supply from the market” (p. 121). The same author declare that in due to the implementation of these policies “farmer incomes across the country increased by more than 50 billion CNY” (p. 122).
- 70** Minzi Su (2009) reports that “in 2004, reductions in taxes and fees alone translate into direct benefits for farmers of 45.1 billion CNY. In 2005 the benefits increased to 70.2 billion CNY, and in 2006, to 126 billion CNY” (p. 129).
- 71** According to Minzi Su (2009) “339.7 billion CNY was spent in the countryside, a 44.2 billion CNY increase over 2005. It represented 21.4 percent of total state fiscal spending in 2006. In the 53 billion CNY spent on rural construction, 31.4 billion CNY was used directly for rural productivity and living conditions. [...] in addition to state spending, provincial and local government spending on the countryside also rose by an average of 20 percent over the previous year. At the same time, the central government increased its support for local governments by 78.2 billion CNY in order to assure the payment of salaries and the funding of mandated social programs” (p.134-135). As reported by Xingqing Ye (2009), “by 2008, the subsidies for improved rice, wheat, soy bean, maize, cotton and rape seeds had reached 12.16 billion CNY; the subsidies for the purchase of farm implements had reached 4 billion CNY; and the comprehensive subsidies for agricultural production materials such as chemical fertilizer and diesel oil had reached 71.6 billion CNY. Similarly, by 2008 direct subsidies to grain-producing farmers had risen to 15.1 billion CNY” (p. 122).
- 72** As reported by Xingqing Ye (2009): “Since 1998, the construction of new rural power grids and the improvement of existing grids has been financed, nationally, with 288.5 billion CNY. [...] In 2008 the central authorities arranged 2.9 billion CNY to support the electrification of areas without power supply. [...] [Meanwhile] between 2003 and 2007, 1.3 million kilometres of new roads were constructed, of which 850,000 kilometres were asphalt-concrete roads. [...] [Finally] in 2006, the Rural Drinking Water Safety Plan was implemented with a financial investment from the central authorities of 4 billion CNY; in 2008 this investment was increased to 7 billion CNY” (p. 132-133).
- 73** Hence, nowadays the design institutes of municipalities are also drafting masterplan for the redevelopment of the agricultural areas, that previously were almost set aside from any planning activities.
- 74** See the case of Liuxian Village, in northern China, as reported by David Bray (2013).
- 75** See the case of Taiqian Village, in Zhongmu County, Henan as reported by Christopher C.M. Lee (2016a); or the case of Qinglong Village in Jiangsu Province as reported by David Bray (2013).



- 76** With the 2008 Planning Act, the Ministry of Land and Resources (MLR) introduce a strict policy of farmland protection based on quotas. According to Fulong Wu (F. Wu, 2015): “the policy was invented to maintain the nationwide stock of agricultural land at 1.8 billion mu (15 mu = 1 hectare)” (p. 58). Despite nowadays municipalities shall not exceed the established amount of built up land, these quotas are just number that are not related to any geographical areas. Therefore they can be relocated by institution from one place to another.
- 77** From 2005, several design activities had been promoted in the light of these three projects. The design of the Zhengzhou Integrated Transportation Hub was subjected to several competitions for drafting the land use plan, the regulatory plan, and various infrastructure and architectural projects. Meanwhile several proposals had been developed by local institute for the Zhengzhou National Economic and Technological Development Zone and the Zhengzhou-Kaifeng Industrial Belt. Finally, the most relevant initiative was the International Solicitation for the Masterplan of Zhengzhou Airport City, which involved the ATKINS Consultants Ltd (UK), the China Academy of Urban Planning and Design of Shenzhen and the Honk Kong Planning Institute. All these plans have been collected in the publication by Li Keqiang, the Administrative Committee of Zhengdong New District and the Zhengzhou Urban Planning Bureau (2010b, 2010c, 2010e, 2010d, 2010a).
- 78** The draft of the plan for Zhengbian New District was developed as follow: in 2007 two plans were drafted regarding the Strategic Studies of the Integration of Zhengzhou-Kaifeng Industrial Belt (preliminary studies), one by the Chinese Academy of Social Science, and the other by the Chinese Urban Planning Association. This planning activity was followed by the drafting of the Master Planning of the Integration of Zhengzhou-Kaifeng Industrial Belt, consisting in two plans: one drafted by the Tsinghua Urban Planning and Design Institute, and the other by the Zhengzhou Urban Planning Design & Survey Research Institute. After that the Regulatory Detailed Planning of the Integration of Zhengzhou-Kaifeng Industrial Belt was drafted by the Zhengzhou Urban Planning Design & Survey Research Institute (K. Li et al., 2010a). In 2007 it was also published the Zhengbian Industrial Development Plan. One year later, this planning activities led to the establishment of the Zhengbian Urban-Rural Reform and Development Experimental Zone. Finally, in 2009 did this process lead to the launch of an international competition won by the London studio Arup (Zhengzhou Municipality, 2009).
- 79** The Zhengkai Avenue and the Zhengbian Logistic Passageway.
- 80** The railways network is composed by a southern line that connects the city centres of Zhengzhou and Kaifeng in 45 minutes, a northern high-speed railway line that links directly the new districts of Zhengdong and Kaifeng in 30 minutes, and a light railway service situated in between the other two lines that runs from Zhengdong to Songchenglu station (in the southern part of Kaifeng New Area) connecting each cluster.
- 81** From 2006, besides the Zhengzhou City General Plan (2008-2020), the Kaifeng City General Plan (2008-2020) and the planning activities for Zhengdong New District and Kaifeng New Areas, under the guidelines of ARUP’s comprehensive plan the following plans had been drafted: the Zhengzhou Logistic and Technical Development Zone General Plan (2006-2020), the Zhengbian Industrial Belt General Plan (2006-2020), the Zhongmu County General Plan (2008-2020) and the Zhengzhou Airport General Plan (2008-2035) (Zhengzhou Municipality, 2009).
- 82** The plan has been developed under the consultancy of John D. Kasarda, the director of the Centre for Air Commerce at the University of North Carolina’s Kenan-Flagler Business School. Kasarda is also president and CEO of Aerotropolis Business Concepts LLC, and the president of the Aerotropolis Institute China.
- 83** In fact, already in 2006 the provincial government of Henan launched an international competition for the masterplan of Zhengzhou airport. The three competitors were: the China Academy of Urban Planning and Design based in Shenzhen, the Hong Kong planning Institute, and ATKINS Consultants Ltd (UK) (K. Li et al., 2010a). The site of the competition was the area in between the Jingzhu Expressway and the canal of the South-to-North Water Diversion Project (a national level project in order to supply water to the central and the northern regions of China officially opened on December 12<sup>th</sup>, 2014).
- 84** The area includes more than 30 townships located in the counties of Zhongmu, Xinzheng and Weishi, in Zhengzhou and Xuchang municipalities.

- 85** These values has been retrieved through GIS analysis and the study of satellite images.
- 86** At present, new districts are under construction in the following cities of Henan province: Zhengzhou (1,840 square kilometres), Kaifeng (287 square kilometres), Luoyang (518 square kilometres), Anyang (226 square kilometres), Puyang (189 square kilometres), Xinxiang (188 square kilometres), Hebi (130 square kilometres kilometres Jiaonan (180 square kilometres), Shongqiu (198 square kilometres), Xuchang (180 square kilometres), Luobe (148 square kilometres), Nanyang (190 square kilometres), Pingdingshan (148 square kilometres), Zhumadian (148 square kilometres), Sanmenxia (187 square kilometres) and Zhoukou (145 square kilometres) (Fang & Yu, 2016).
- 87** After Kisho Kurokawa passed away in 2007, the Administrative Committee entrusted Arata Isozaki for the completion of Zhengdong New District . From that period Isozaki has took part to several planning activities in Zhengdong and Zhengbian. In 2010, the Japanese architect organized an international workshop to design the urban layout and various buildings of the sub-CBD, which led to the exhibitions 'Run After Deer! Zhongyuan. Traces of Future Steps' at Biennale di Venezia in 2012 and 'Isozaki Arata: Solaris at ICC Gallery of Tokyo' in 2014. Moreover, in the 2011 Isozaki took part to the competitions for Zhengzhou New District Lvbo Cluster Urban Design and for the Zhengzhou Aviation City, and the following year he drafted the plans for the Zhengzhou Baisha Business Zone and for the Zhengdong New District Integrated Transportation Hub. Finally in 2013, Isozaki worked on the plan for the Zhengzhou New District Transportation Core Area Urban and Landscape Design of the East Urban Area.

SECTION III

**ARTEFACTS  
AND  
STRUCTURE**



The policies, plans and projects described in the previous section have given rise to radical transformations in the territory of the Central Plains of China. In order to understand how the ongoing political, economic and demographic trends are modelling the landscape, the third section of the thesis investigates the transformations that have occurred over the last two decades in several areas of the Zhengbian New District. The section is organized into three chapters that focus on three different aspects: the infrastructural system, the dwelling units, and the productive spaces. For each chapter I have elected to examine up to four territorial samples that range from 1.5x1.5 kilometres to 9x9 kilometres, in an overall area of 60x60 kilometres [figs. S.3.3-S.3.4]. These samples bring to light artefacts and structures that are constitutive of today's physical spaces in the Central Plains, but not only that: by studying how these elements have altered the previous environmental and socio-economic conditions, this study seeks to go beyond mere description of the ground morphologies. In fact, in recording the territorial transformations, I consider the *physical space* as "an ongoing medium of exchange, a medium that is embedded and evolved within the imaginative and material practices of different societies at different times" (Corner, 1999, p. 5). Hence, the territory "oscillates between the static and the dynamic point of view, in any given configuration there is an inherent propensity for the unfolding events" (Fung, 1999, p. 144). This condition emphasizes the inherent nature of the *physical space* not as something stable, but as an ongoing process based on tension of forces (Corboz, 1985). In light of this position, it is possible to imagine the *physical space* as a palimpsest which is constantly being rewritten, and is affected by transformations that make a 'cumulative selection' of what is 'memorable' (Corboz, 1985). This process is mostly related to practical purposes; however, people also attach value (monetary or symbolic, private or collective) to places and objects (Gregotti, 1966; Secchi, 2000). The idea of the *physical space* as palimpsest or text has led both to structuralist interpretations, which consider landscape as 'our unwritten biography' (Lewis, 1979), and the post-structuralist approach, which affirms the 'intertextuality



of landscapes' by considering "the textual context within which landscapes are produced and read" (Duncan & Duncan, 2010, p. 230). Therefore, the *physical space* is regarded "less like a palimpsest whose 'real' or 'authentic' meanings can somehow be recovered with the correct techniques, theories, or ideologies than a thickening text displayed on the word processor screen whose meaning can be created, extended, altered, elaborated and finally obliterated by the merest touch of a button" (Cosgrove & Daniels, 1988, p. 8). For this reason, "landscape cannot spatially be reduced to a single point of view, it cannot be frozen as a single moment in time. The geography of a place becomes known to us through an accumulation of fragments, detours, and incidents that sediment meaning, 'adding up' over time." (Corner, 2014, p. 167).

Based on these considerations, the investigations reported in this section 'recasts the visual' by developing representations based on collected data, photographs, satellite images and first-hand observations gained during the periods of field research (Crang, 2009). These data per se do not lead to an interpretation of the ongoing territorial transformations, they are just 'tracings' (Deleuze & Guattari, 1987). However, they can be used to develop an interpretation of how the *physical space* has been shaped and transformed through time. In this operation, the raw data have been critically exploited using a variety of visual methods (maps, datascares, photographs, surveys) in order to explore the possibility of 'witnessing as artistic coutervision' (MacLear, 1998).<sup>1</sup> In particular, the work is based on both a para-empirical investigation conducted using satellite images, maps and data provided by official sources, and on an empirical observation of the ongoing transformations (Kurgan, 2013). This strategy has been adopted to avoid some issues brought to light by recent studies on visual methods: in particular, critical satellite studies,<sup>2</sup> and the critical use of cartography.<sup>3</sup> In fact, if taken alone, the 'para-empirical'



**S.3.1.** Apartment in Zhengdong New District, October 10<sup>th</sup> 2017, © Samuele Pellecchia

investigation based on data collection and satellite images, could lead to ‘blind omniscience’ related to the ‘historical legacy of ocularcentrism’ (Warf, 2012), that is, when “an unseen event is bracketed off, denied entry into the ‘real’” (Parks, 2001, p. 596). Moreover, since these media are not neutral, they implicitly lead to a ‘strategy of deception’ (Virilio, 2007), so “rather than provide evidence [...] they serve the seemingly antithetical strategies of denying knowledge and claiming omniscience” (Parks, 2001, p. 598). For these reasons, it is necessary to recast the visual and positioning the observer by “grasping vision, touching the light” (Cragg, 2009) **[figs. S.3.1-S.3.2]**. Hence, every chapter opens with a narrative describing an empirical investigation conducted by experiencing and living the places of the Central Plains during three field research periods. Through these narrative it is possible to understand more about the way in which people inhabit and practice these places, and, in doing so, how they altered the *physical space*.

Based on these raw data, several representations have been developed in order to report the territorial transformations which are affecting the Central Plains of China.<sup>4</sup> These representations, in the form of maps, diagrams, datascares and pictures do not aspire to be either objective or exhaustive; on the contrary, they “tell us only *a* story, not *the* story, of what is going on” (Kurgan, 2013, p. 31). Hence, these outcomes are themselves interpretations, and each one “tells a multitude of little white lies; it suppresses truth to help the user see what needs to be seen; [...] its generalized geometry and generalized content reflect a chosen aspect of reality” (Monmonier, 1996, p. 25). Through this strategy, the representations provide an interpretation to be set out, to establish an argumentation. In other words, these materials “set the conditions for a new eidetic and physical word to emerge” (Corner, 1999, p. 198). In light of this, they are considered the starting point for speculation on the landscape transformations which have affected the Central Plains of China.



**S.3.2.** Zhengdong New District Commercial Strip, April 25<sup>st</sup> 2019, © Leonardo Ramondetti



**CHAPTER 7**  
**OVERLAPPING INFRASTRUCTURES**

**PATHS, CONCRETE ROADS AND SMALL CANALS**

SAMPLE A [9x9 km<sup>2</sup>]

Along County Road 006

**HIGHWAYS, RAILWAYS AND RIVERS**

SAMPLE B [3x3 km<sup>2</sup>]

Along Xiong'er River

**GRIDS**

SAMPLE C [2x2 km<sup>2</sup>]

Inside the grid of Kaifeng New Area

**CHAPTER 8**  
**JUXTAPOSING SETTLEMENTS**

**ANCIENT AGRICULTURAL VILLAGES**

SAMPLE A [1.5x1.5 km<sup>2</sup>]

Yuezhuang Village

**MODERN AGRICULTURAL VILLAGES**

SAMPLE B [1.5x1.5 km<sup>2</sup>]

Weigang Village

**NEW AGRICULTURAL TOWNS**

SAMPLE C [1.5x1.5 km<sup>2</sup>]

Zhugu New Agricultural Town

**COMPOUNDS**

SAMPLE D [1.5x1.5 km<sup>2</sup>]

Chang Jiyun Compound

**CHAPTER 9**  
**REASSEMBLING FIELDS**

**AGRICULTURAL PARKS AND TOURISTIC AREAS**

SAMPLE A [5x5 km<sup>2</sup>]

Zhongmu National Agricultural Park

**TECHNOLOGICAL AND INDUSTRIAL PARKS**

SAMPLE B [5x5 km<sup>2</sup>]

Foxconn Science Park

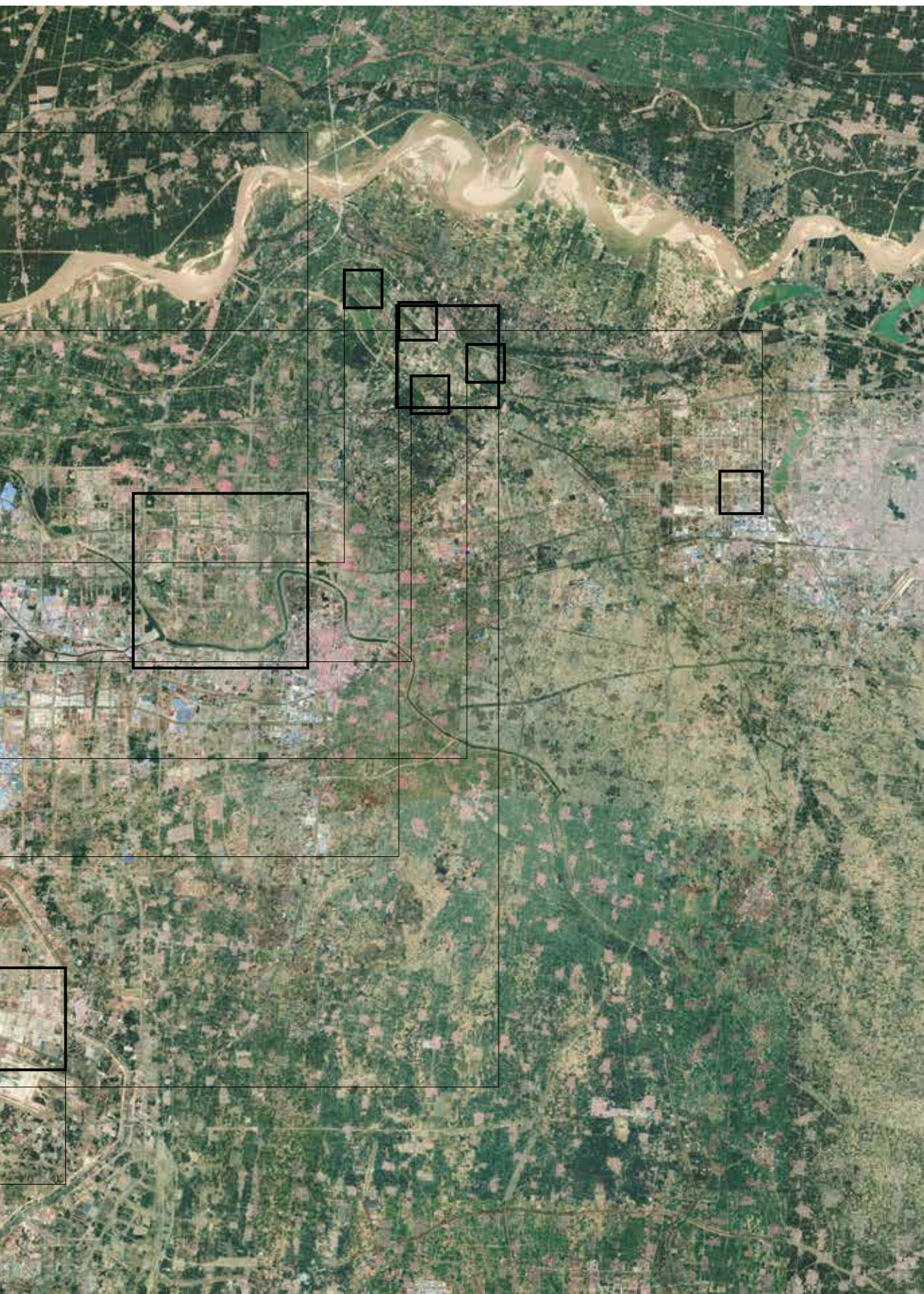
**UNIVERSITY TOWNS AND RESEARCH CLUSTERS**

SAMPLE C [5x5 km<sup>2</sup>]

University Town of Zhengdong New District









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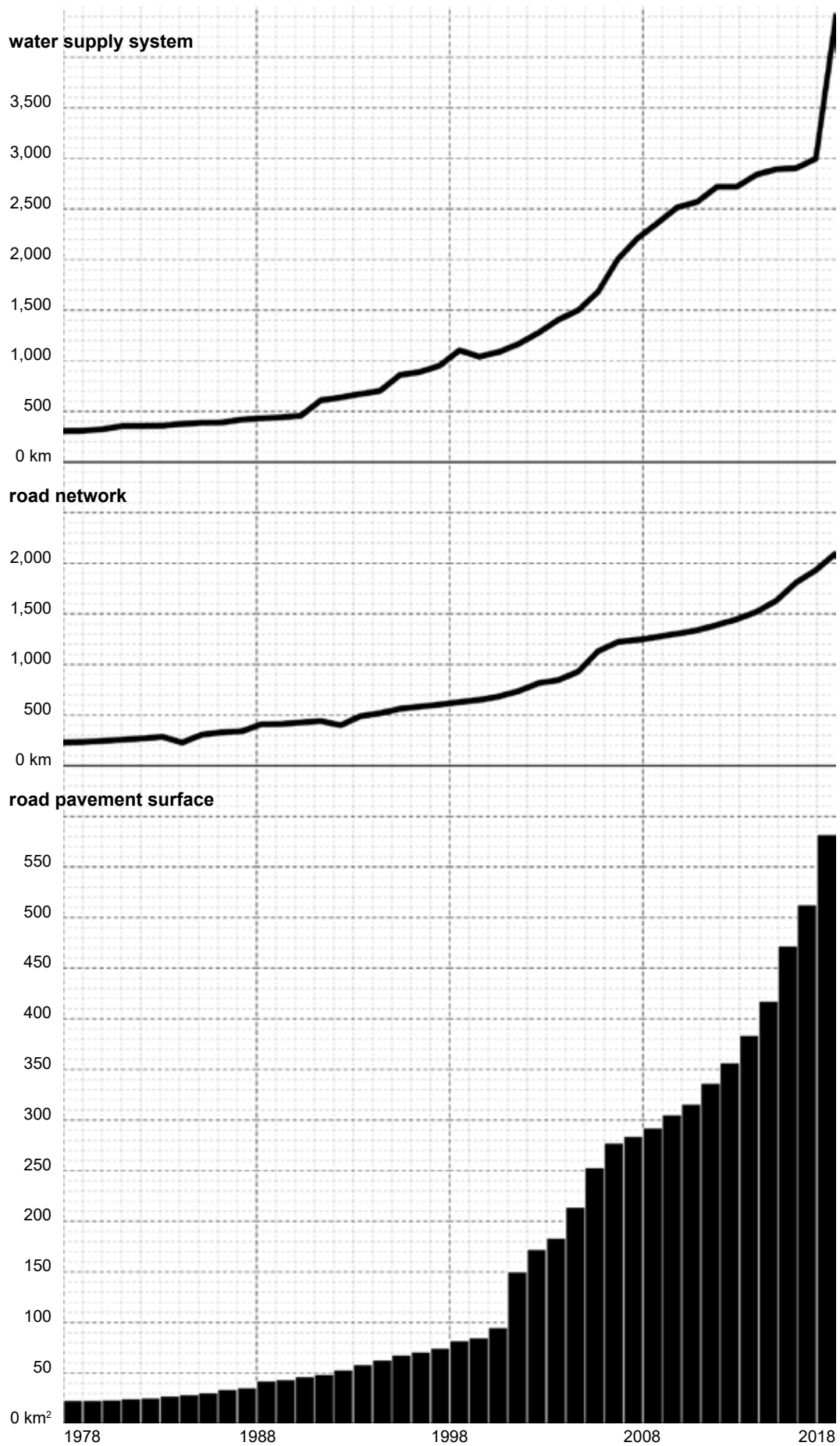


# Chapter 7

## Overlapping Infrastructure

The majority of spatial transformations in the Central Plains in the last few decades have concentrated on the improvement of the infrastructural network. As an example, in the area of the Zhengzhou municipality alone, the total roadway built per year has increased from 230 kilometres in 1978 to 2,101 kilometres in 2018; consequently, the overall paved area for infrastructural uses has risen from 2,300 to 58,210 thousand square metres. Over the same time period, the water supply system has also been expanded, passing from 306 to 4,420 kilometres (Zhengzhou Municipal Statistics Bureau, 2018) **[fig. 7.1]**. Up to the last decade, most of the major changes had involved the construction of long-distance and rapid mobility systems. At present, on the other hand, most of the infrastructures under construction are primarily devoted to homogeneously equipping the entire territory; thus, allowing the complete area to be freely colonized with different programs, functions and morphologies. However, in parallel with these changes, the ancient network of infrastructure is still present and in use in those areas that are not yet been reached by the main transformations.

As a result, nowadays, the armatures around which the territory of the Central Plains of China is organized is a precarious assembly of superimposed elements, extremely different from one another, such as highways and dirt roads. This chapter seeks to understand how these elements interact in shaping and structuring the landscape of the Central Plains. In order to do so, I investigate the transformations that over the last two decades have occurred in three portions of the Zhengbian New District **[fig. 7.2]**. Sample A (9x9 kilometres) is archetypical of the relationship between the ancient system of mobility and the new infrastructural network. Sample B (3x3 kilometres) demonstrates the impact of rapid, long-distance mobility systems. Finally, sample C (3x3 kilometres) is an example of the use of infrastructural grids as a means of organizing forthcoming urban development.



**7.1.** Infrastructure Improvement in Zhengzhou Municipality

**PATHS, CONCRETE ROADS AND SMALL CANALS**  
**SAMPLE A [9x9 km<sup>2</sup>]**  
**Along County Road 006**

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**HIGHWAYS, RAILWAYS AND RIVERS**  
**SAMPLE B [3x3 km<sup>2</sup>]**  
**Along Xiong'er River**

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**GRIDS**  
**SAMPLE C [2x2 km<sup>2</sup>]**  
**Inside the grid of Kaifeng New Area**

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0 km







## Moving Inside the Kaifeng Grid

*May 2<sup>nd</sup> 2019*

The Central Plains Region is the cradle of Chinese civilization and for centuries the city of Kaifeng was the beating heart of this rising empire. That is why this place nowadays is a well-known tourist destination. Some of the most ancient pagodas, temples, and imperial palaces in China are located here in beautiful and peaceful parks centred around huge lakes. Thus, to celebrate this glorious past, what could be better than to create a new town with an artificial lake as big as the entire Central Park in Manhattan?

Crossing the bridge over this enormous expanse of water that separates the old city of Kaifeng from Kaifeng New Area, the surface sparkles in the sun. What until 2014 was a fertile agricultural landscape of fields and fishponds is now a huge leisure park that marks the eastern boundary of the Zhengbian New District. Both the bridges that cross the lake look like monumental gates to the new towns. A crowded bus crosses over the southern one and I can clearly see stretching into the distance a ten-lane boulevard with service roads and greenbelts on either side: the Zhengkai Ave. Built in 2005 as a corridor to connect Kaifeng to Zhengzhou, this was expanded further in 2012 to form the main east-west axis of the new town. Nowadays there is a plan to centralise all the main facilities of Kaifeng New Area along this strip: administrative and representative buildings, shopping malls, museums and so on. Even if most of the skyscrapers are still under construction, some malls are already open and crowds of shoppers fill the plazas with bags full of merchandise. However, this place seems to be just a Potemkin village: three blocks down the road, the construction sites give way to empty plots and fields. I pause in a great monumental square in the middle of nowhere. The edges of this huge paved surface are marked by large iconic streetlights similar to giant flowers. Only a few people and families are present in this vast expanse, exercising to the sound of traditional music or playing with kites. I approach a man and ask for information. As he explains, this is the centre of the new town, and this plaza marks the intersection between the green north-south axis and the east-west boulevard. Pointing out with his finger a construction on the opposite side of the square, he tells me: 'You should have a tour of the Kaifeng Museum! I have just finished visiting it; it's amazing!'.

I decide to follow his suggestion. From the outside, the Kaifeng Museum looks like an contemporary version of an ancient castle: the walls are made of large blocks of stones and they widen at the base into ramparts; towers are located at every corner, and a water feature at the base creates a sort of moat that completely surrounds the building. Inside, there are several rooms which contain a huge variety of artefacts and relics. To recreate the glorious atmosphere of the ancient city, several parts of the building are staged as the medieval neighbourhoods of Kaifeng so that the visitors may have a walk amongst craft workshops, trading centres and inns. The whole museum is designed to glorify the role of Kaifeng in shaping Chinese culture, and its importance as a trading post along the silk road. While half of the building is given over to the

historical gallery, the other part is the public exhibition hall of Kaifeng municipality. Passing from one side to the other, visitors are suddenly projected from a bucolic past into an exciting future. Here, several models highlight the radical changes that have occurred over the last century and the upcoming changes. Pictures record the construction of railroads, boulevards and industrial plants; together with the portraits of the protagonists who have promoted the urban development: not only Chinese government officials, but also American and Soviet experts, as well as contemporary international firms. The republican plans, the socialist projects and the post-reform initiatives are all presented in a timeline that recounts the rise of the modern city of Kaifeng and the technical and scientific achievements of China. Year after year the area involved in the urbanisation process has steadily increased; the massive plan for the Zhengbian New District is presented as the final achievement: a great megalopolis merging the cities of Kaifeng and Zhengzhou, a new urbanisation made of infrastructural corridors, ecological belts, international airport and logistic centres, and leisure and cultural facilities.

Although all these planning activities are shown through the official documents in a precise and technical way, the exhibition hall contains other more amusing and more entertaining presentations. In particular, the most enjoyable and, perhaps, most illuminating consists of two short 4D movies. The first recounts the vicissitudes of the ancient settlements of Kaifeng: the rise of the city, its glorious battles and the many trials and tribulations of its inhabitants. As the narrator exclaims: 'Fires, floods and famines to forge the rising empire of China!'. Suddenly, at the climax of the story the scene moves from ancient times to the contemporary city. The audience fly over the magnificent legacies of the past: imperial palaces, parks, lakes, and ancient pagodas. But what is singularly impressive at this point is not the monuments, but their surroundings. Here a vision for the future city-centre of Kaifeng is clearly presented: neighbourhoods are full of shops and craft workshops in traditional Chinese buildings. This revival landscape is characterized by great leisure parks and amusement areas in which theatre companies put on staged epic medieval battles. The message is clear: Kaifeng will become a tourist destination based on leisure and cultural activities by exploiting the legacies of its great past and its ancient history. While the first movie attempts to link the past of the city to the current development, the second is completely based on a forward-looking perspective. Basically, it consists of a virtual tour of the brand-new urbanisation which is currently under construction. The spectators fly from museum of the new town to the high-speed railway station passing over the main university campuses. A subway brings them amongst the skyscrapers of a great business centre, and finally they lay down under a tree in a park just in front of a lake to enjoy a firework display. These two movies provide a vision: on one hand, Kaifeng city-centre will be a simulacrum of the glorious past; on the other, Kaifeng New Area will be a pleasant futuristic city with all the amenities for people today.

After watching the two movies, the visit to the exhibition hall is over. I exit the building and I find myself thrown back into the stark contrast of the new town: in a kind of suspended state awaiting the great urban transformation. Since I have just discovered that the southern portion of the new area was designated as a satellite industrial town in the early 2000s, I decide to continue my journey in that direction. I take a bike and turn left on Zhengkai Ave into a four-lane road that runs south. On the western side of the street are cleared lands, while the eastern plots contain high-rise apartment blocks and low-rise compounds that have just been

completed. Given the predictability of the infrastructural grid, after about half a kilometre I intersect another four-lane road; differently from the others, this street is topped with a ten-meter-high bridge. Here is where the suspended railway that connects the southern part of the Kaifeng new Area to the Zhengdong New District passes through the newly developed area. This line is planned to be the infrastructural backbone of the Zhengbian New District, with more than ten stops serving the area. Today it already allows people to commute between the cities of Zhengzhou and Kaifeng in less than 30 minutes.

Under the bridge there are some small brick buildings. A little down this road, I understand that this is a village which still clings on despite the infrastructural network progressively eating away at it little by little. I move along the big road which now forms the border of the settlement. Inside this land bounded by a four-lane road, there are houses, dirt paths and vegetation that carries on as if nothing out of the ordinary was happening. After another half a kilometre, I cross another deserted intersection where troops of traffic lights control an imaginary flow of vehicles. Passing the village, I finally see the big boxes of the production plants appearing behind the vegetation of the greenbelts. Here the empty streets are populated only by the occasional truck transporting goods and raw materials in and out of warehouses and factories.

After having a look at the industrial complexes from the outside, I move east along the Songcheng Road, one of the three main strips that cross the entire territory of Zhengbian New District. While the eastern zone of the new town is one huge construction site, the remaining portion is a city yet to come. As I move west the building sites give way to farmland; small warehouses and low-rise industrial sheds alternating with cropland of poplar, grain, and vegetables. Finally, it is just countryside. The grid of four-lane roads continues in the middle of nothing, and, in the end, it comes to a stop in front of a country village. I decide to have a closer look and I immediately notice several piles of rubble just outside settlement. Even if still inhabited, it will not be this village that stops the expansion of such an infrastructural network. In fact, I turn and see a small excavator digging a canal for the highway's greenbelt: it is just a matter of time and the grid will continue its march westward.

I take a walk among the dirt streets of the village, and then move along the western edge of the new town. It seems that since the new high-speed railway station is located up north, that area is more attractive for the real-estate companies for their investments. Indeed, I soon find myself surrounded again by the skeletons of high-rise buildings alternating with empty plots. Wandering around in such an anonymous and almost unpopulated landscape, my attention is abruptly caught by a group of young people walking carefree holding food in their hands in the middle of the street. Since midday has just passed, I decide to ask them if there is any place nearby to eat something. Following their directions, I turn the corner and surprisingly I find people crowded around several food stands. Here it is, the canteen of the new town! Soon I am sitting on a stool, eating noodles from a plastic bag. Several people stare at me: eventually, a construction worker decides to come forward and ask something in Chinese. Since I cannot understand, he starts laughing, but a girl in her twenties that was eating nearby with a friend explains to me: 'he wants to know where you are from!'. After a short chat with them, I discover that the entrance of a huge university campus is just in front of the kiosks, and many others are

located along this road. That's the reason why the stands decided to move here for both students and workers. When I ask her if she enjoys to live in a campus surrounded by construction sites and far from the city-centre, she says: 'I like the campus, inside are all the facilities I need for study and sport activities. In the new town are many shopping malls; and there are plentiful regular buses to reach the city-centre. Furthermore, the university is not far from the railway station, so I can easily go back to my hometown in Sanmenxia'

After lunch, I keep traveling until I reach the north-west edge of the new town. A steady flow of vehicles arouses my curiosity. Beside a four-lane road under construction, a nonstop stream of motorcycles, cars and small trucks moves along a small dirt track. I decide to follow them, and I ask a woman for a ride on the back of a three-wheeler. The road intersects the railway track to the Kaifeng north high-speed station, then an underpass crosses the G30 highway. When we finally come out of this tangle of infrastructural lines, I find myself in a rural landscape: lines of trees run parallel to the concrete road passing fishponds and trees. But what surprises me most is the congestion caused by vehicles and people compared with the streets of the new town's grid. It is not difficult to understand why: this should be the main street that connects the countryside south of the Yellow River to the city of Kaifeng. This busy road crosses several villages, and various shops are located along the road; not only in houses on the outskirts of each settlement, but also in stands. Finally, the three-wheeler makes it to the inner embankment that protects the area from the floods of the Yellow River. Since the waterway is still about five kilometres north, before me is just an expanse of fields with a scattering of small villages. I ask the driver to stop, and the woman helps me to arrange my way back in another three-wheeler.

Back in the new town I rent a bike and cycle to the Kaifeng North railway station. As everywhere in China, it seems to be impossible to promote a new urbanisation without building a great infrastructural hub. So now the main railway station is about nine kilometres from the city centre, in the middle of an expanse of empty plots to be occupied. Differently from the futuristic station of the Zhengdong New District, the design of the Kaifeng terminal gives a nod to the historical legacy of the city. The low building is covered by a roof which reminds one of traditional Chinese palaces. A huge eight-lane boulevard arrives half a kilometre ahead of the station, where there is a huge plaza made up of gardens and a huge paved area. It's a strange landscape: there are no buildings, no trees, and no people. But the station is operating in full swing: trains move in and out, voices announce the latest information, and an endless taxi rank is just outside the building. After taking a last look at the square, I decide to conclude my tour of the new town and go back to the city-centre. While the taxi drives along the huge boulevards, crossing parks, waterways, a high-speed train flies right past me; if the new towns are a great promise of a world yet to come, one thing is already clear: this promise is laid on a solid infrastructural network.



**7.3.** Zhengkai Intercity Railway, Zhongmu County, October 13<sup>th</sup> 2017, © Samuele Pellecchia





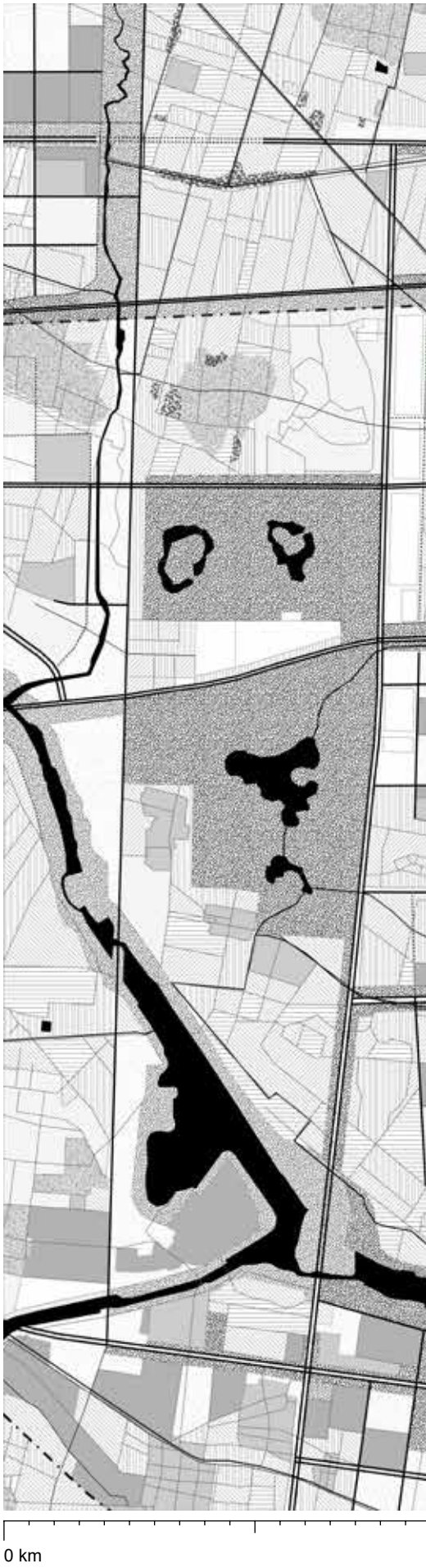
# 7.1. Paths, Concrete Roads and Small Canals

Sample A is a 9x9-kilometre area located north-west of Zhongmu Town, at the heart of the Zhengbian New District [fig. 7.4]. The site is traversed east-west by numerous infrastructural channels that connect the cities of Zhengzhou and Kaifeng as well as the Jialu river, one of the most important waterways in the Zhengbian New District. Since ancient times, this area has been crossed by County Road 006: a 20-kilometre road that links the centre of Zhongmu to Wantan Town, south of the Yellow River. Despite the great changes that have taken place over the last two decades, this road is still one of the busiest to Zhongmu Town.

## Legend

- ..... railways
- roads
- water
- built up areas
- parks and parks under construction
- crops, arable land and greenhouses
- demolished area
- artificial surfaces

7.4. Sample A: the southern portion of County Road 006





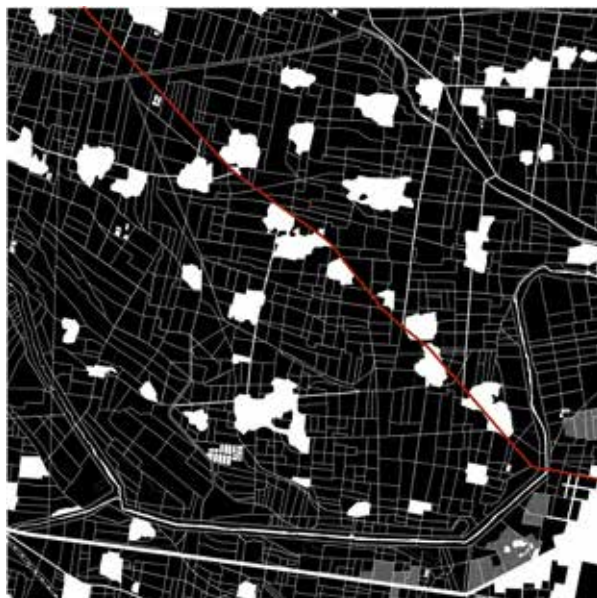


In 2003, the territory of sample A, which is representative of most of the Central Plains region, was an agrarian zone, where 53 ancient agricultural villages were located **[fig. 7.5\_2003]**. Apart from the National Road G220, which was the main route connecting the cities of Zhengzhou and Kaifeng at that time, the County Road 006 was one of the most important transport routes in Zhongmu County. In fact, this concrete road connected up to fifteen villages, and shops and commercial activities were located alongside it. Moreover, the road was the backbone of a capillary network of paths, dirt roads and farm tracks that formed the systems of mobility in the area. Together with a multitude of small canals, this dense infrastructural network allowed the area to support agrarian production, efficiently giving shape to a porous ground in which all the elements were mutually intertwined.

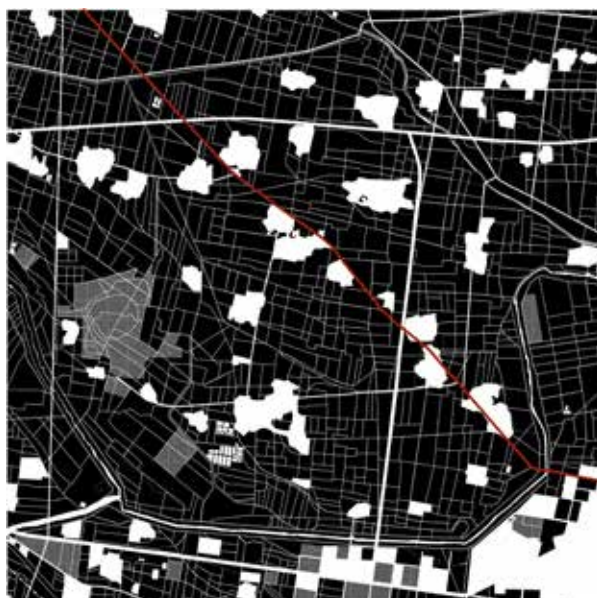
From the mid-2000s, this situation started to change with the construction of the main infrastructural corridors that would link the major urban centres of the Central Plains **[fig. 7.5\_2011]**. In fact, until that time, only the G30, a national highway built at the beginning of the 1990s in the northern area of Zhongmu County, provided a fast connection from Zhengzhou to Kaifeng. To cope with the congestion, in 2005, the Zhengkai Avenue was built, and it was opened to traffic in the following year. This 39-kilometre-long avenue is a ten-lane road with 30 metres of greenbelt on each side, with a total width of 100 metres. Four years later, the Zihuan Road was completed: a six-lane road (25 metres) with greenbelts on each side (20 metres each) that connects the new urban expansion west of Zhongmu to the Zhengkai Avenue by crossing the area north-south. Apart from these two roads, most of the major changes occurred between 2009 and 2014. In that time, the municipalities of Zhengzhou and Kaifeng began to develop the infrastructural backbones of the Zhengbian New District. Consequently, in 2009, work began on the construction of the Zhengkai Intercity Railway: a 50-kilometre high-speed intercity line connecting the city of Zhengzhou and Kaifeng in 35 minutes, reaching a maximum speed of 200 km/h (Henan Province People's Government, 2014a, 2014b, 2014c, 2014d). The suspended railway runs parallel to the Zhengkai Avenue from Zhengdong station to Songcheng station, located in the southern portion of the Kaifeng New Area. Although the line was opened in December 2014, eleven stations are still under construction and, with the exception of the terminals, only the China Green Expo station located north of sample A is in service. In parallel with the construction of the Zhengkai Intercity Railway, the Zhengbian Logistic Passageway was built in 2009: a 32-kilometre-long expressway that runs just 1.5 kilometres south of Zhengkai Avenue (SINA Henan News, 2012). This is an eight-lane road with 40 metres of greenbelt on each side, for a total width of 120 metres. Unlike the previous expressways, the greenbelts of the Zhengbian Logistic Passageway have been designed as urban parks which contain bike paths and minor channels of mobility. The reason for these additions is that during that period greater attention was given to the green areas. In fact, the Zihuan Road greenbelts were turned into parks, while work began on enlarging the Jialu riverbed and converting the agricultural riverbanks into river parks. Furthermore, in 2010, an area of 2 square kilometres was converted into the China Green Expo: a garden exhibition which includes an



2003



2011



2019



*Legend*

- county road 006
- areas under construction
- built-up areas
- permeable surfaces

**7.5.** Sample A: spatial transformations



artificial lake of 150,000 square metres.<sup>5</sup> In spite of all these transformations, until 2014 the landscape of sample A remained almost unchanged: no villages were demolished and the pre-existing pattern of small infrastructures, such as the County Road 006, was totally integrated into the new system of expressways. Consequently, the overall infrastructural network was upgraded while maintaining the porosity of the original ancient system of mobility.

In contrast with the first stage of infrastructural development, since 2014, the infrastructural system of sample A has been undergone a radical transformation **[fig. 7.5\_2019]**. Since the process of urbanisation is rapidly moving east from the Zhengdong New District, the site is now undergoing a great process of reorganisation for allocating new urban materials. In fact, as envisaged in the plans for the Zhengbian New District, this area is expected to be one of the main residential nuclei of the new urban expansion (ARUP Engineering Consulting Company et al., 2009, 2010; Zhengzhou Municipality, 2009; Zhongmu County Urban and Rural Planning Bureau, 2016). Consequently, in recent years, 31 ancient villages have been demolished and the land redeveloped (about 3.5 square kilometres).<sup>6</sup> In their place, 85 new compounds, mostly high-rise buildings, have been constructed and 28 sites are under construction today. In order to organize the new settlements, a grid of four-lane roads has been built (and is still partially under construction), dividing the area into mega-plots that range from 500x500 to 1,000x1,000 square metres.<sup>7</sup> In the meantime, since this site is also designated as an ‘area for cultural activities’, the environmental system has been radically restructured (Zhengzhou Municipality, 2016; Zhongmu County People’s Government, 2016a, 2016b; Zhongmu County Urban and Rural Planning Bureau, 2016, 2016). In 2016, the Zhengzhou Fantawild Dreamland was constructed: an amusement park that occupies an area of 1.2 square kilometres on the northern side of the Zhengbian Logistic Passageway. At present a ‘historical park’ is under construction on over 500,000 square metres south of the Zhengkai Intercity railway station.<sup>8</sup> Together with the China Green Expo, all these amusement parks form a 5 square kilometre corridor for leisure activities. Finally, while greenbelts have been realized along all the main streets, the Jialu riverbed has been enlarged from 30 to 150 metres, and its riverbanks have been totally transformed into linear parks. As a result, today, the sample A site has 175 kilometres of new roads and 12.5 square kilometres of parks.

The transformations that have been executed in the territory of sample A since 2014 have not been an addition to the pre-existing infrastructural network. On the contrary, the new infrastructural elements progressively overlap and ultimately replace the previous ones. In spite of this, until its complete substitution, the ancient network of infrastructure is integrated into the new system and continues to function well **[figs. 7.7-7.8-7.9]**. The County Road 006 is a perfect example of this: while the western part has recently been dismantled, the eastern section remains one of the busiest roads to the centre of Zhogmu **[fig. 7.6]**.



7.6. Along County Road 006, Zhongmu County, April 29<sup>th</sup> 2019, © Leonardo Ramondetti



**7.7.** Farm track north of Xishilipu Village, Zhongmu County, April 29<sup>th</sup> 2019, © Leonardo Ramondetti



**7.8.** Open-air theatre in Zihuan Road, Zhongmu County, April 29<sup>th</sup> 2019, © Leonardo Ramondetti






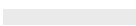






**7.9.** Dirty road in Gangtouqiao Village, Zhongmu County, April 29<sup>th</sup> 2019, © Leonardo Ramondetti



## 7.2. Highways, Railways and Rivers

Sample B is a 3x3-kilometre area located north of Zhengdong railway station, between the Zhengdong CBDs and the university town [fig. 7.10]. The site is the physical intersection of several major infrastructures for rapid mobility: the highspeed railway line that links Zhengzhou to northern China; the third ring road of Zhengzhou city (i.e. motorway G107); and three of the major traffic routes that connect various areas of the Zhengdong New District (i.e. Longhu Middle Ring Road, Longhu Outer Ring Road, and Ping'an Avenue). The site is also crossed by the Xiong'er and Jialu rivers and the Dongfeng canal, which are the most important waterways for the correct functioning of the Zhengdong New District water system, as well as for the water supply network for Zhongmu County. Finally, this area is also where three ecological corridors merge: the greenbelt that runs along motorway G107, and the parks sited along the main waterways. Thus, by examining how this territorial sample has changed over time, it is possible to understand how the construction of the major infrastructural channels has affected the landscape.

### Legend

	railways
	roads
	water
	built up areas
	parks and parks under construction
	waiting land
	trees and vegetation
	artificial surfaces

7.10. Sample B: intersection of canals in Zhengdong New District





As for sample A, the diachronic description of the spatial transformations in sample B reveals the gradual shift from a dense network of minor roads to a system of major infrastructural roads dividing the land into mega-plots. As a result, if, in 2003, the non-permeable surfaces occupied about 720,000 square metres of the area, these now total 2,900,000 square metres, of which almost 2,000,000 square metres is accounted for by the paved surfaces of roads and railways, whereas the footprint of buildings takes up only 615,000 square metres.<sup>9</sup> Furthermore, since the new road network is mostly four-lane roads, it rigidly partitions the area into sections as well as splitting apart the systems for rapid and slow mobility. Thus, what emerges is a change in the relation among different urban artefacts once based on their proximity, as was the case, for instance, in the ancient villages where the spaces for different functions intermingled. On the contrary, the new system of mobility allows fast connections between distant elements while the subdivision of the land marks out clearly defined functional areas such as public parks, schools or dwelling compounds.

In parallel with this process, another landscape restructuring occurred regarding the new water system **[fig. 7.11]**. Due to the proximity of the Yellow River, the area of sample B has always been a lowland with a plentiful supply of water: in the southern sector, there is the confluence of the Xiong'er river with the Dongfeng canal, while the northern part is crossed by the Jialu river. In light of this, the place had been modelled through time to be a large reserve for fish farming. Until 2003, a widespread system of small canals collected and distributed water, ensuring the functioning of 492 fishponds that occupied an area of 207,500 square metres.<sup>10</sup> All this began to change in 2004, when work began on implementing Kisho Kurokawa's plan for the Zhengdong New District. The plan envisaged the creation of three lakes connected by a system of navigable canals (K. Li et al., 2010b, 2010c, 2010d; Y. Zhao & Sun, 2010). Consequently, the entire water system of Zhengdong needed to be rationalised and upgraded. Thus, between 2004 and 2009, the artificial riverbeds of the Xiong'er river and the Dongfeng canal were both widened to 95 metres, and a system of dams was built to retain water. In parallel with the urbanisation process, in 2009, the network of irrigation canals was done away with in the southern sector of sample B while various fishponds in the northern part were drained. In 2016 the reorganisation of the water system was finalised by widening the Jialu riverbed from 10 metres to 60 metres and building a further waterway to connect Longhu Lake directly to the Dongfeng canal. In the meantime, the territory was totally drained, and, apart from a few small lakes inside the university campuses and the new compounds, all the water is now collected in the main canals. Despite the water shortages in the Zhengdong New District (Qin, 2009), at present, this water system is working to maintain the multitude of parks that have been created along the main infrastructural corridors. This demonstrates a shift in thinking in that the waterways are no longer considered as part of a productive system, but as a landscape feature for the beautification of the new town **[figs. 7.12-7.13]**.



2003



2011



2019



*Legend*

- water system
- areas under construction
- built-up areas
- permeable surfaces

**7.11.** Sample B: spatial transformations



In fact, the construction of new roads and waterways has been followed by the creation of a pervasive system of parks. On the one hand, the riverbanks of the main canals have been progressively transformed into river parks with a width that ranges between 50 and 150 metres; on the other, greenbelts that commonly reach 15 metres have been realized alongside the main traffic routes. Furthermore, as was envisaged in the plans for the new towns, the ‘ecological corridor’ running in between the railway line and the motorways has been partially developed. As a result, in sample B, parks account for a total area of 2,840,000 square metres, and another 650,000 square metres are under construction. In contrast, all the agricultural land has been converted with a total loss of about 5,000,000 square metres of arable land.<sup>11</sup> As for the transformations that have affected the water system, the pervasive system of parks evidences the shift from a landscape suited to productive activities to an environment that promotes an image of health and wellbeing [figs. 7.14-7.15-7.16-7.17].



**7.12.** Longhu Lake, Zhengdong New District, April 23<sup>rd</sup> 2019, © Leonardo Ramondetti



**7.13.** Along Xiong'er River, Zhengdong New District, April 26<sup>th</sup> 2019, © Leonardo Ramondetti



**7.14.** Zhengzhou Forest Park, Zhengdong New District, April 23<sup>rd</sup> 2019, © Leonardo Ramondetti



**7.15.** Central Canal, Zhengdong New District, April 23<sup>rd</sup> 2019, © Leonardo Ramondetti





**7.16.** Longzihu Park, Zhengdong New District, April 26<sup>th</sup> 2019, © Leonardo Ramondetti




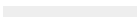







**7.17.** Longzihu Lake, Zhengdong New District, April 26<sup>th</sup> 2019, © Leonardo Ramondetti



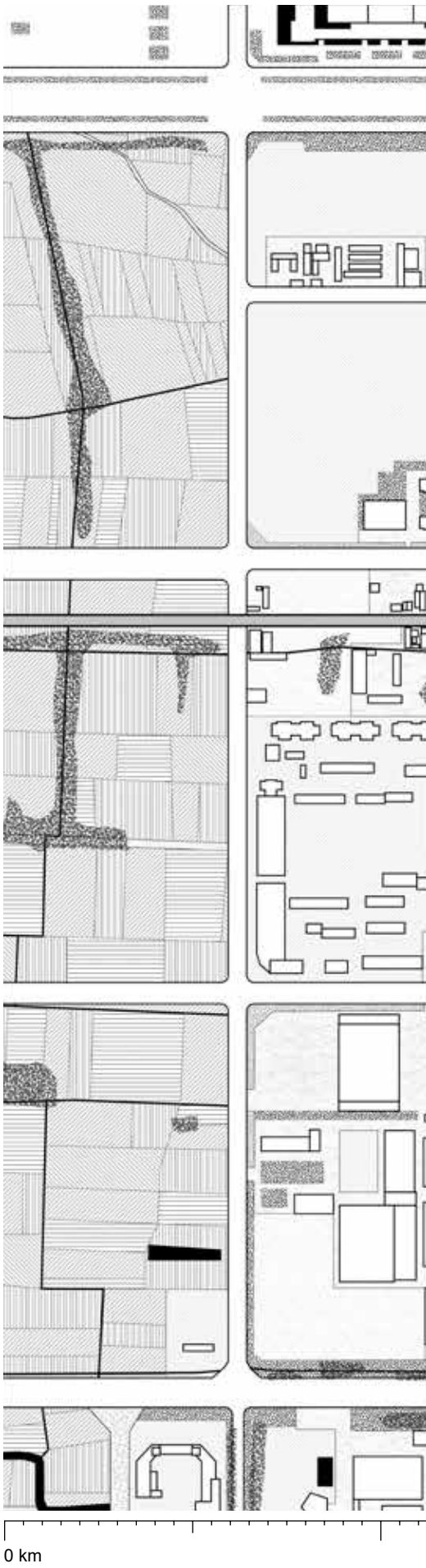
### 7.3. Grids

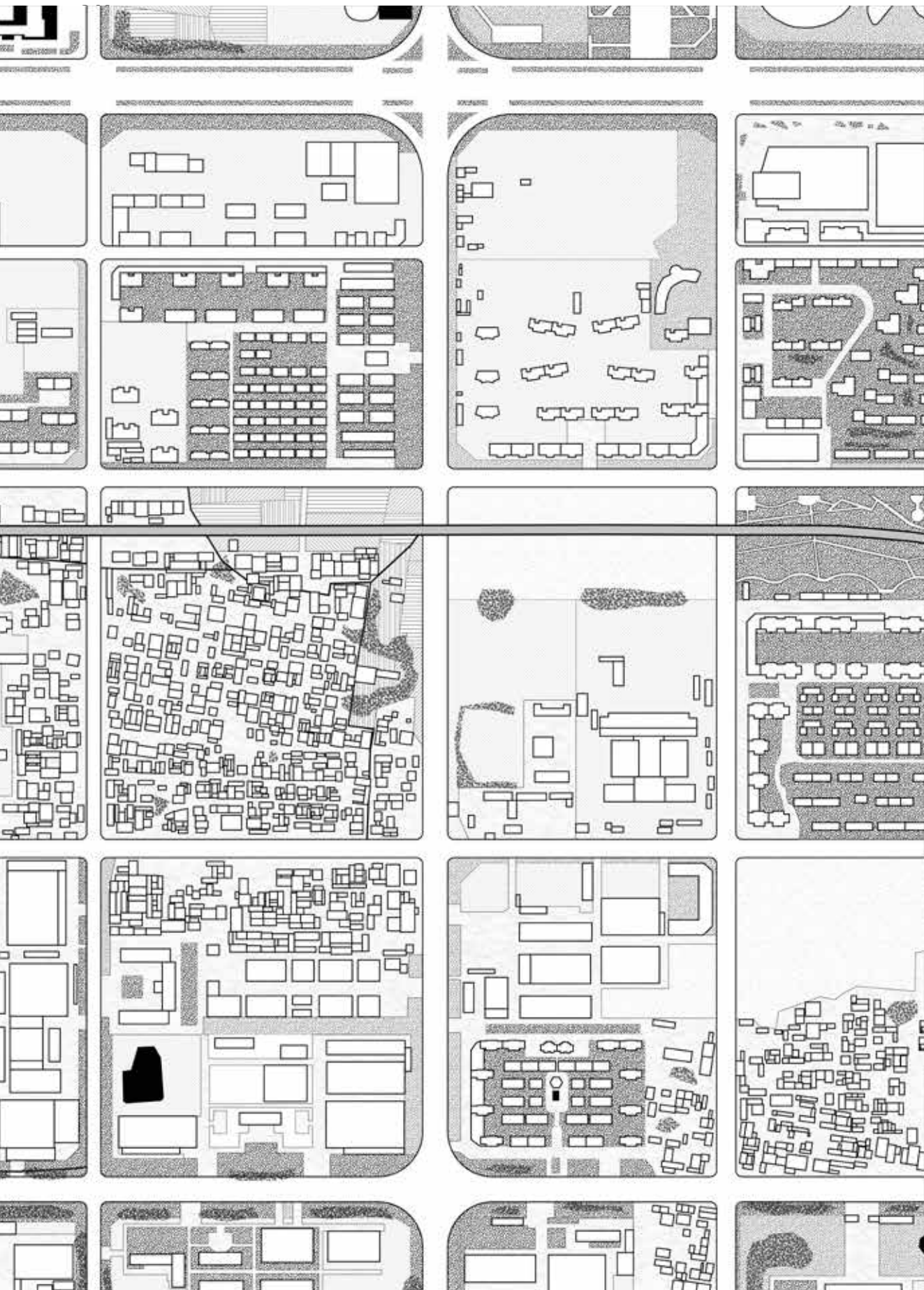
Sample C is a territory of 2x2 kilometres located in the Kaifeng New Area, the eastern part of the Zhengbian New District [fig. 7.18]. At present, this site, and the entire Kaifeng New Area, is a mix of different programs, uses and morphologies: agricultural fields, industrial zones, malls, leisure areas, cultural facilities, agricultural villages and luxury villas, all side by side. These different elements and functions share the same infrastructural network. Hence, by observing the transformations in sample C, it is possible to explore how the infrastructural system has been modified to make it possible.

*Legend*

-  railways
-  roads
-  water
-  built up areas
-  parks and parks under construction
-  crops and arable land
-  waiting land
-  trees and vegetation
-  artificial surfaces

**7.18.** Sample C: the grid of Kaifeng New Area





In 2003, the area of sample C was mainly for agriculture and only a few shops and facilities were located inside the two villages of Yanzhai and Maozhai. As for sample A and B, this site was also characterized by a dense network of small infrastructures mainly composed of dirt roads and irrigation canals **[fig. 7.19\_2003]**.

In 2005, work began to urbanize the area, as envisaged in the Kaifeng General Plan 1995-2010.<sup>12</sup> The plan foresaw the southern portion of sample C as part of the Kaifeng Free Trade Zone: a satellite district for industrial activities to be developed over 15 square kilometres and located on both sides of the ancient railway that links Kaifeng to Zhengzhou. Consequently, in 2005, the southern part of Maozhai village was demolished and a six-lane road (the Songcheng Road) was built to connect the area to Kaifeng city centre. Moreover, between 2007 and 2008, the Zhengkai Avenue was realized, crossing the northern part of the site, to connect Kaifeng to the Zhengdong New District. Consequently, few industries were established in the area occupying the southern portion of sample C **[fig. 7.19\_2007]**.

Within the framework for promoting the Zhengbian New District, since 2009, the transformations in site C have gained momentum. The new plan for Kaifeng (2010-2020) envisaged the doubling in size of the existing city by urbanizing an area of 40 square kilometres west of the city centre, which also includes the northern part of the satellite town planned in 1995.<sup>13</sup> The new urbanisation organized the landscape based on an orthogonal grid layout which defines 500x500-metre mega-plots. With the exception of the major avenues, the roads composing the grid all have four-lanes, ranging in width from 25 to 30 metres. Each plot is surrounded by outer greenbelts separating the inner areas from the main streets (some are still under construction). Such greenbelts are designed to be urban parks that contain both the minor system of mobility, such as bike path and pedestrian streets, and the main waterways. Formed on the basis of this layout, each plot is practically identical **[fig. 7.19\_2019]**. As a result, Kaifeng New Area is populated by a large variety of artefacts and uses. In fact, the area hosts nine factories and two of the main shopping malls in the city.<sup>14</sup> Seven university campuses have been established in the northern part of the grid, while in 2013 the Kaifeng Municipal government planned to build in the new town nineteen primary schools, seven junior high schools and three high schools (Henan Province People's Government, 2013).<sup>15</sup> Moreover, other public facilities such as the Kaifeng City Museum and the Kaifeng Citizen Square are located at the centre of the area. Finally, even if in recent years several plots have been occupied by compounds built by various real estate companies, eleven agricultural villages are still present in this zone, and the plots which have not yet been colonized are still used for farming. Hence, as shown in sample C, the grid of Kaifeng, like others under construction in new urban areas in the Central Plains, are devices that homogeneously equip the whole territory, shaping a vast, open landscape to assure the correct functioning of programs and morphologies radically different from one another **[fig. 7.20]**.

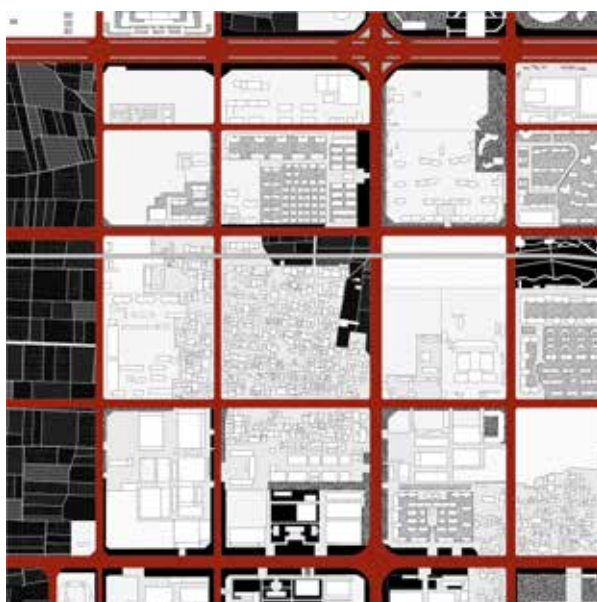
2003



2007



2019



*Legend*

- infrastructural system
- areas under construction
- built-up areas
- permeable surfaces

**7.19.** Sample C: spatial transformations





**7.20.** Inside the grid of Kaifeng New Area, May 2<sup>nd</sup> and 3<sup>rd</sup> 2019, © Leonardo Ramondetti



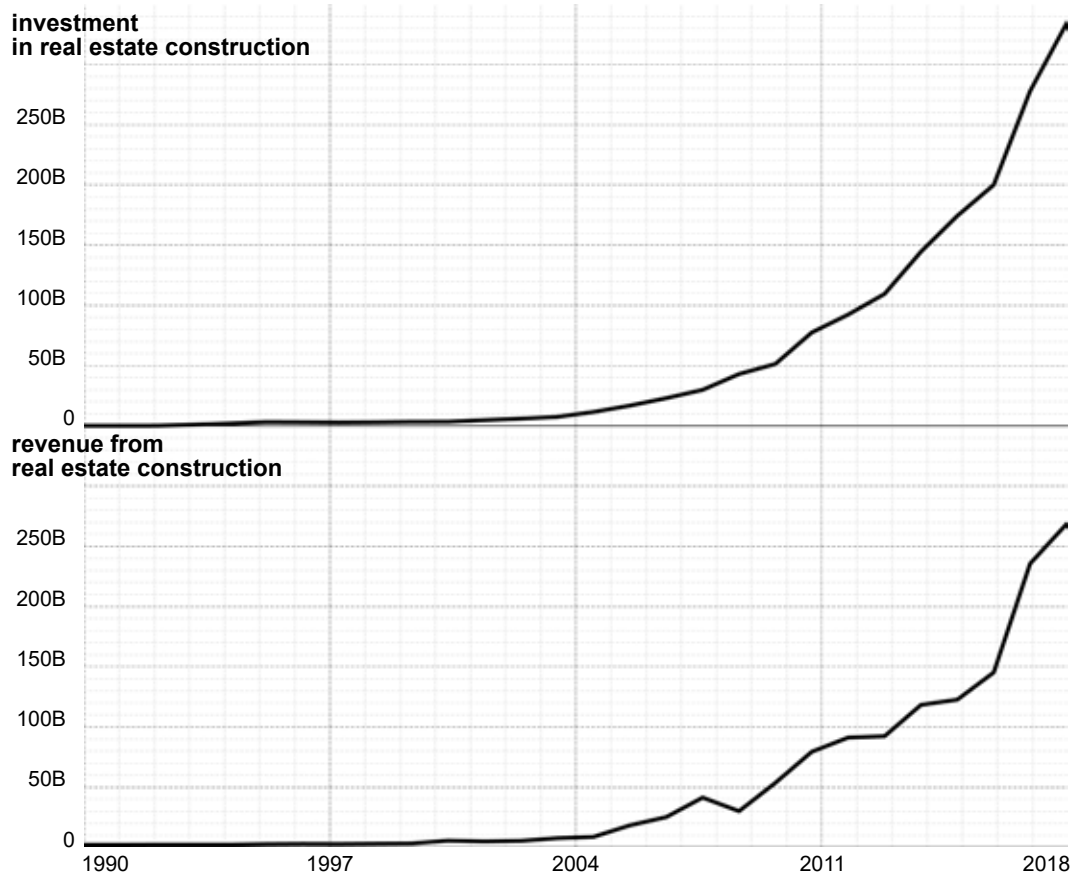
## Chapter 8

# Juxtaposing Settlements

Over the last 25 years, real estate investments in the Henan province have grown from 5 to 709 billion CNY (Henan Province Bureau of Statistics, 2018). Consequently, the quantity of developed areas on the market has increased dramatically from 2,250 to 133,138 thousand square metres, and the turnover expanded from 1.6 to 713 billion CNY. As part of these figures, in 2017, construction for residential uses accounted for 88 percent of the total transactions, and investment in residential buildings amounted to 533 billion CNY, providing a total income of 590 billion CNY (Henan Province Bureau of Statistics, 2018). This enormous property boom, which has characterized all the municipalities of the Henan province, is completely transforming the territory of the Central Plains **[fig. 8.1]**. If until 2010, the major changes occurred mainly in the urban fringes of the major cities or in their new towns, over the last decade the whole territory of the Central Plains has witnessed the rise of a radical process of land restructuring. This is evident when considering the heterogeneous varieties of dwellings that are mixed today in areas such as the Zhengbian New District. A condition that illustrates how institutional and market forces are progressively transforming the way of living and perceiving not just urban areas, but the entire territory. Besides the well-known high-rise apartments that epitomize the rapid urbanisation of China (Armando & Carota, 2019), in the Zhengbian New District, four types of settlements can be identified: the ancient agricultural villages, the modern agricultural villages, the new agricultural towns and the compounds of real estate companies.

Nowadays, these different dwellings co-exist alongside one another, whether in urban areas such as the new districts of Kaifeng, Zhengzhou and Luoyang, or in rural zones. A perfect example of this incredible mix of settlements is Yanming Lake Town, in Zhongmu County, an area located 15 kilometres north of Zhongmu

Town, 35 kilometres east of the Zhengdong New District, and 15 kilometres west of the Kaifeng North railway station in Kaifeng New Area. At present, Yanming Lake Town comprises 21 administrative villages, of which two are new agricultural towns, for a total resident population of 28,000 inhabitants, whose average income is 1,300 CNY per month.<sup>16</sup> According to the plans for the Zhengbian New District, the site is part of the ‘ecological corridor’ south of the Yellow river; therefore, it is designated as an ‘agricultural park’ based on well-being activities and efficient agricultural production (ARUP Engineering Consulting Company et al., 2010).<sup>17</sup> To accomplish this, the plan provides for the development of new settlements and the conversion of the existing villages. In light of these transformations, in this chapter I investigate the spatial features of the four different types of settlements that make up Yanming Lake Town: the ancient village of Yuezhuang (sample A), the modern agricultural village of Weigang (sample B), the Zhugu New Agricultural Town (sample C), and the Chang Jiyun compound developed by the real estate company Vanke (sample D) [fig. 8.2]. This study highlights a progressive shift in dwelling typologies adopted for country areas: a shift that manifests the change in perception of rural zones that were once considered isolated from the main urban transformations. On the contrary, ongoing transformations demonstrates how the institutional distinction between urban and rural areas is progressively blurring.



**8.1.** Real estate investment and revenue in Zhengzhou Municipality



## ANCIENT AGRICULTURAL VILLAGES

### SAMPLE A [1.5x1.5 km<sup>2</sup>]

#### Yuezhuang Village

Total area: 180,000 m<sup>2</sup>

Total housings: about 250 units

Inhabitants: about 900 people

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## MODERN AGRICULTURAL VILLAGES

### SAMPLE B [1.5x1.5 km<sup>2</sup>]

#### Weigang Village

Total area: 100,000 m<sup>2</sup>

Total housings: 264 units

Inhabitants: about 1,000 people

Construction time: 2013

---

## NEW AGRICULTURAL TOWNS

### SAMPLE C [1.5x1.5 km<sup>2</sup>]

#### Zhugu New Agricultural Town

Total area: 725,000 m<sup>2</sup>

Total housings: 1,682 units

Inhabitants: about 5,500 people

Construction time: 2017

Average prize: 4,500 CNY/ m<sup>2</sup>

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## COMPOUNDS

### SAMPLE D [1.5x1.5 km<sup>2</sup>]

#### Chang Jiyun Compound

Total area: 125,000 m<sup>2</sup>

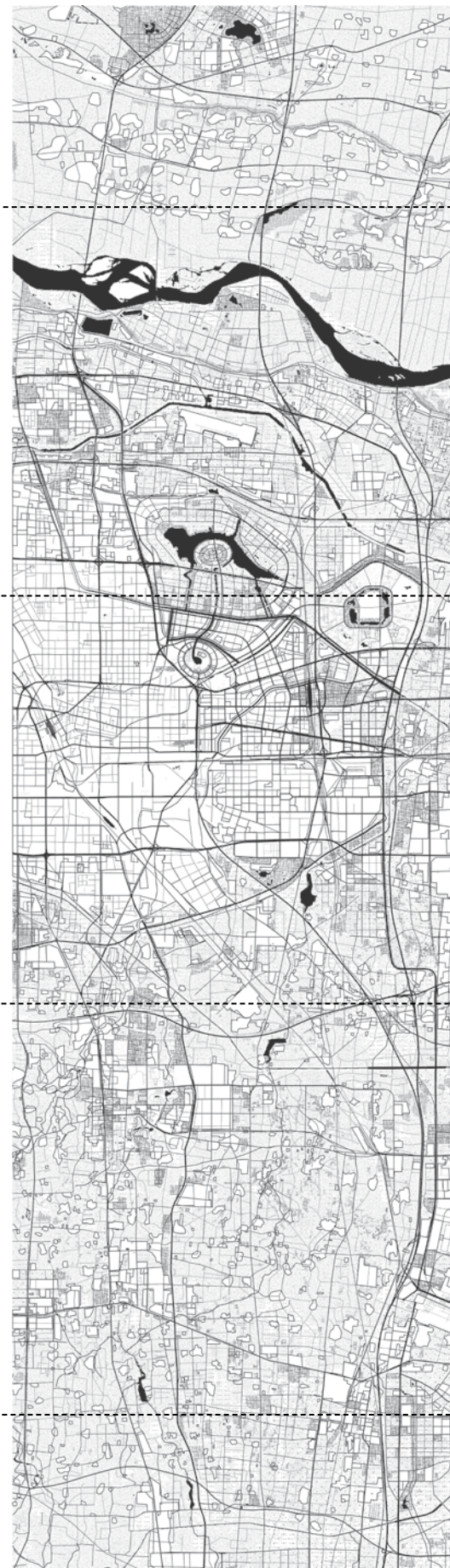
Total housings: 200 units

Inhabitants: about 600 people (expected)

Construction time: 2018

Average prize: 15,000 CNY/ m<sup>2</sup>

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## **The Life at the Edge of the New District**

*October 14<sup>th</sup> 2017*

Most books and articles depict Chinese new towns as poor imitations of European cities: full of empty skyscrapers and abandoned shopping malls. These mainstream descriptions illustrate one side of the coin, but what about the other side of these new urbanisations? What does it mean to inhabit the fringes of a new town? To answer these questions, I have convinced my travel companion, the photographer Samuele Pellecchia, to visit Yangmin Lake Town and explore the lesser known 'life at the edge'. Despite the name, Yangmin Lake Town is not properly a city; it is not even a single settlement, but an administrative area located in the northern part of Zhongmu County, south of the Yellow River.

After breakfast in our hotel in Zhongmu, my companion and I take a taxi and head towards the Yellow River. Soon after passing the Zhengkai Avenue, we find ourselves in the countryside. Although we are at the heart of the Zhengbian New District, there are no traces of the ongoing process of urbanisation. We decide to search further for any visible signs of development, so I ask the driver to turn off the four-lane road and to take a side road. After a while, we stop in a village and we get out to have a look. This dense settlement is composed of a hodge-podge of dwelling styles. Some are in red brick with grey roof-tiles; these recall the stereotypical image of traditional Chinese buildings just like those in the Antonioni movie *Chung Kuo, Cina* set in Henan. However, this scene appears much less bucolic since the majority of these houses have recently been 'improved' using steel structures and prefabricated concrete walls to add three or more storeys. Due to the increased height of the new constructions, the streets look like narrow alleys running between five- or even six-storey buildings. The muddy lanes are filled with a motley assortment of cars, small tractors, agricultural tools and bins; along the main street, hammocks hang from trees and tables are scattered all around. It is probably used as the public space of the village. However, at the moment, all we can see are dogs and chickens roaming freely along dirty streets. Presumably most of the villagers are at work, and we just hear voices coming from the houses. We wander around a bit before going back to the taxi and continuing our journey.

After passing another similar settlement, our attention is caught by a row of houses in the distance. We ask the taxi driver to take us there, and soon we pass under a steel structure with Chinese characters hanging from it: the village gate! The first thing that strikes us is that this is a different type of settlement. The houses are all identical: featureless three-story concrete boxes with an enclosed yard at the front. They form unbroken terraces of semi-detached houses. We move along the concrete street to the centre of the village: a large square with a Chinese flag flying in the middle. Some kids are playing in there, but most of the space is taken up by crops and panicles left here to dry. All around are the public buildings, such as the school and the town hall. At first sight, the village seems to be an attempt at creating a space of socialist monumentality in the rural area: an updated version of the agrarian commune based on an

egalitarian system that reflects a clear political ideal. This, together with the poor condition of the structures, makes us think the settlement must have been built in the late-1970s, but surprisingly it is not so. Walking around, we see on a gate a date painted in red: 2013! We ask a young girl passing by and she confirms our hypothesis, the village was built just five years ago, and it is the result of the new socialist countryside policies: an attempt to improve the living conditions of people inhabiting in rural areas. Using the translator of our phone, we manage to ask the girl if she is happy living in the new village, and she is.

We decide to continue our excursion. We are driving along when Samuele suddenly asks the driver to stop. Despite being in a new district just thirty kilometres east of one of the most vibrant cities in China, right in front of us is a young mother with a baby on her back wrapped in colourful blankets; she is kneeling picking vegetables. But she is not alone, the entire field is full of peasants tilling the land using hand tools. This scene underscores the glaring contradictions of the rural areas: in the villages, brand-new cars are parked all around, here, just a few small tractors and simple farm machines can be seen. Paradoxically, in an emerging industrialized country, where trains exceed 300 km/h, people still work the land using primitive methods. While Samuele is taking some pictures, I turn and spot what I am looking for. Within this agrarian landscape, a crane stands as a beacon of urbanisation in a sea of agrarian fields: something is happening there!

As we approach the spot, the small road we are on turns into an expressway with greenbelts and gardens; we finally arrive in the core area of Yangmin Lake Town where various plots of land have recently been cleared, many sites are under construction and several high-rise buildings are rising. We stop in a parking lot where a man dressed in a smart uniform guards a gate. We approach him and ask whether it is possible to visit the site under construction: a luxury housing complex promoted by the Vanke real estate company. He pulls out his phone and tells us to wait. In a few minutes, a young woman appears dressed in business clothes. In simple English, she asks if we want to have a tour inside the compound. Inside the gate, we find ourselves in an atmosphere completely detached from its surroundings. A path through a bamboo grove ends on a green lawn running down to a large artificial lake surrounded by lush vegetation. In this peaceful landscape, we can hear almost no noise if not the sounds of nature. This scenic effect is even more astonishing when the paved path goes one meter under the level of the lake, and we unexpectedly find ourselves walking like Moses through the water. Around us are some children trying to catch little fish just below the calm surface of the lake while their parents are saying goodbye to the staff. About two hundred meters away is the exhibition centre: a huge building in the style of an exclusive country club, with great windows looking out onto the beautiful scenery. Entering the building, we pass through a series of bright, carefully designed rooms and beautifully furnished: a lobby, a lounge area, a library filled with books about architecture and design, and a playroom with billiards and games for children. Finally, our guide stops in front of a huge model that displays the layout of the urban area. 'The majority of the apartments have already been sold, but there are still some houses available', she says before starting to meticulously describe the different housing typologies currently under construction. In the meantime, another woman brings us a cup of hot tea, and someone else gives us several brochures with plans and images that illustrate the large variety of available dwellings. When the woman concludes the presentation, we move to another room



in which several stands display the high-quality building materials and fixtures adopted for the construction. Here pipes, building insulation, bathroom fixtures and security doors are exhibited to celebrate the progress of technology in the construction industry.

When we are finally about to leave, our guide asks us if we would be interested in visiting the showhouses. As she explains to us, 'even if the site is still under construction, a building for each housing typology has been already completed so that visitors and buyers can experience what life in Vanke's compound is like'. Of course, we accept. The tour inside these 1:1 scale models is something astonishing. The houses look as if they are currently inhabited; as if their owners have kindly let us inside their private realms. Not only are the dwellings finished with wooden flooring, carpet, and painted walls; not only have they been stylishly furnished with expensive ceilings, luxury rugs and fancy tables; but there are even fake personal objects to create atmosphere, such as pictures hanging on walls, clothes inside the wardrobes, and laptops open on the study desks. Even the fridge is full of plastic foods. Of course, everything is westernized: not chopsticks, but cutlery; not Chinese food, but baguettes and croissants; not Chinese books, but English ones. That's a clear message here: to live in a Vanke compound means to be part of a small more-than-bourgeois elite of international businesspeople. This mood is emphasized by the presence of luxury conveniences: each dwelling has a private lift, and on each rooftop is a gazebo with a jacuzzi, not to mention walk-in closets filled with replicas of Rolex watches.

Once we conclude our visit to the real estate compound, we visit one of the recently-built new agricultural towns, a product of the new socialist countryside program. East of the core area of Yangmin Lake Town is Zhugu, one of the biggest developments: built to replace four ancient villages. The taxi turns left at the end of the four-lane road currently under construction, and it crosses an open gate with an empty guardhouse. We immediately understand that the modern village we visited before is now completely out of date: not only in terms of building construction and urban layout, but also the imaginary promoted. First, Zhugu Agricultural Town is much bigger than any other settlement in the area, the monotonous rows of semidetached houses seem to stretch for miles. Second, the housing type adopted is dissimilar from that of the modern agricultural villages. Construction is based on a concrete structure filled by bricks with composite tiled roofs. Bow-windows, garages, and a small garden at the front make these dwellings somehow similar to mainstream suburban villas; however, the housing density of the settlement is much higher than in any non-Chinese suburban developments we have ever seen. The large houses are close to one another, and as their footprint is limited, they extend upward for two or three storeys. The taxi moves on and we arrive at the centre of the agricultural town. Here is a big square surrounded by administrative buildings and facilities, such as the school, medical centres and shopping areas. The latter have probably been built recently, so, for now, most of them are still empty. A canal crosses the town and divides it into two parts. Presently, this is just a small trickle of water with wasteland along the banks, but a poster shows that it will soon become the 'green axis' of the new town with trees and gardens all around. After crossing the waterway, the road becomes a dirt path, so we decide to continue on foot. The rows of houses seem to have no end. Although some of them have still to be finished and the streets have still to be tarmacked, the majority are already inhabited. Most of the front yards are used to dry crops and corn, some of them have vegetable gardens, others are used to store

tools for agriculture or construction; just a few have ornamental gardens with bushes, shrubs and flowers. Several people are walking along the street. Seeing us, they look puzzled and a little taken aback, but after we wave and greet them, their expressions turn friendly and smiling. A group of young kids is particularly intrigued by our presence. Three of them are sitting on a small motocross bike while one is following another on bicycles. They start to move around us, asking something in Chinese and laughing. We say hello to them, and finally the bravest gets off his bicycle and asks us to get a shot all together. Just after taking the picture, a woman comes out of her house. Dressed in light teal pyjamas and light teal sneakers she approaches us smiling. 'Hello! Do you need help?', she enquires in perfect English. Seeing our surprise, she immediately clarifies: 'I am a teacher, I teach English at the middle school in the village'. After introductions, we take the opportunity to have a chat and ask her something about the new settlements. 'It's about a year since I moved in with my family. The new house is spacious, and there are many conveniences compared with our previous place. Before this, we lived in the ancient Zhugu Village, just at the end of the road, which has just been demolished'. When we ask her whether they were given the choice whether remain in the previous village or move in to the new one, she looks at us in surprise and says: 'Of course not! But, anyway, why? Who would want to live there? Nowadays, there are just a few families left there, but they will probably move soon'. After taking pictures together with the woman, we decide to have a look at the old village, or what is left of it.





The teacher was right, crossing the last line of houses we suddenly see a large expanse of ruins. Here is the ancient Zhugu village. We decide to have a walk inside this field of devastation, where only a few walls stand as survivors in a landscape of ash and dust. In the middle of this no-man's land, a house surrounded by rubble piled as high as its rooftop catches our attention. This quaint, ancient building looks like it is still inhabited. We approach the construction and I peep inside the courtyard gate. Plastic basins and small tables are scattered all over the patio, wooden tools lean against the walls, and wet laundry is hanging from the window. Sitting on a stool is an old man working. As soon as he sees us, he waves and turns to call someone inside. Suddenly an old woman dressed in a blue jacket with a scarf over her head walks out of the house and comes forward until she stands less than one meter from us. We stare at each other. Her face, furrowed by deep lines, hints first at doubt, then her expression turns to surprise. She says something to us in Chinese and points to the camera. Samuele uses gestures to ask her if he can take have a picture, and she starts smiling and laughing. We take some pictures while the woman continues to speak us in Chinese and touch our face and our hands: we became friends. After a while we say goodbye and we continue our journey. In this landscape of ruins it is still possible to recognize houses, schools, abandoned objects and furniture.

After wandering around a little, we go back to the taxi and return to Zhongmu. Again, the taxi runs along the main roads and highways that cross Zhengbian, crossing a mixture of scenes: agricultural fields, factories, huge building sites, villages, and, then, fields again. Our journey has been significant in understanding transformations that come with the construction of new towns in rural areas. It seems obvious that we are witnessing a great process of urbanisation that is radically affecting the whole area in many different ways, but the main question still remains: what is the purpose of this great process? What kind of city is ultimately expected to come out of all this?

# 8.1. Ancient Agricultural Villages

Most of the traditional settlements in the Central Plains of China are agricultural villages. Since ancient times, these villages have developed spontaneously and even in the last century their urban layout remained basically unchanged (Knapp, 1992). Even if ancient villages differ from one another, several common features can be identified: their average size ranges from 120,000 to 250,000 square metres; the number of houses varies between 350 and 450 and they are normally populated by 1,000-1,500 inhabitants (Lee, 2016a). However, the major ones may even be twice as large. Sample A (1.5x1.5 kilometres) describes the case of Yuezhuang: a village that has the typical layout and spatial organisation of most of the ancient agricultural villages in the Central Plains [fig. 8.3].<sup>18</sup> These are generally compact settlements, whose borders are marked by vegetation, small artificial ponds, and minor public spaces [fig. 8.4]. The town hall is a small building sited at the centre of the village, which corresponds to the main crossroad. On the other hand, other public amenities, such as schools or waste collection and recycling areas, are usually located on the outskirts of the settlements; while commercial activities, small warehouses and restaurants can be found inside normal houses. Most of the ancient villages have specific spaces for agricultural production and crop collection which are generally located at the village's fringes. The courtyard houses that compose most of the settlements are sited side by side, with just narrow lanes between. Since the dwellings are north-south oriented, the majority of the roads cross the settlements in an east-west direction.

## Legend

-  buildings
-  crops and arable land
-  fishponds
-  water

8.3. Sample A: Yuezhuang Village





0.5

1.5





**8.4.** Axonometric view of Yuezhuang Village







**8.5.** Beidi Village, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



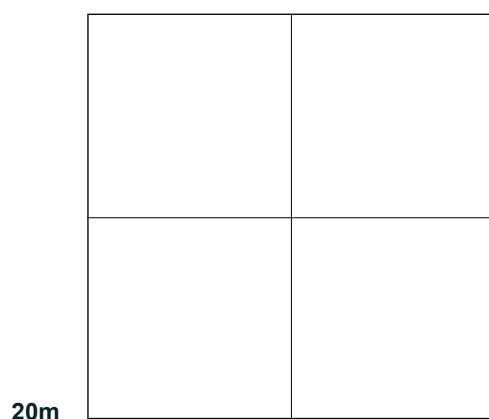
**8.6.** Lujia Village, Zhongmu County, April 30<sup>th</sup> 2019, © Leonardo Ramondetti



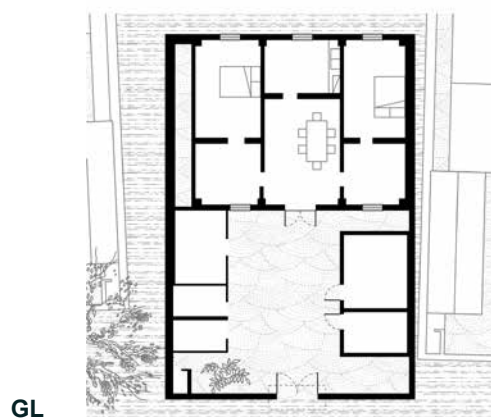
**8.7.** Beidi Village, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



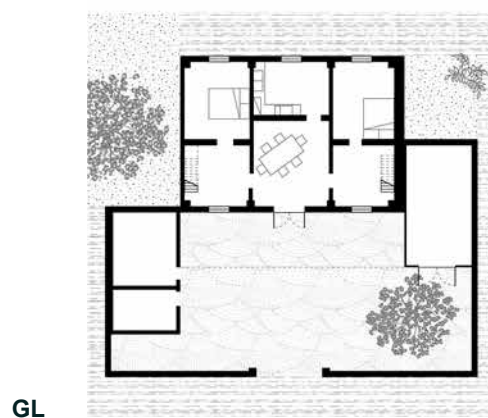
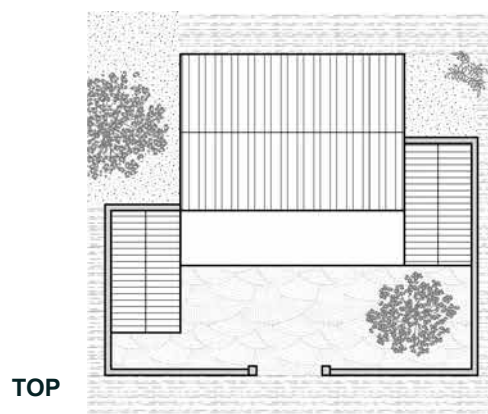
Most of the ancient agricultural villages are composed of two different housing typologies **[figs. 8.5-8.6-8.7]**. The oldest dwellings are courtyard houses with a dimension that ranges from 200 to 250 square metres **[fig. 8.8]**.<sup>19</sup> Commonly, the courtyards are bounded by rectangular blocks that occupy a total area of 150 square metres. Each building is in brick with wooden trusses supporting the pitched tiled gable roof **[fig. 8.9-8.10]**. Apart from the decorations of the roof ridge and the courtyard gate, the complex presents a simple linear form **[fig. 8.11]**. The house consists of a rectangular one-storey or two-storey building located on the north side of the court, with the entrance and the windows facing south. Internally the volume (about 95 square metres) is divided in six rooms, and it is organized as follows: at the centre is the living room (about 18 square metres), which is connected to three smaller spaces, commonly used as the kitchen (about 9 square metres each), and two bedrooms (about 14 square metres each). The other buildings of the courtyard house, are smaller structures (no more than 20 square metres) sited on the eastern and the western side of the yard. These structures are not directly connected to the main building, and their internal area is divided into little rooms used as work spaces, stores, henhouses, or small barns. The courtyard is enclosed by walls and has a gated entrance on the southern side. Since the mid-2000s, due to the first initiatives under the New Socialist Countryside program, many families have replaced the ancient houses with a modern building, a copy of that in the modern agricultural villages (see the next subchapter). Hence, the overall urban layout of the villages remains the same, since no further houses were built during that period. Major changes have occurred since 2010 (and particularly in 2012 and 2013), most of the older buildings have been extended by their owners by adding steel structures clad in prefabricated concrete or in corrugated steel. Most of the new structures have completely covered the entire courtyard, adding up to six or seven stories to the existing dwelling. As result, several villages are now composed of rows of massive compact buildings (20x15 metres) separated just by narrow lanes **[fig. 8.16]**.



Typology A



Typology B



8.8. Housing typologies of Yuezhuang Village



**8.9.** Zhugu Village, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



**8.10.** Lizhuang Village, Zhongmu County, April 30<sup>th</sup> 2019, © Leonardo Ramondetti











**8.11.** House close to Laitongzhai Village, Zhengzhou Municipality, April 24<sup>th</sup> 2019, © Leonardo Ramondetti



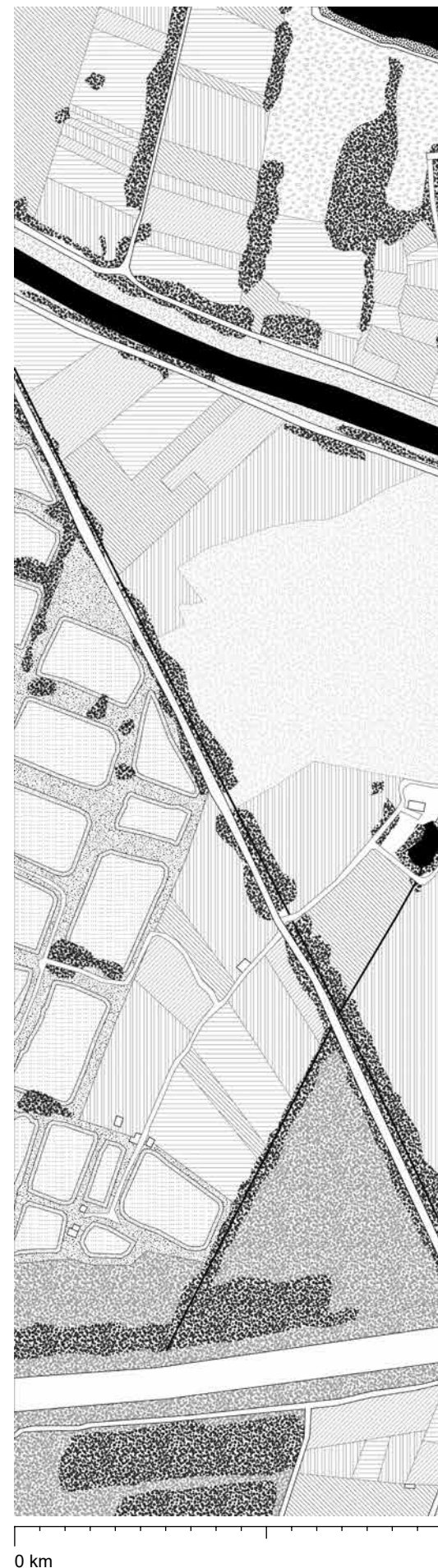
## 8.2. Modern Agricultural Villages

As a consequence of the New Socialist Countryside program, the construction of modern agricultural villages began in the mid-2000s and reached its peak between 2010 and 2013. The construction of modern villages responds to the need for new housing stock in rural areas and improving the living conditions of the inhabitants. As in the case of Weigang village reported in sample B (1.5x1.5 kilometres), the modern settlements are usually composed of 250 to 300 houses to accommodate 800-1,000 persons [fig. 8.12].<sup>20</sup> Unlike the spontaneous organisation of the ancient settlements, the modern ones have a clear and well-defined urban layout [fig. 8.13]. Each village consists of a compact north-south rectangular nucleus, generally covering a footprint of about 800.000 square metres. The town square (200-250 square metres) is located at the centre of the settlement surrounded by public facilities: the town hall, the administrative offices, the medical centre, the primary school and the public toilets [fig. 8.19]. In some cases, education and sport facilities are sited at the external corners of the settlements; while ancestral halls can be found in the countryside near the villages.<sup>21</sup> Other amenities such as shops, markets, and restaurants, are carved out by each business owner from his own private house. Therefore, apart from the main public facilities, the rest of the village consists of semi-detached rows of family houses.

### Legend

	roads
	buildings
	crops and arable land
	fishponds
	trees and vegetation
	water

8.12. Sample B: Weigang Village

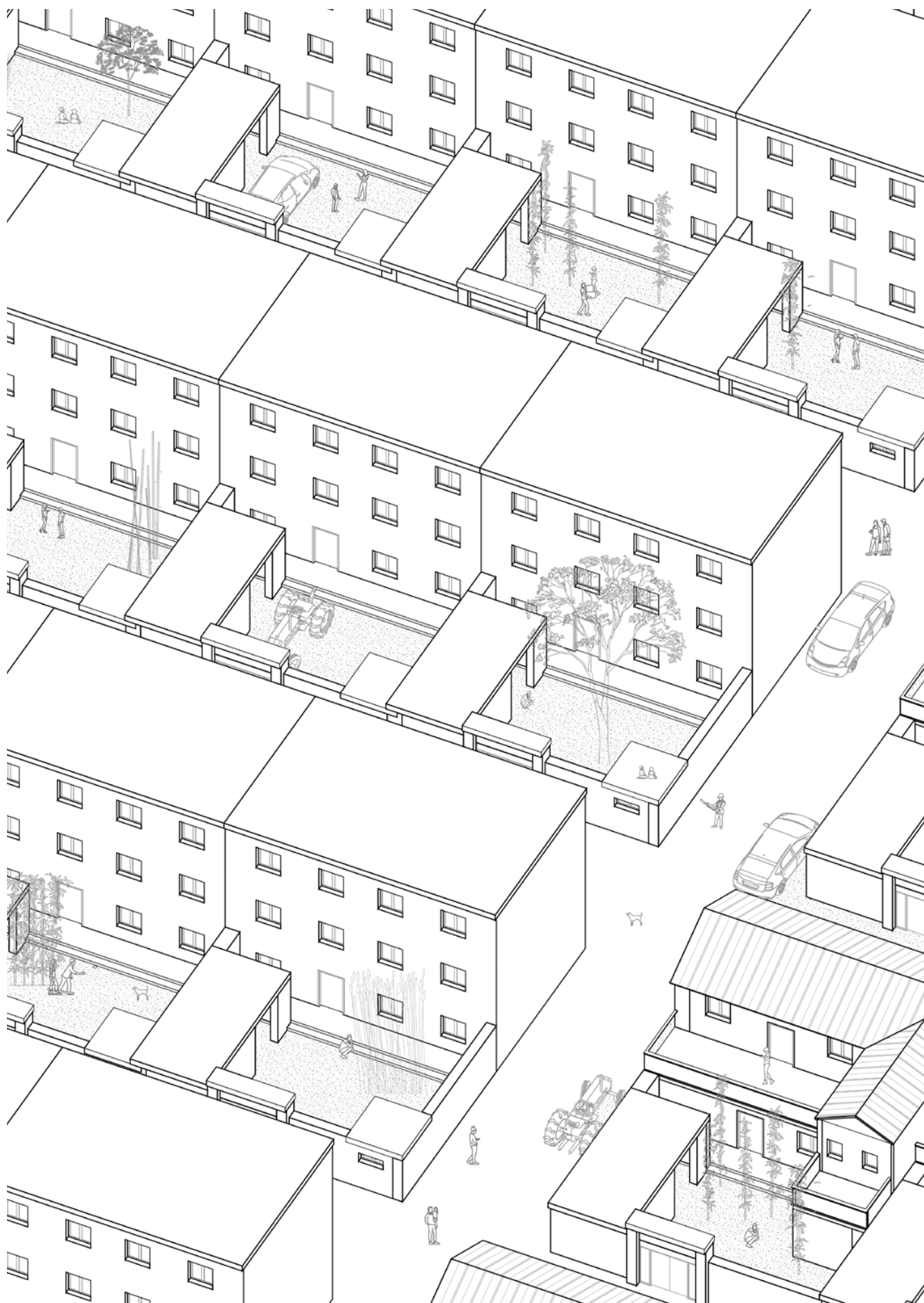




0.5

1.5





**8.13.** Axonometric view of Weigang Village







**8.14.** Liuzhuang Village, Zhongmu County, April 30<sup>th</sup> 2019, © Leonardo Ramondetti



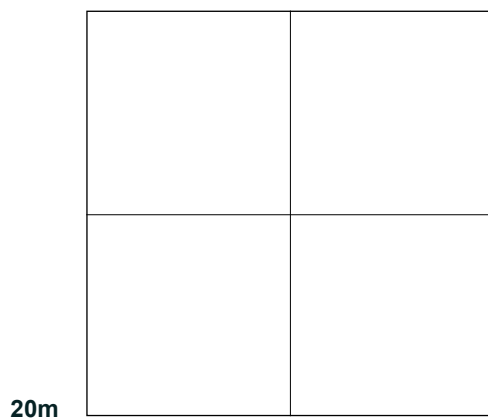
**8.15.** Xishilipu Village, Zhongmu County, April 29<sup>th</sup> 2019, © Leonardo Ramondetti



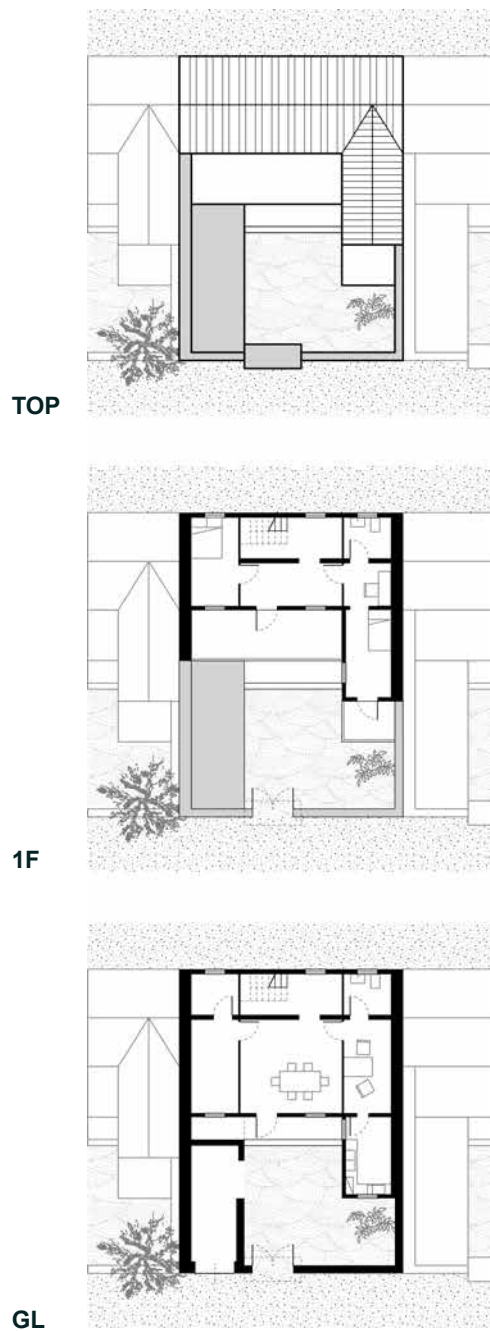
**8.16.** Laitongzhai Village, Zhengzhou Municipality, April 24<sup>th</sup> 2019, © Leonardo Ramondetti

The dwelling typologies adopted in the modern villages are an updated version of the traditional courtyard houses **[fig. 8.14].<sup>22</sup>** Each housing unit occupies a total area of 165 square metres and has a constructed surface that ranges between 175 and 255 square metres. The main building is a two-storey or three-storey structure (80 square metres per floor) on the northern side of the courtyard. Unlike the ancient houses, the new buildings are made of prefabricated concrete elements, and they are usually flat-roofed. This austere composition generally does not have any decoration except the main courtyard gate, which is usually red and with a painted pediment. However, there are variations in the standard housing typology which include gabled roof, string-courses between floors, walls covered with tiles, or terraces **[figs. 8.18-8.20-8.21]**.

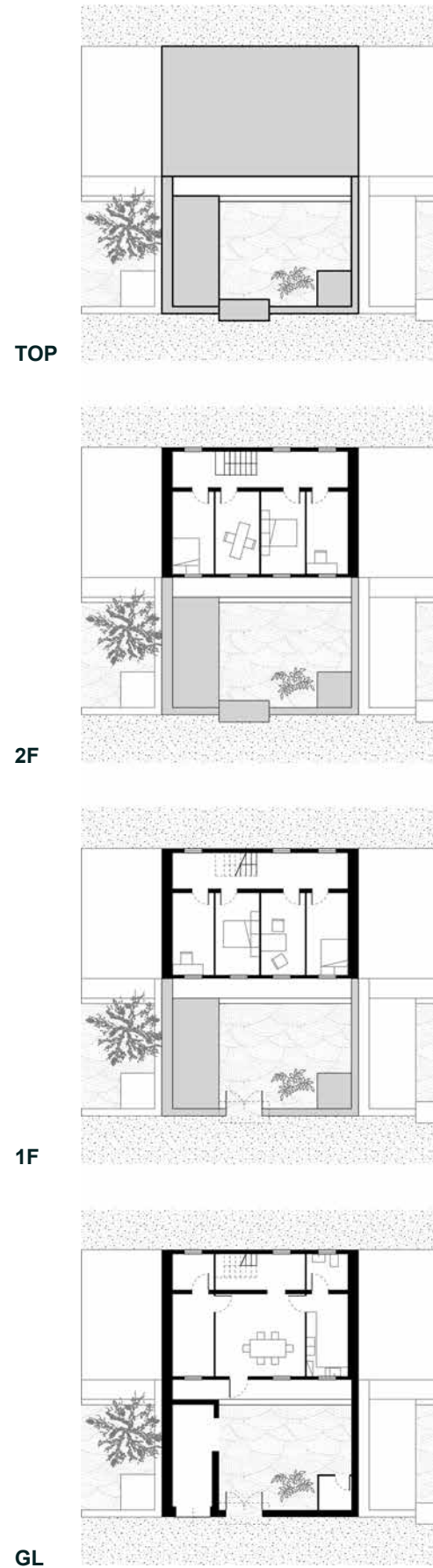
Generally, the internal space of the main building is laid out as follows **[fig. 8.17]**: the living room (25 square metres) is located at the entrance and is the centre of the house, it connects all the other rooms on the ground floor which are commonly used for storage or as a kitchen (10.5+5 square metres each). Behind the main rooms, on the northern side are the corridor and the stairs. The upper floor is divided into rectangular rooms facing south, each opening directly onto the main corridor (10.5 square metres each). In addition to the main building, a smaller single-storey structure (12.5 square metres) is located on one side of the courtyard. This structure, intended to be used as garage, has openings both to the street and to the internal courtyard. In many cases this room has been converted to farming activities or is used for storage. Another housing unit which is commonly adopted in the modern villages is a two-storey building with a gabled roof made of corrugated sheets, and a terrace on the second floor. Internally, the building has a lay-out similar to the one mention above. Generally, these houses have not been subjected to the major alterations that occurred since 2010 in the ancient villages. However, many buildings have been spontaneously extended by the owners to add verandas, self-built structures over the garage roof, or to enclose the terraces. These housing typologies are also used to replace traditional dwellings in the ancient villages **[figs. 8.15-8.16]**.



Typology A



Typology B



8.17. Housing typologies of Weigang Village





**8.18.** Wangjia'an Village, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia



**8.19.** Wangjia'an Village, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia



**8.20.** Zhugu Village, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia









**8.21.** Wangjia'an Village, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia



### 8.3. New Agricultural Towns

Following the implementation of the second stage of the New Socialist Countryside program, the construction of new agricultural towns began in 2013, and is still ongoing. New agricultural towns are planned by local governments and designed by the design institutes of the major municipalities. Differently from the modern agricultural villages, the construction of new settlements not only attempts to improve the living conditions of rural dwellers, but also to reclaim ‘land quotas’ by reorganizing and optimizing land-uses, that is, by reducing the footprint of the built-up areas located in the countryside. In order to achieve these objectives, new agricultural towns are densely-populated settlements built to relocate the inhabitants of three or more pre-existing villages. At present, in the area of the Zhengbian New District, about 100 new agricultural towns are under construction while approximately 380 ancient villages have recently been demolished.<sup>23</sup> As for the Zhugu New Agricultural Town (sample C), the total footprint of the new settlements is commonly about 800.000 square metres and the number of houses ranges from 1,300 to 1,700 units to accommodate 4,500-5,500 inhabitants [figs. 8.22-8.23].<sup>24</sup>

#### Legend

-  roads
-  buildings
-  crops and arable land
-  demolished areas
-  trees and vegetation
-  water

8.22. Sample C: Zhugu New Agricultural Village





0.5

1.5





**8.23.** Zhugu New Agricultural Town, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia





In order to be directly connected to the regional infrastructural network, the new agricultural towns are frequently located alongside a newly-built expressway or a major road. The new settlements have specific entrances which mediate between the town and the main infrastructure and in a few cases, they are even gated. As for the modern agricultural villages, the new towns have a compact, regular urban layout marked out by a tree-lined road that runs along the external perimeter of the settlement **[figs. 8.24-8.25]**. Inside, most of new agricultural towns are laid out along two main axes. Generally, a linear park runs along the north-south axis with canals, vegetation and sometimes even small lakes; while the east-west axis is mostly taken up by a four-lane road with shops and commercial facilities. At the intersection of the two axes is the town centre, where the main square is located. This core area hosts most of the public facilities: town hall, public offices, schools, libraries, clinics, medical and sport facilities. Other amenities are located in the public parks at the corner of the settlements.<sup>25</sup> In addition to the two main axes, the towns are crisscrossed by orthogonal roads and public gardens with pedestrian footpaths. The remaining areas are organized in minor or dead-end roads lined with terraced houses. Since every agricultural town is planned by different design institutes, this general layout may also assume a more organic and less hierarchical form. Finally, inside the new settlements, there are no spaces given over to agriculture or other productive activities.

The process of building the Zhugu New Agricultural Town is exemplary of planning activities for the construction of new agricultural towns. These settlements are built in multi-phase projects, as in the case observed. In fact, the administration of Yangming Lake Town launched an invitation to tender for the first phase of the project on March 5<sup>th</sup> 2015 with an estimated cost of 23 million CNY; another tender was launched for the second phase on November 19<sup>th</sup> 2018, with a forecast expenditure of 25 million CNY; finally, all public amenities have been developed by separate invitations to tender (Ministry of Finance of the People's Republic of China, 2015a, 2017, 2018). Nowadays, the price of a second-hand house (70 years of property rights) in a new agricultural town such as Zhugu ranges from 700,000 to 1.6 million CNY, that is, 2,885-6,150 CNY per square metre.<sup>26</sup>

The housing units of the new agricultural towns are completely different from those of the ancient and the modern agricultural villages: they consist of compact constructions in the style of suburban houses **[figs. 8.26-8.27-8.28]**. Even if the dwellings vary according to the different design institutes, all the buildings have a supporting frame in concrete, brick walls, and a pitched roof covered with tiles. Three housing sizes have been adopted in all the villages: 180, 240 and 280 square metres **[figs. 8.29-8.30]**.<sup>27</sup> As for sample C, the main entrance to the houses is located on the southern side, facing the private garden of the house (65 square metres). This space is frequently transformed into orchards, or paved and used to dry harvested crops and to store work tools or other materials. The ground floor of all the typologies consists of a main living room with a bow window and a kitchen on the southern side (respectively 25 and 8-15 square metres); a garage (18 square



**8.24.** Tushandian New Agricultural Town, Zhongmu County, April 30<sup>th</sup> 2019, © Leonardo Ramondetti



**8.25.** Taiqian New Agricultural Town, Zhongmu County, October 13<sup>th</sup> 2017, © Samuele Pellecchia



metres), a restroom, and another room on the northern side (respectively 18, 5, and 15 square metres). Typology A is only two-storey house (180 square metres total) and on the upper level, there are three rooms and a bathroom (13, 15 and 25 square metres). Typology B and C are three-storey buildings (240 and 280 square metres). On the first level of the former are three bedrooms (13, 15 and 25 square metres), a bathroom and a terrace facing north (16 square metres); while the second typology has the same layout with a room instead of the terrace. Finally, on the second floor of type B, there is a room with an ensuite bathroom (20+3 square metres), and a terrace (45 square metres); while the type C upper level is a copy of the first floor. In the case of the Zhugu New Agricultural Town, most of the houses are type B; however, several owners have extended their property by enclosing the balcony on the first floor, or self-constructing structures that cover the terrace on the upper one.



**8.26.** Zhugu New Agricultural Town, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



**8.27.** Zhugu New Agricultural Town, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia



**8.28.** Zhugu New Agricultural Town, Zhongmu County, October 14<sup>th</sup> 2017, © Leonardo Ramondetti



**8.29.** Axonometric view of Zhugu New Agricultural Town







**Zhuguhu New Agricultural Village**

Total area: 725,000 m<sup>2</sup>  
Total housings: 1,682 units  
Average prize: 4,500 CNY/ m<sup>2</sup>

**Typology A**

Total area: 180 m<sup>2</sup>  
Total number: 349 units

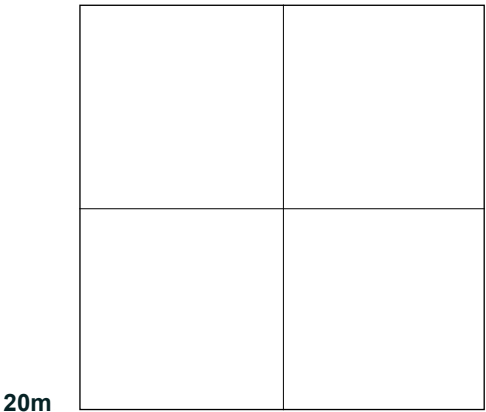
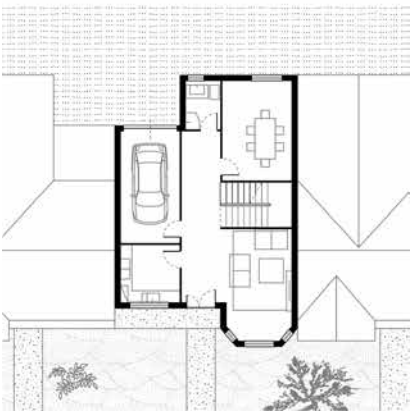
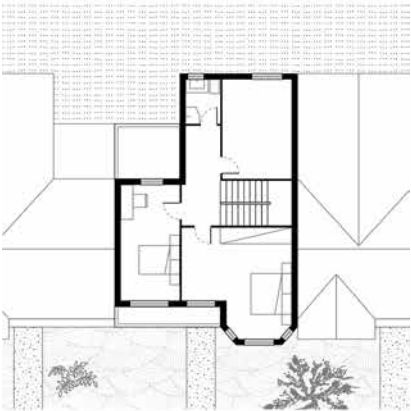
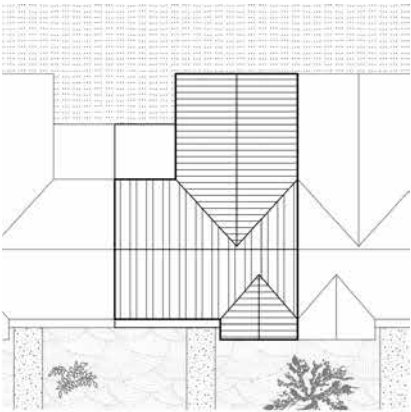
**Typology B**

Total area: 240 m<sup>2</sup>  
Total number: 941 units

**Typology C**

Total area: 280 m<sup>2</sup>  
Total number: 392 units

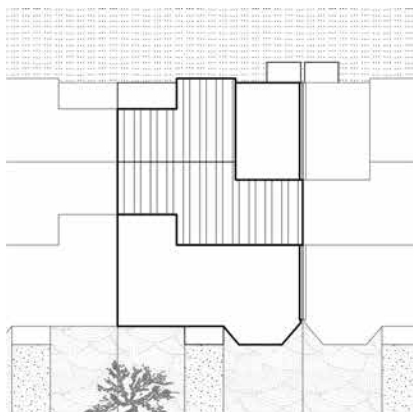
**Typology A**



**8.30.** Housing typologies of Zhugu New Agricultural Village

## Typology B

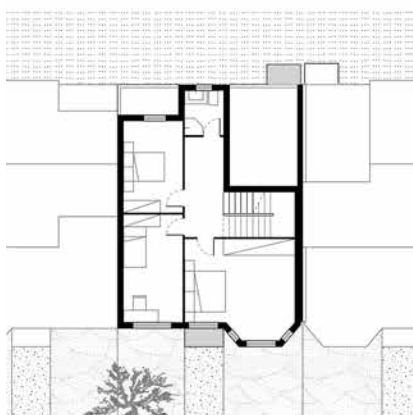
TOP



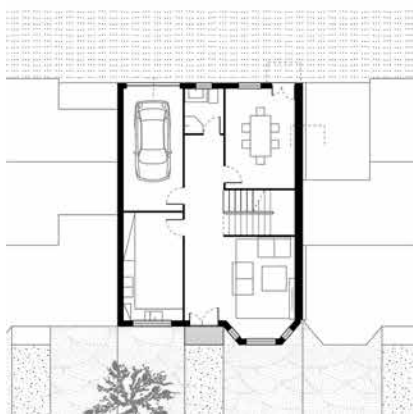
2F



1L

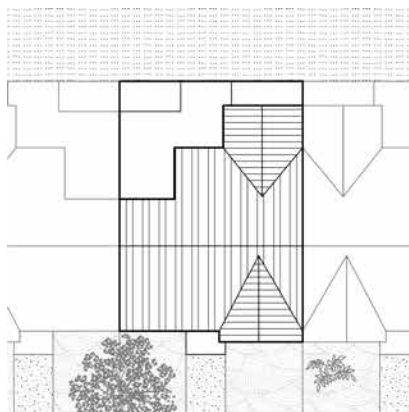


GF

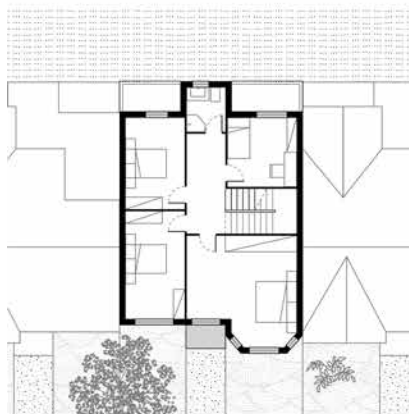


## Typology C

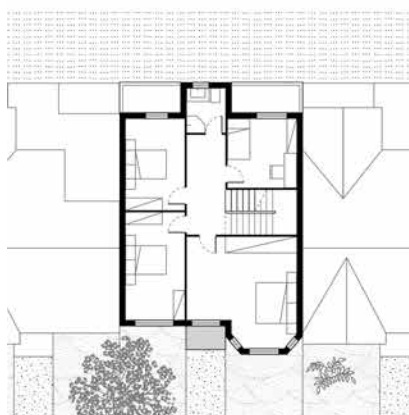
TOP



2F



1F



GF











## 8.4. Housing Compounds

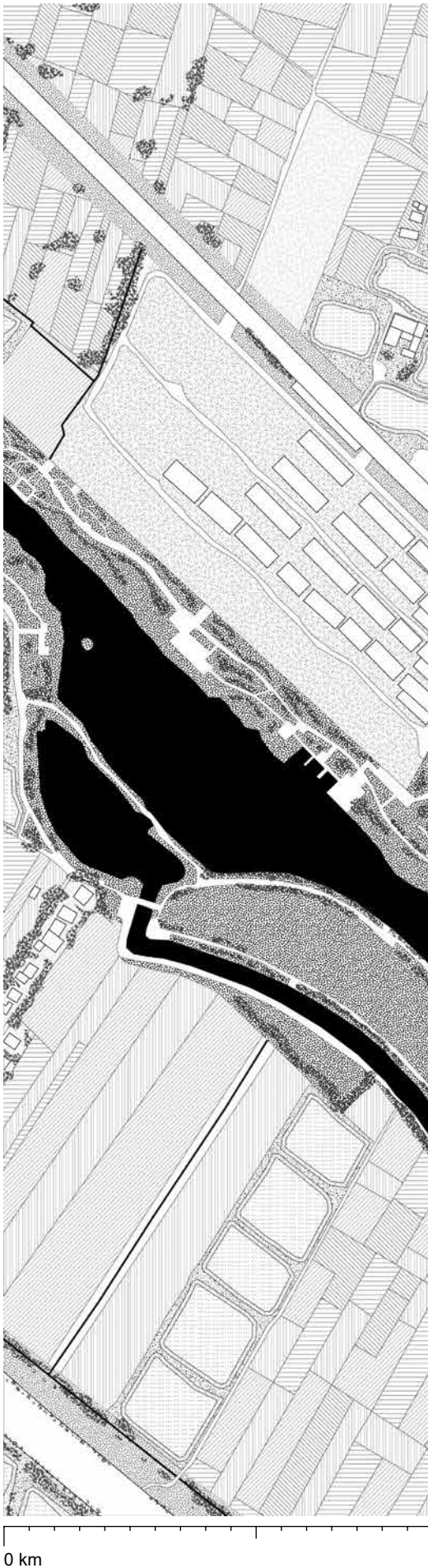
Although there is a strict administrative separation between urban and rural areas, the ongoing process of urbanisation in the Central Plains is progressively blurring the distinction between city and countryside. The new residential areas under construction by real estate companies in the Zhengbian New District make this evident. If, until ten years ago, this phenomenon was mostly centred on the outskirts of the major municipalities as well as in the new towns such as the Zhengdong New District, nowadays, new compounds are being built everywhere. As a result, even those areas that claim to be ecological and agricultural parks such as Yanming Lake Town are full of the construction sites of real estate companies that promote a luxury environment guaranteeing wellbeing .

Real estate companies attempt to endow each site with a unique atmosphere; thus, the housing typologies vary radically from one compound to another. In spite of this, it is possible to identify some common features. The overall size of each compound usually ranges from 1.5 to 4 square kilometres. As for the new agricultural towns, the site is bounded by a tree-lined road that marks the external perimeter. However, internally, the compounds have an organic urban layout which is not hierarchical: the open spaces and the public gardens are uniformly distributed in

### Legend

	roads
	buildings
	crops and arable land
	fishponds
	areas under construction
	demolished areas
	trees and vegetation
	water

**8.31.** Sample D: Chang Jiyun compound







0.5

1.5



the area and there is neither main street nor a central square. Each compound has its own exhibition hall, consisting of a huge building, located near the external road, and commonly surrounded by a large park. The exhibition hall is where the real estate offices in charge of selling the houses are located. After selling most of the houses, the real estate company holds a celebration for the new residents/owners.<sup>28</sup> After that, the exhibition hall is converted into private facilities for the compound's community, such as swimming pools, gyms, kindergartens, libraries, and private schools [figs. 8.33-8.34-8.36].

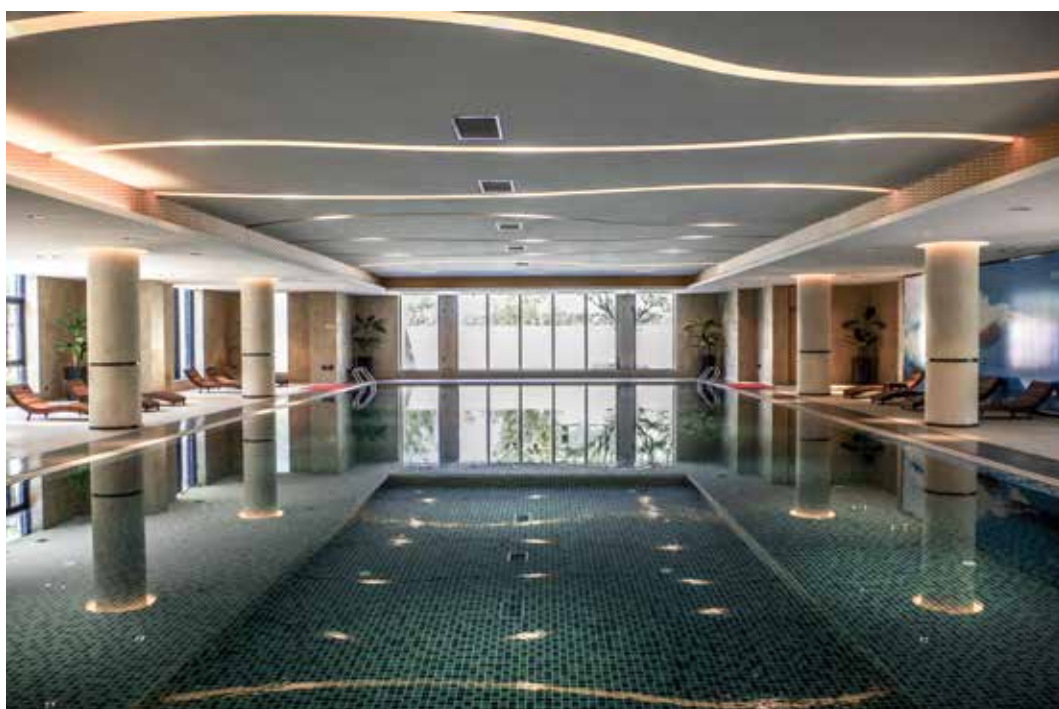
Among all the compounds in the area of Yanming Lake Town, only a few include high-rise buildings (such as the Changjiyan Yuewan compound by Vanke), the majority of new constructions are low-density dwellings that commonly have no more than six-stories. The prices vary greatly according to the different typologies: the average cost of an apartment is about 7,800-10,000 CNY per square metre while for the semidetached houses or villas, it ranges between 15,000 and 28,000 CNY per square metre.<sup>29</sup> The houses are sold 'without decorations', that is, without flooring, bathroom fittings or furniture and the buyer has 70 years of property rights. Apart from the smaller apartments in the high-rise buildings, which have a minimum dimension of 80 square metres, the housing units normally range between 130 and 250 square metres. Every compound has some luxury typologies which commonly range in size between 250 and 400 square metres, while the largest housing unit in Yanming Lake Town is a 600-square-metre villa [fig. 8.32].

	Real Estate Company	Sales Initiation Time	Minimum Dimension (m <sup>2</sup> )	Maximum Dimension (m <sup>2</sup> )	Minimum Prize (CNY/m <sup>2</sup> )	Maximum Prize (CNY/m <sup>2</sup> )
<b>Changjiyan Yuewan</b>	Vanke Group	2016.01	90	380	7,800	28,000
<b>Green Town</b>	Greenland Group	2017.04	140	380	13,500	27,000
<b>Oak Tree Garden</b>	Henan Oak	2015.09	160	412	10,000	18,000
<b>Chang Jiyun</b>	Vanke Group	2018.07	170	360	15,000	
<b>Yanming Lake N.1</b>	Lihai China	2013.03	300	600	15,000	28,000
<b>Rose Garden</b>	Greenland Group	2011.03	300	450	25,000	
<b>Yongwei Shanghe</b>	Henan Tianming	2019.09	135	440	12,000	14,000
<b>Zhengshang Shuanghu</b>	Zheng-shang Group	2014.12	80	340	8,000	14,000

**8.32.** Compound realized by real estate companies in Yanming Lake Town



**8.33.** Greentown Exhibition Hall, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia



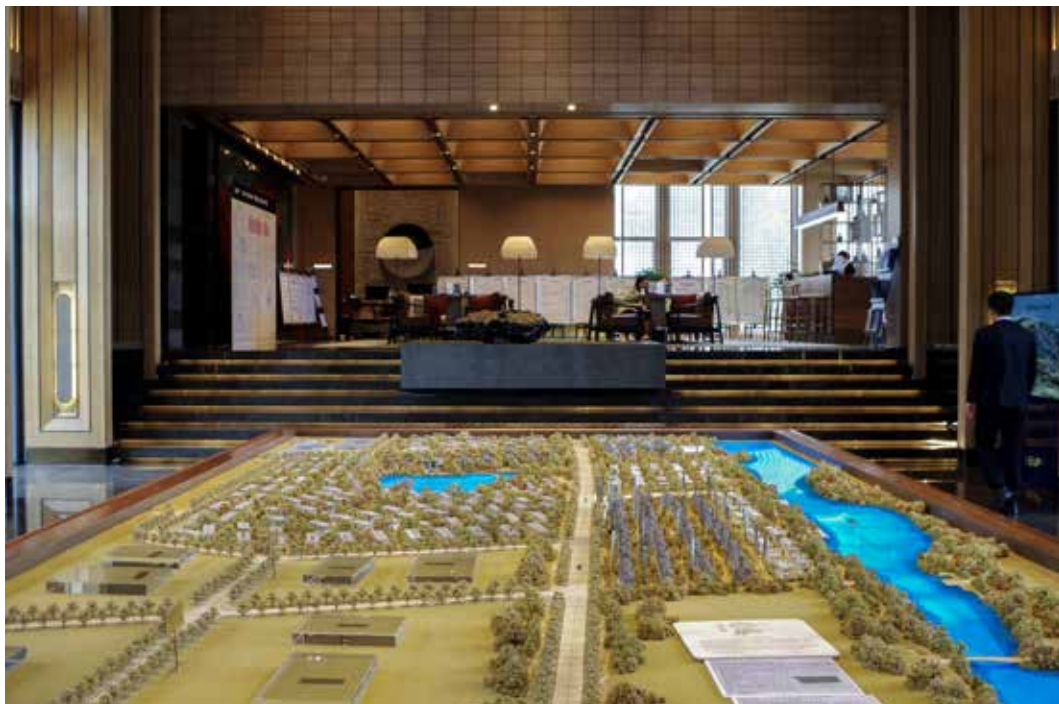
**8.34.** Greentown Exhibition Hall, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti

Sample D contains one of the most exemplary compounds in Yanming Lake Town: the Chang Jiyun complex constructed by Vanke real estate company [figs. 8.31-8.35]. Most of the common typologies are present in this compound [figs. 8.37-8.38]. The smallest apartments (typology A) are duplexes located in six-storey buildings with sizes ranging from 175 to 200 square metres. The first floor of the apartments hosts the main living room (35 square metres), the kitchen (9.5 square metres), a guest room (10.5 square metres), and a bathroom (5.5 square metres). On the upper level, there is a small bathroom (6 square metres) and three bedrooms (9, 10.5 and 23 square metres), of which the larger is ensuite (8 square metres) [fig. 8.40]. Each apartment has a garden, balconies and/or terraces depending on its level. A similar layout is used for the 200-square-metre duplex, adopted for the four-storey buildings (typology B). The only difference is the double-height living-room on the first floor, and, thus, the presence of just two bedrooms on the upstairs. Typology C, semi-detached house, has a floorspace of 200 and 220 square metres, with a private garden (100 square metres). The ground floor has the same organisation as the duplexes, while the second floor is split in two parts: one side is a bedroom plus an ensuite bathroom (25+4 square metres); the other includes a bedroom (20 metres), an ensuite bathroom (7 square metres), and a private study (9.5 square metres).



**8.35.** Chang Jiyun compound, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti

Even if no villas were built in the Vanke compound, there are two types of luxury four-storey terraced houses. Typology D is 260 square metres large. On the ground floor there is a hall (4 square metres), a double-height living room separated into two areas (30+13 square metres), the kitchen (5 square metres) and a toilet (5 square metres). On the first floor, there is a bathroom (5.5 square metres) and a bedroom (11 square metres); while on the third, there is a bedroom with a walk-in closet (18+9 square metres), a study (9.5 square metres), a bathroom (7 square metres), and a terrace (12 square metres). Finally, the top floor is composed of a study/living room (20 square metres), a bathroom (5.5 square metres), and a terrace (25 square metres). Each dwelling has its own private lift and its own gardens (70 square metres). Finally, typology E is the largest housing unit (360 square metres), and is organized as follows: on the ground floor, there is an hall (9 square metres), a double-height living room (45 square metres), a small toilet (4 square metres), a dining room (15 square metres), and a kitchen (7.5 square metres); the first floor has a study (20 square metres), one bedroom with its own bathroom (15+7 square metres), and another restroom (9 square metres); on the second floor, there are two bedrooms each with a private bathroom (17+7.5 square metres), and a terrace (23 square metres); finally the top floor consists of a study/living room (30 square metres), a toilet (4 square metres), and a terrace (35 square metres). Each dwelling has its own private lift and its own gardens (150 square metres) [fig. 8.39].



**8.36.** Chang Jiyun Exhibition Hall, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti





**8.37.** Axonometric View of Chang Jiyun compound



**Chang Jiyun Compound**

Total area: 125,000 m<sup>2</sup>  
Total housings: 200 units  
Average prize: 15,000 CNY/ m<sup>2</sup>

**Typology A**

Total area: 200 m<sup>2</sup>  
Total number: 200 units

**Typology B**

Total area: 200 m<sup>2</sup>  
Total number: 200 units

**Typology C**

Total area: 200 m<sup>2</sup>  
Total number: 200 units

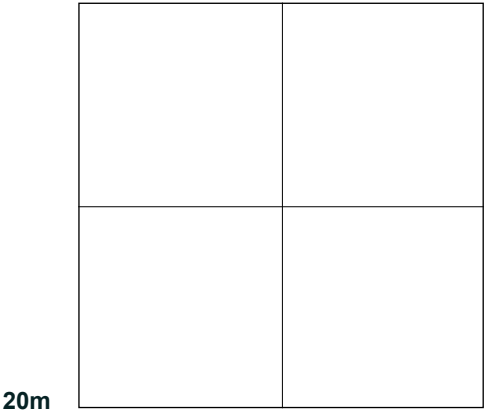
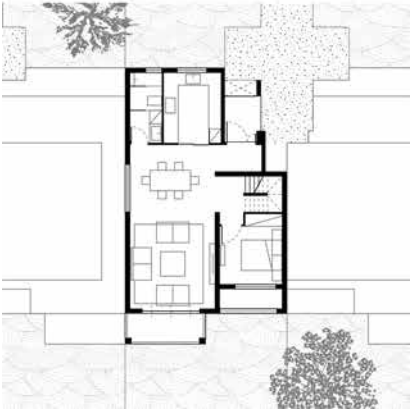
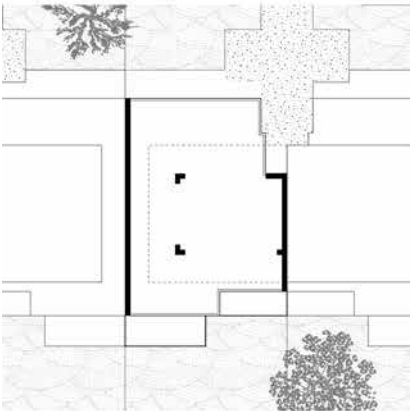
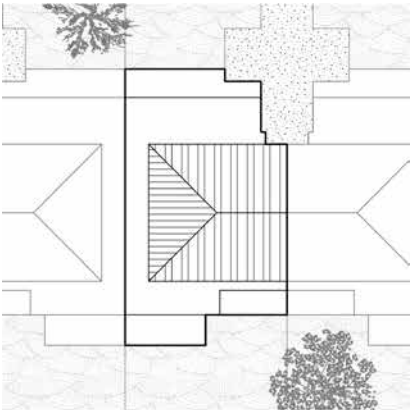
**Typology D**

Total area: 200 m<sup>2</sup>  
Total number: 200 units

**Typology E**

Total area: 200 m<sup>2</sup>  
Total number: 200 units

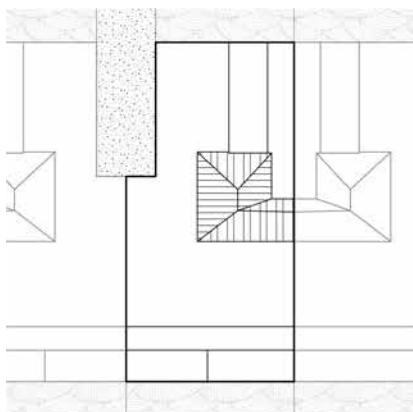
**Typology A**



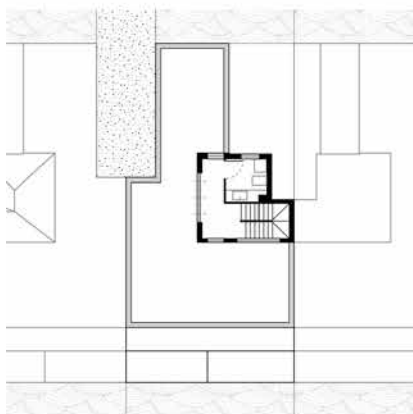
**8.38.** Housing typologies of Chang Jiyun compound, Vanke Group

## Typology B

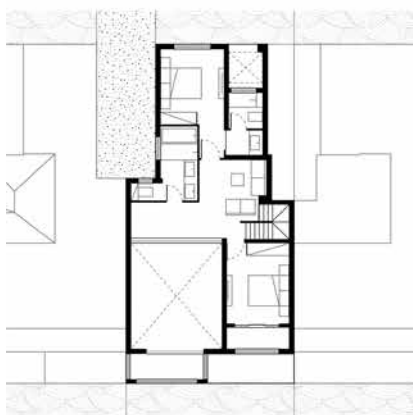
TOP



4F



2L

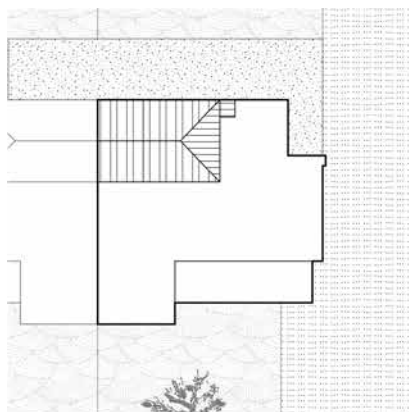


1L

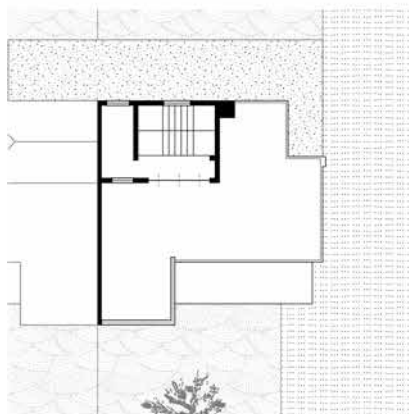


## Typology C

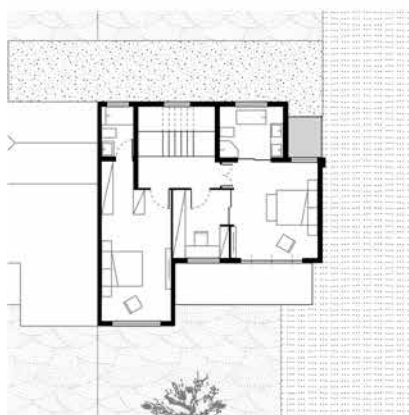
TOP



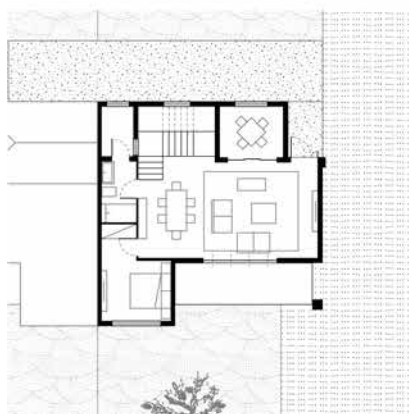
2F



1F



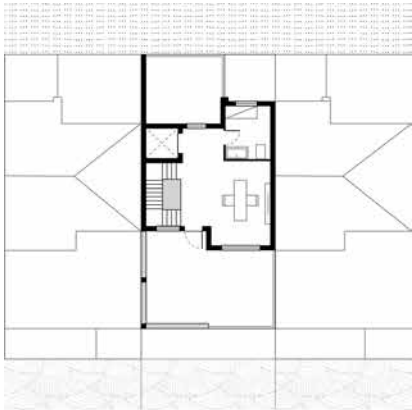
GF



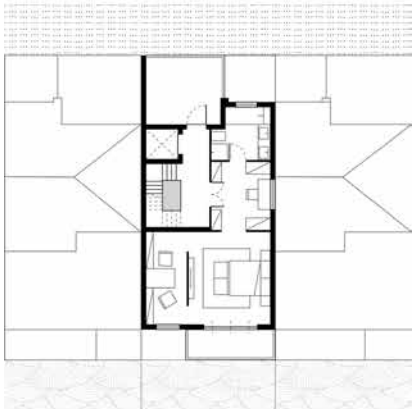


Typology D

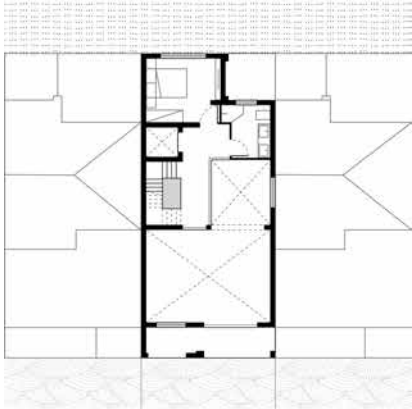
3F



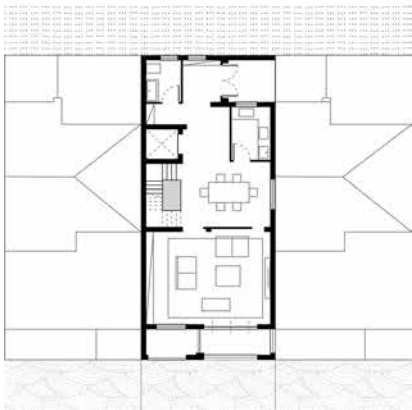
2F



1F

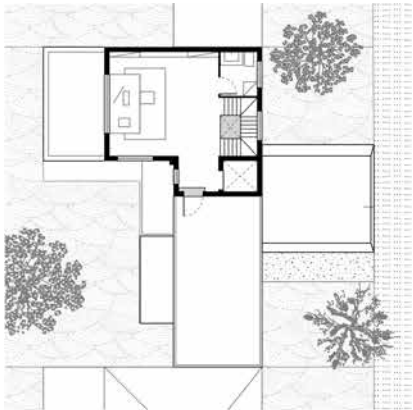


GF



Typology E

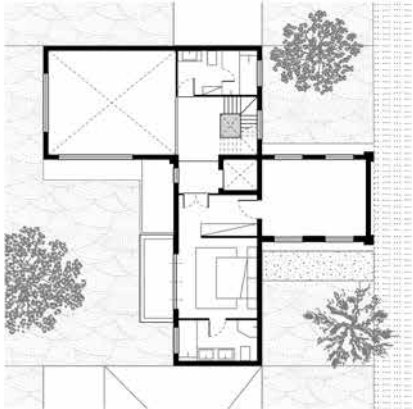
3F



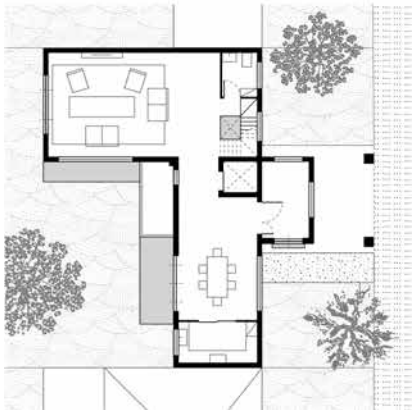
2F



1F



GF





**8.39.** Typology E, Chang Jiyn compound, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



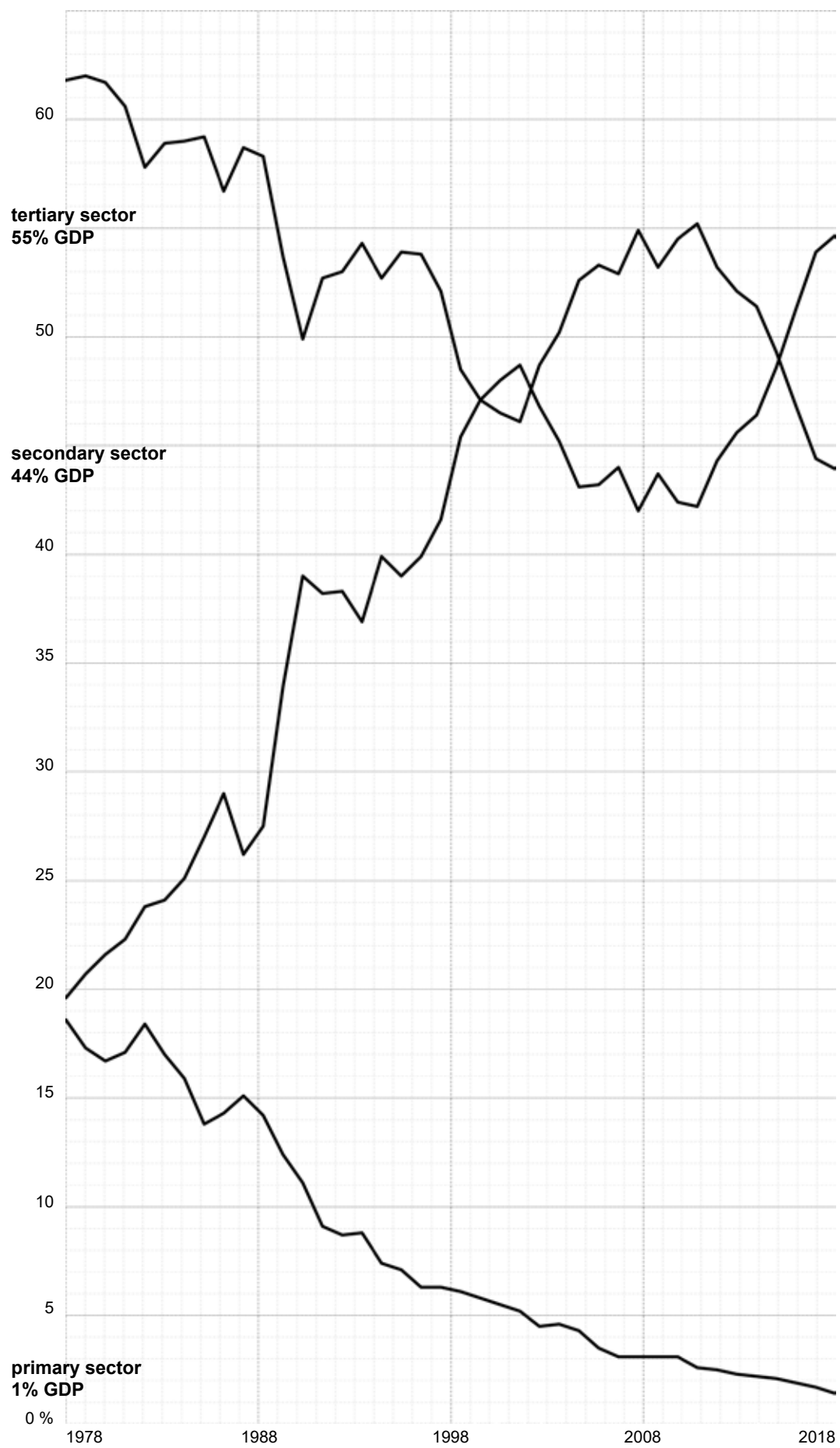
**8.40.** Typology A, Chang Jiyn compound, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti

# Chapter 9

## Reassembling Fields

In the past twenty years, the economic landscape of the Henan province has undergone a great change. From 2000 till the present, employees in the primary sector have decreased from 64 percent to 36 percent of the total labour force while workers in both the secondary and the tertiary sectors have risen from 18 percent to 32 percent (Henan Province Bureau of Statistics, 2018). In parallel, while, in 2000, the primary sector still accounted for 23 percent of GDP, it now only represents 9 percent of GDP; instead, the tertiary sector has grown from 31 to 43 percent of GDP, and the secondary sector has continued to produce 45 percent of GDP (Henan Province Bureau of Statistics, 2018). This trend was even more pronounced in the major municipalities such as Zhengzhou, where today the primary sector accounts for only 1.5 percent of the total workforce and produces only 1.5 percent of GDP, while the secondary and tertiary sectors employ respectively 44 and 54.5 percent of the labour force and produce 43.5 and 55 percent of GDP (Zhengzhou Municipal Statistics Bureau, 2018) **[fig. 9.1]**.

The changes in the economic structure of the area have also affected the physical space and the relation between the productive system and the city itself. Thus, this chapter seeks to understand the spatial organisation and the artefacts that compose the new productive zones, how these spaces work, and what kind of imaginaries they promote. Thus, I investigate three samples of 5x5 square kilometres: the first focuses on the Zhongmu National Agricultural Park sited in the ‘ecological corridor’ south of the Yellow River; the second presents the Foxconn Science Park located in Zhengzhou Airport City; finally, the third is centred on the university town in the Zhengdong New District **[fig. 9.2]**.



**9.1.** GDP production in Zhengzhou Municipality



## AGRICULTURAL PARKS AND TOURISTIC AREAS

### SAMPLE A [5x5 km<sup>2</sup>]

#### Zhongmu National Agricultural Park

Total area: 5,3 square kilometres

Persons employed: unknown

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## TECHNOLOGICAL AND INDUSTRIAL PARKS

### SAMPLE B [5x5 km<sup>2</sup>]

#### Foxconn Science Park

Total area: 5,5 square kilometres

Persons employed: about 350,000

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## UNIVERSITY TOWNS AND RESEARCH CLUSTERS

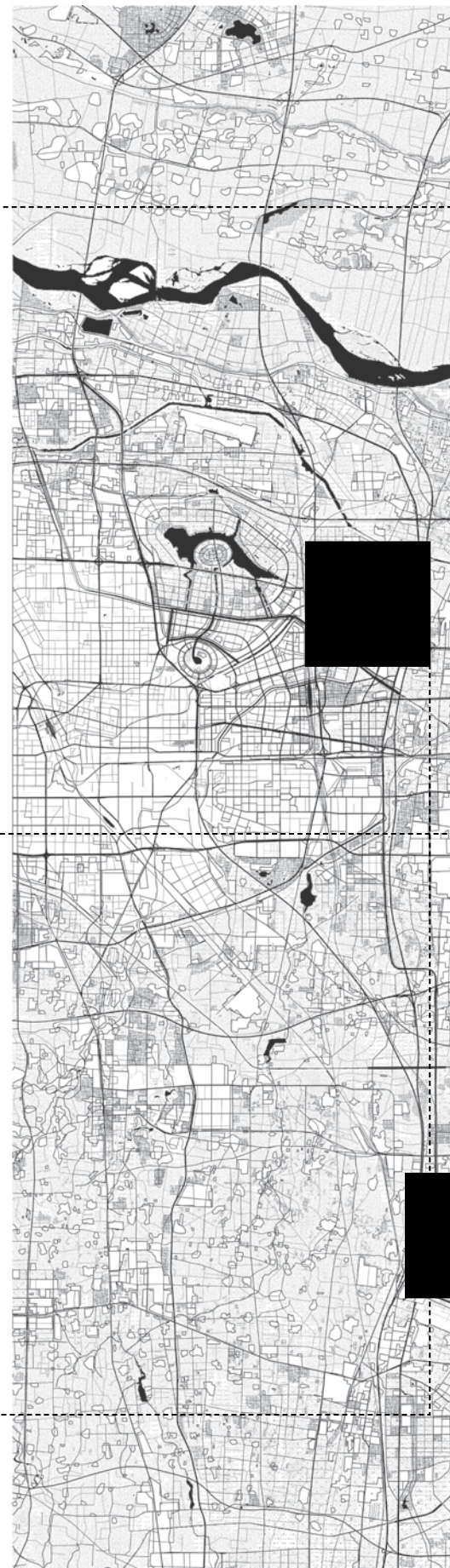
### SAMPLE C [5x5 km<sup>2</sup>]

#### University Town of Zhengdong New District

Total area: 8,5 square kilometres

Persons employed: about 150,000

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## Experiencing the New Town

*April 26<sup>th</sup> 2019*

Getting to Zhengzhou airport from the city-centre is a voyage deep in the earth. One needs to get on line 1 of the metro and, at the half-way stage, hop on line 2 and go to the end of the line. The entire journey takes about an hour and a half and for most of the trip nothing is visible. All that can be heard is the noise of the engine that brakes and then speeds up again. After twenty kilometres, the subway stops at the very fringe of urban Zhengzhou, and passengers are asked to get out and wait. Another train soon arrives and takes them the rest of the way. Fortunately, the new line is suspended, so it is finally possible to see the light again. In spite of this terrible journey, a silent army of workers fills the subway cars. People stand glued at their phone: sending messages, playing games, or watching tv series. When it is possible, they squat or occupy a vacant seat. Several of them look at me curiously. Although Zhengzhou airport claims to be one of the main international hubs of inland China, few western visitors have passed through here yet. The real importance of Zhengzhou Airport City is not only its role as a great infrastructural node, there are two other relevant factors: first, it is the largest industrial district in the Henan province; Second, as the name implies, the airport has not been conceived as a single stand-alone infrastructure, but as a city: that is, a new urbanized area under construction. As the train travels south, a scattered landscape comes into view in which new housing developments, factories and shopping malls mix with agricultural fields, huge canals, and new infrastructure. As the subway gets closer to the Airport City, the area turns into one giant construction site: an expanse of skeletons waiting to be fleshed out.

I decide to get off the subway four stops before the airport to have a walk in the new town and the industrial zone. As I emerge from the station, I am surrounded by hundreds of high-rise apartment buildings crammed into an area of around a dozen blocks. Most of them are under construction, so the plots are full of shacks, machinery and piles of building materials. Apart from the workers, there is no one else around: the parks and the houses are deserted, so too the main facilities and shopping areas. The new town is just too recent to be inhabited. Nearer to the airport, the houses disappear, and industrial sheds and warehouses dominate the scene. This is one of the major industrial zones in the Henan province: smoke is billowing out of the chimneys and, in the distance, it is possible to hear the sound of engines and machines. All the manufacturing plants are surrounded by greenery and enclosed with walls. When I finally reach the entrance of one of them, the Henan Logistics Centre, I can see an industrial area inside with a large yard where several people are unloading goods from trucks. I try to get inside but the guard doesn't let me, so I take a taxi and move on south. Finally, I arrive at the Zhengzhou Xinzheng International Airport: a huge infrastructural hub with a futuristic design. The airport was built in the late nineties to serve the entire Henan province. In 2000 it was opened to

international traffic routes, and it was expanded in 2005 by renewing the old terminal building, adding a new one and constructing a new runway. In 2016 the airport was designated in the most recent Five-Year Plan as a strategic infrastructure for the development of the inland regions. To enter, I have to go through several checkpoints. The scene inside is like all airports: there are several people waiting to check-in or for their flight and others meeting someone in arrivals. I look at the timetable and I notice that even though it claims to be international, there are few non-Chinese destinations. Probably, as the website states, most of the international routes are for airfreight not for passengers. I have a walk inside the immense structure, and then come back to Zhengzhou. Certainly the Airport City is one of the most important gateways to inland China, a great logistics centre where people and material flow in and out; but, moreover, it is a giant factory where not only are goods produced but the entire space is a great urban worksite.

After visiting the Airport City, I have a tour of the University Town. Since it is the very last eastern subway stop, the ride back through Zhengzhou and then on to my final destination is even longer than the outward journey. One should not be surprised by the great distances here. It is well known that the city is not only reaching upward to the sky building skyscrapers, but it is also burrowing into the earth, digging tunnels like a tree spreading its roots. Indeed, even though today the metropolis of Zhengzhou has only two subway lines, the municipality has already planned to build twenty more lines in the next thirty years and to extend the existing ones. Among them, three are already under construction and one is to open next week. When I finally see daylight again, the landscape seems no different from what I left about two hours ago, I am again in a great construction site, but at least the sun has come out. There are several three-wheelers parked close to the subway station, and a woman immediately approaches me asking if I need a ride to one of the universities. Like most university towns in China, the one in the Zhengdong New District also covers a huge area in which more than ten campuses are located next to each other. That is why it is not easy for the students to reach their dormitories from the subway station: the distance could even be more than two kilometres. Since I have no specific destination, I decide to decline the ride and walk.

The University Town is an independent nucleus located on the eastern border of the Zhengdong New District, and bounded by highways and infrastructural corridors. At the centre is a lake with a great island in the middle, and the university campuses all around. The subway stops in the central zone, a site planned to be the ‘research cluster’; that is, a place where private and public companies set up their headquarters, offices and research centres. Though some towers and futuristic structures have already been built, most of the facilities are still under construction. Moving south I finally arrive at the lake shore, where a monumental plaza opens onto the great lake. Here is the perfect viewpoint of the other bank where several campuses are located. Since most of the university buildings are low-rise constructions, there are just a few roofs that break through the tree tops. Some of them have iconic shapes that mimic the western neoclassical architecture typical of Anglo-Saxon universities: domes topped with a great lantern, giant Ionic colonnades and neogothic towers. In the distance are some high-rise apartments that host the dormitories and constructions for sport facilities. All the buildings are immersed in the peaceful and flourishing vegetation perfectly maintained by the constant work of troops of gardeners. As a result, the overall scene looks like a peaceful oasis of nature and calm, especially if compared to the unwelcoming atmosphere of the Airport City.



I decide to have a tour all around the University Town by bike. Inside the park, there are many young people, probably students of the different faculties. Some of them are running, paddling or doing some other physical activities, some are fishing or flying kites, others just lie on the grass enjoying the sun while a few kissing couples are in secluded places. Even if every campus is separated from the rest of the city by a great fence, inside, the park continues as a single carpet blending all the University Town. By showing a guard my invitation letter as a visiting Ph.D. student at Tsinghua University, I manage to get inside one of the campuses. Like most of the main entrances to the universities, the gate opens on to a great monumental axis driveway that connects the public road to the main offices and common facilities. The remaining buildings are immersed in a great park, with small lakes and rolling hills. Students are walking fast along the main paths, while several food delivery guys are cycling on the main streets. Observing them, one thing seems to be clear: distances are great in such monumental campuses. Since it almost lunch time I decide to get to the canteen. The mess hall is a noisy room inside a big building close to the dormitories. The tables are full of young people: some are talking loudly, some are eating alone reading a book; others are sleeping with their head resting on the table. Following the directions some students give me, I manage to get some food; however, as soon as they notice me, I suddenly become the centre of attention in the canteen. Several curious guys approach me asking for information: where I came from, why I am in this university, my WeChat accounts and so on. Since I am getting too much attention, as soon as I finish my lunch I decide to get out; my tour at the University Town is over. However, in getting out of the campus it is clear to me that even if the University Town claims to be a space characterized by a clear function, it is also a city in itself, a place where thousands of people not only work and study but live their daily life.

Since I still have time today, I decide to spend the afternoon in the Yellow River Scenic Area of Zhengzhou. To get there is a long bus ride, but, finally, after crossing the entire city, the bus stops in front of the ticket office. Soon a small group of tourists and I are all in front of the park gate, maps and brochures in our hand, ready for the visit. The Scenic Area is famous for the giant sculpture of the emperors Yan and Huang, two legendary Chinese emperors and cultural heroes. The monument was inspired by Mount Rushmore; however unlike the American memorial, the statues are not carved in the rock, but built on top of a hill. The entire project lasted 20 years and was completed in 2007. Now the monument has a total height of 106 metres: 55 metres wide at the base platform and the busts at the top are 51 metres high. According to the brochure, it took more than 7,000 cubic metres of concrete, more than 1,500 tons of steel, and more than 6,000 cubic metres of granite to complete the statue. Since the monument faces the waterway, it is not visible from the park entrance, but after a short walk, there it is: an immense square with the statues on one side and the Yellow River on the other. The immense plaza is more than half a kilometre wide and at the centre is an artificial pyramid made of three square terraces, like most traditional Chinese ‘temples of earth’. To compensate for the fact that the great square makes the memorial look smaller, the monument adopts a curious scenic solution: the base of the hill has been planted with small pines to rebalance the proportions.

I notice this feature walking up the hill, then, a young girl asks me for a picture in front of the monument. Although she does not speak a word of English, we soon become friends. Her name is Qing Mu, and she comes from a village close to Kunming, in Yunnan. She shows

me a photo of her hometown, a picturesque settlement set in a wonderful landscape of terraced mountains and rice cultivations. Using the translator of my phone, we manage to have a short chat. I discover that one year ago her mother died in a car accident; after that tragedy she decided to take a one-year vacation, so now she is travelling all around China. I ask if she has already been to Beijing, but she tells me it is not one of her priorities; she loves mountains, and her dream is to travel to Tibet. We decide to visit the park together. The Scenic Area is huge since it occupies several hills beside the main monument, and several attractions are spread over it: pagodas, suspended bridges made of glass that cross little canyons, cable cars, boats and so on. After visiting some of them, we arrive at a place surrounded by walls. Mu stops and tells me she will wait for me outside. At first, I cannot see the reason, but entering the gate, I find myself in a great monumental cemetery, probably for the city Zhengzhou. Inside, it is a peaceful place, secluded in the middle of the hills and completely surrounded by woods; there are lines of gravestone and a few pagodas. Most of the memorials are adorned with flowers or coloured ribbons while just few of them have pictures of the departed. After having a quick look, I decide to go back to my companion.

When I come out Mu is waiting for me with some food, eggs and corn cobs, that she has bought at a kiosk nearby. After having a snack, we rent a three-wheeler and reach the highest mountain of the park located at the western side of the Scenic Area. Here, there is a wonderful panoramic viewpoint from which it is possible to see the entire park; but not only, below us is the great Yellow river, a great waterway that flows peaceful toward the east, and beyond it, the cultivated plains extend up north. Here, it is also possible to admire the many bridges crossing the river. To the east, there are two: the older one, built in the sixties, was doubled in 2012 and, now, beside it, there is a steel bridge for the high-speed railway line. To the west, there is another bridge, also built in 2012, for the new highway S87 that connects Northern and Southern China. These are just a few of the several connections realized in the last twenty years; in fact, four new bridges have been built in the Zhengbian New District alone, while another two are now under construction and two more will be in the coming years. After admiring this landscape where the force of nature meets the will of mankind, we conclude our tour in the Scenic Area.

In going back to Zhengzhou, the bus once again crosses the anonymous landscape that constitutes most Chinese cities: endless masses of monotonous, featureless buildings, alternating with some commercial facilities at most. After visiting the Airport City, the University Town and the Scenic Area, it seems to me that the new towns herald a different kind of urbanisation: an urbanisation with clear connotations of functions and characterization of spaces, at least in name.

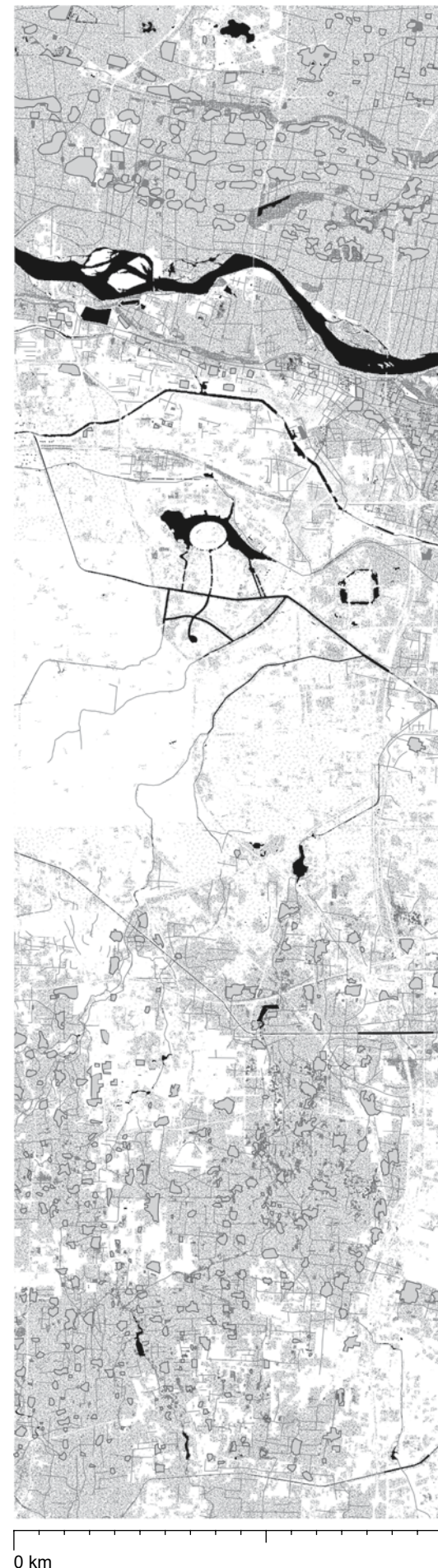
## 9.1. Agricultural Parks and Tourist Areas

As reported by Chuanglin Fang and Danlin Yu (Fang & Yu, 2016), one of the main objectives of the Central Plains Urban Agglomeration is “to create a demonstration area for coordinated development between industrialization, urbanisation and agricultural modernization” (p. 210). This, in order to cope with the great disparities not only between the inhabitants of urban cores and rural areas, but also within the same country areas. In fact, in Zhongmu County alone, the average income of an urban household is about 2,350 CNY per month, while a rural resident earns only 1,500 CNY per month (Henan Province Bureau of Statistics, 2018). Furthermore, a villager employed in the secondary sector receives about 2,100 CNY per month, whereas the average income for a farmer is just 600 CNY per month (Lee, 2016a).<sup>30</sup> In light of this, several initiatives have been undertaken by local administrations to develop rural areas by modernizing agriculture and promoting the tourist sector [fig. 9.3]. Both these issues have been addressed in the numerous plans for the Zhengbian New District as well as in the Zhongmu County Urban and Rural Master Plan (2016-2030) (ARUP Engineering Consulting Company et al., 2009, 2010; Zhengzhou Municipality, 2009; Zhongmu County Urban and Rural Planning Bureau, 2016). All these documents envisage the creation of so-called ‘ecological corridors’ devoted to agricultural, leisure and cultural activities.<sup>31</sup> One of these areas

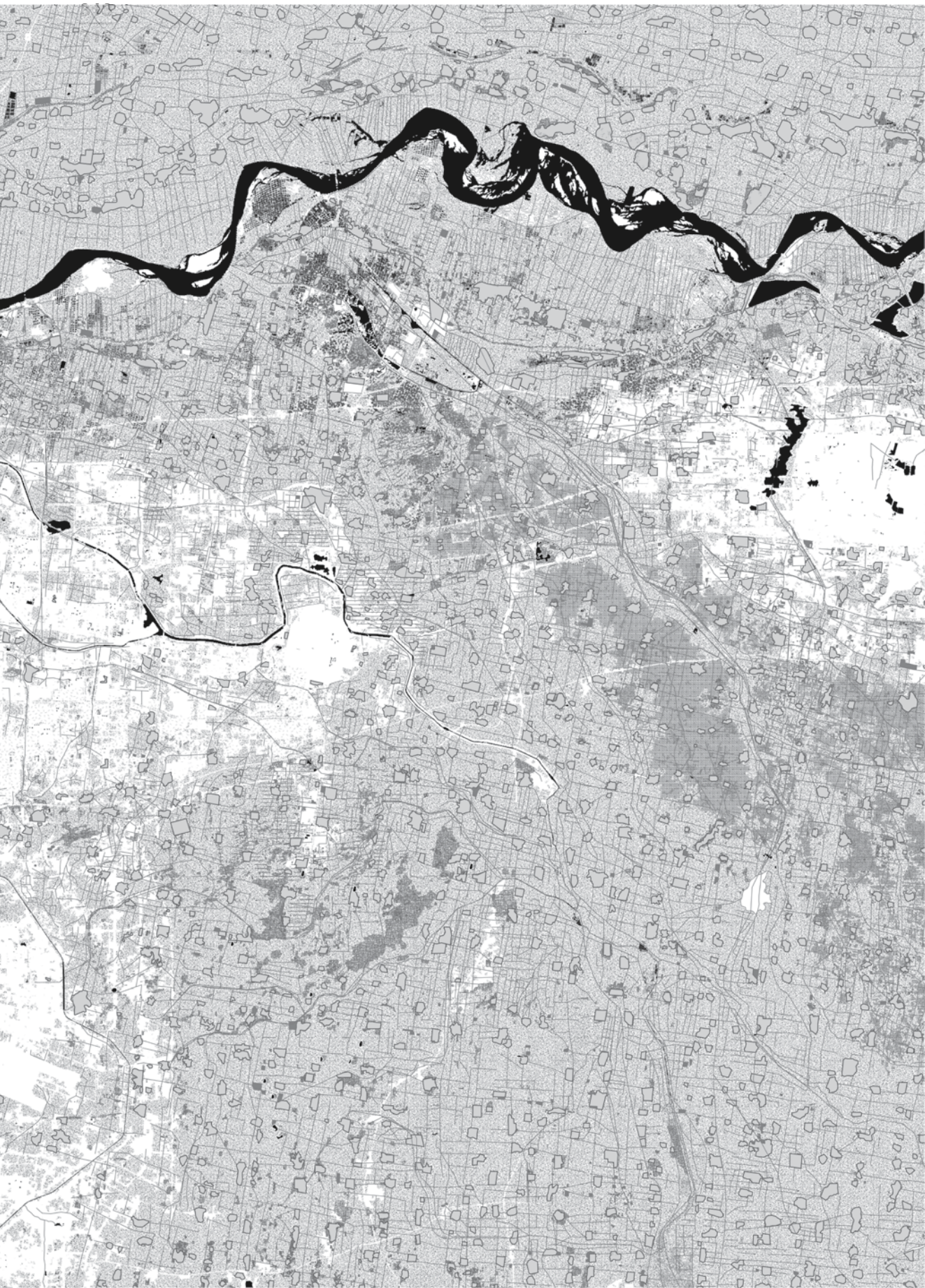
### Legend

- dirty roads and paths
- built up areas
- villages
- crops and arable land
- trees and vegetation
- water

**9.3.** Areas for agrarian production in the Zhengbian New District















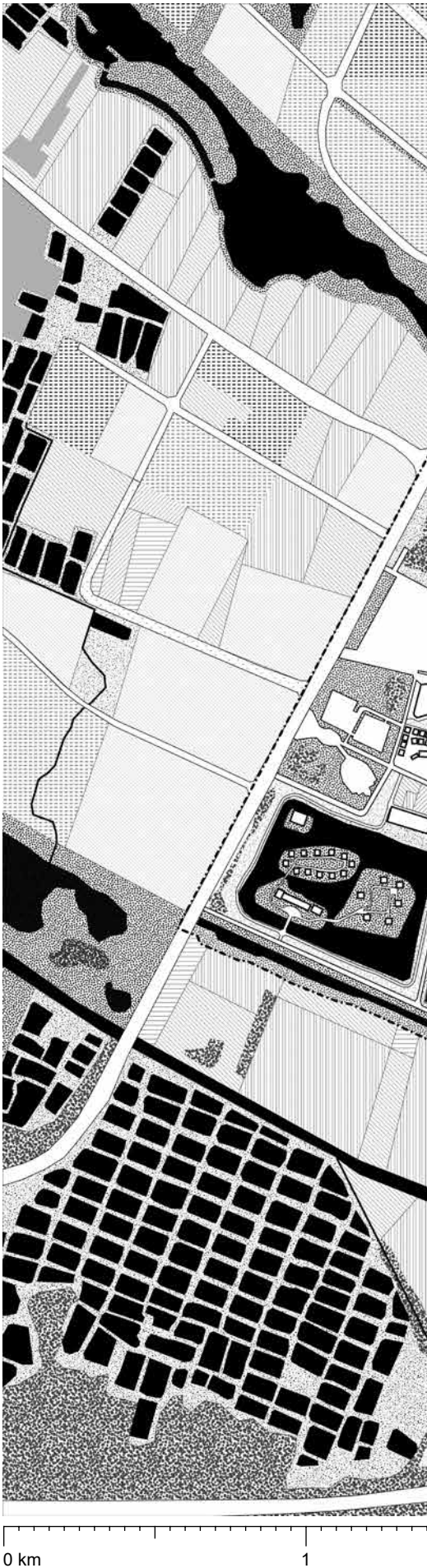
is the southern bank of the Yellow River, which also includes Yanming Lake Town located in the north-east sector of Zhongmu Country. This site was chosen in 2008 as the location for a golf club and a luxury resort. Since that time, the administration has decided to implement a strategy focused on two targets: firstly, to foster wellness and tourist activities; secondly, to promote the creation of a high-tech and high-quality agricultural zone.

In light of this, in March 2011 the Institute of Agricultural Planning Science of China Agricultural University and China Tourism Design Institute, were appointed by the government of Zhengmu County to draft a plan for the so-called Zhongmu National Agricultural Park (Sample A) [fig. 9.4]. The park was to be built on an area of 5.3 square kilometres for a total investment of 3.5 billion CNY. The final plan envisaged the site as six functional areas: a management services zone, spaces for aquaculture, agricultural facilities, cultivation of fruit trees, horticulture and floriculture, and a ‘cultural-creativity area for agriculture’.<sup>32</sup> In these zones, the plan foresaw the construction of 550,000 square metres of multi-span greenhouses, 194 solar greenhouses, 550,000 square metres of modern fish ponds, and eight demonstration pavilions. Furthermore, 8.3 kilometres of artificial navigable canals, with an average width of 30 metres, were planned to enclose the park on three sides. Work began in 2012, and, two years later, the definitive infrastructural layout was ready; most of

*Legend*

- zhongmu national agricultural park
-  roads
-  buildings
-  built up areas
-  crops and arable land
-  trees and vegetation
-  water

**9.4.** Sample A: Zhongmu National Agricultural Park







agricultural facilities were built, while the remaining parts were under construction. All the buildings and the equipment were said to be high-tech and high-quality, as well as the pavilions that were named The Future Agricultural Museum and The Agricultural Science Fast Track Museum.<sup>33</sup> In April 17<sup>th</sup> 2014, the park was opened to visitors for the so-called Agricultural Carnival (from April 17<sup>th</sup> to May 3<sup>rd</sup>), an event that was repeated in the following two years: from March 28<sup>th</sup> to June 2<sup>nd</sup> 2015 and from April 2<sup>nd</sup> to July 2<sup>nd</sup> 2016 (Henan Baidu, 2016; Henan People's Daily News, 2014; Publicity Department of Zhongmu Municipal Party Committee, 2014; Zhengzhou Municipality, 2015). In the same period, a luxury compound was also built inside the park area. In December 2015, the plan was revised by the Henan Huineng Fuli Technology Co., Ltd; in spite of this, since 2017, the work to complete the park has stopped and no other event has taken place in the area (Henan Huineng Fuli Technology Co & Management Committee of Zhengzhou Modern Agriculture Demonstration Zone, 2015; Zhongmu County People's Government, 2015). At present, although the administration of Zhongmu County declares the National Agricultural Park to be still under construction, it appears to be in a state of abandonment: construction work on the unfinished buildings is at a standstill while the greenhouses and the structures that hosted the past events and should be in service are neglected, or, at best, used as common farmland [figs. 9.5-9.6].<sup>34</sup>

While, at first glance, the Zhongmu National Agricultural Park may be considered a failure, it is not the case. In fact, the park has been the driver for several initiatives undertaken in the area. In 2015, the administration of Yanming Lake Town invested 25.63 million CNY in constructing agricultural infrastructure projects, the majority for improving the water irrigation system, and 1.8 million CNY in reclaiming 15.4 square kilometres of land.<sup>35</sup> Besides this, 1.2 square kilometres



**9.5.** Zhongmu National Agricultural Park, Zhongmu County, October 14<sup>th</sup> 2017, © Samuele Pellecchia

of land was reforested, and greenbelts and parks along the main roads were created, occupying a total area of 162,000 square metres (Bai, 2016). As reported by the official administration of Yanming Lake Town, during the ‘Eleventh Golden Week’, more than 390,000 tourists visited the site, generating an income of 74.1 million CNY, an increase of 40 percent over the previous year, of which 58.5 million CNY was generated by catering and accommodation, and more than 7.8 million CNY derived from the sale of agricultural products, in particular the hairy crabs which are typical of the area (Bai, 2016).

In light of this, on May 7<sup>th</sup> 2015, the administration of Zhongmu County announced the tendering for design of the so-called ‘Leisure Agricultural Master Planning Project of Yanming Lake Town’ (Ministry of Finance of the People’s Republic of China, 2015b). The site for the competition was an area of 49.6 square kilometres to be redeveloped in the next 15 years into two ‘farming demonstration parks’ over a total area of 20 square kilometres (Bai, 2016). The major tasks of this initiative were: firstly, to develop an ‘urban ecological agricultural area’, then, to create a unique ecological brand to promote locally processed agricultural products.<sup>36</sup> The competition was won by the Shanghai Weimei Landscape Design Engineering Co., Ltd. in collaboration with the Beijing Oasis Environmental Garden Design (Henan Tengfei Engineering Cost Consulting Co., Ltd., 2015).<sup>37</sup> The plan again centres on the promotion of an area for integrating high-quality agriculture and tourist activities. Differently from the previous projects, the new one encompasses the entire territory of Yanming Lake Town, which is considered to be an integral part of a park composed of a mix of new urbanised areas, spaces for agricultural production, and recreational activities. The settlements of Yanming Lake Town, Wantan Towns and Langchenggang Town are designated zones for



**9.6.** Zhongmu National Agricultural Park, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



real estate development; while most of the ancient villages are to be demolished and their inhabitants relocated in new agricultural towns. Nine sites are foreseen as tourist attractions consisting of ecological resorts and health clubs, some of them already existing, such as the golf club or the aviation club **[figs. 9.8-9.9]**. At present, most of these spots are still under construction, while the Zhengzhou Bird Watching Forest Park opened on September 30<sup>th</sup> 2019 as part of an initiative undertaken by the administration of Zhongmu that during the same day inaugurated another three parks in the county (Dahe, 2019; You Li, 2019). All these projects demonstrate the efforts made by the local administration to promote a new image of the area as a healthy zone for wellbeing and with a pure environment.<sup>38</sup>

The case of Yangming Lake Town is typical of the many policies implemented over the last decade to improve rural areas including the well-known Village Beautiful programs instituted by the central government in 2011 (Williams, 2017). At present it is not possible to foretell if they will be successful or not; whether they will be viable in the future or, on the contrary, be progressively abandoned as happened to the Zhongmu National Agricultural Park. However, many places, such as Yangming Lake Town, have already experienced the advantages of being a ‘scenic area’ and an ‘environmental park’ **[fig. 9.7]**. For instance, not only have tourism and real estate development boomed in Yangming Lake Town, but many agricultural products have also reaped the benefits of the local brand; for instance, ‘Yangming Lake hairy crabs’, ‘Zhugu radishes’, ‘pollution-free apples’ or ‘Yellow River carp’ (Bai, 2016). In this way, the construction of agricultural parks, environmental areas and tourist facilities and agricultural production is enhanced; thus, leading to an improvement in the standard of living for the inhabitants of rural areas.



**9.7.** Zhengzhou Yellow River Scenic Area, Zhengzhou, April 26<sup>th</sup> 2019, © Leonardo Ramondetti



**9.8.** St. Andrews Golf Club, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti



**9.9.** Jingbo Resort, Zhongmu County, May 1<sup>st</sup> 2019, © Leonardo Ramondetti

## 9.2. Technological and Industrial Parks

Since mid-1990s, the major municipalities of the Central Plains of China have been fostering the development of the secondary sector by establishing satellite industrial zones, ETDZs, and science parks. As a result, nowadays, in Henan province, 180 technological and industrial parks are operational. Four of them are located in the Zhengbian New District: the Zhengzhou Economic and Technological Industrial Parks, the Zhengzhou Airport Industrial Cluster, the Zhongmu Automobile Industry Cluster, and the Kaifeng Western Industrial Cluster (Henan Province Bureau of Statistics, 2018) [fig. 9.10]. In 2017, these four technological and industrial parks employed 439,911 people, made 150 billion CNY in investments in fixed assets, and generated 461.74 billion CNY in revenue from the principal businesses (Henan Province Bureau of Statistics, 2018). Among them, the Zhengzhou Airport Industrial Cluster is the most important, since it is the major industrial area in the Central Plains. In fact, while the industrial clusters in the Henan province generally employ 25,000 people, invest 30.4 billion CNY in fixed assets, and generate 12 billion CNY in revenue; this cluster alone has 315,414 workers, 68.2 billion CNY of investments in fixed assets, and generates an income of 29.91 billion CNY (Henan Province Bureau of Statistics, 2018). Most of these results are due to the presence of the Foxconn Science Park, one of the company's largest plants in the world.

### Legend

- railways
- main roads and waterways
- areas under construction
- built up areas
- logistic centres
- industrial zones

**9.10.** Industrial areas in the Zhengbian New District









The Foxconn corporation has three subsidiaries in Zhengzhou, among them, the largest production plant is the Hongfujin Precision Electronics (Zhengzhou) Co., located in the Zhengzhou Airport Economic Zone of the Zhengbian New District (sample B) [fig. 9.11]. In this factory, the Foxconn Science Park, 300,000 people work and live, producing 500.000 mobile phones a day at a rate of 350 phones a minute. The plant is also known as ‘iPhone City’ since it accounts for half of the iPhones sold in the world (Barnett, 2012; Jacobs, 2018) [figs. 9.12-9.13]. The Foxconn Science Park was founded by Bo Xue in July 23<sup>rd</sup> 2010 and construction was completed by the end of the following year (National People’s Congress, 2010). The production plant occupies a total area of 5.5 square kilometres, of which 1.25 square kilometres is currently under construction (Henan Province People’s Government, 2012). The Zhenggang 4<sup>th</sup> Street crosses north-south the area, dividing the industrial site into two equal parts that are connected by underground roads. The internal area of the factory is based on a grid layout of four-lane roads that divides it into 13 sectors (280,000 square metres each) from A to M.<sup>39</sup> Sectors B, D, E, F, K, and L are the ‘work units’ and have an identical spatial organisation: each is divided into four equal parts of which three host the productive nuclei, while in the remaining section there is a 75x110-metre block that faces an area of 50,000 square metres for outdoor sport facilities and green areas. The productive nuclei

#### Legend

- foxconn science park
- ▬ roads
- ▬ buildings
- ▬ high-rise and low-rise compounds
- ▬ crops and arable land
- ▬ waiting land
- ▬ parks and parks under construction
- ▬ water

9.11. Sample B: Foxconn Science Park







are composed of two four-storey blocks of 60x150 metres, with a total footprint of 9,000 square metres each, plus a smaller four-storey block located in between of 25x150 metres with a total footprint of 3,750 square metres.<sup>40</sup> Suspended and covered bridges connect all the blocks and the different work units.

Since Foxconn Science Park is intended to be more than a factory, the company provides several facilities for employees who are supposed to live inside the corporate estate. As described in a report by China Labour Watch<sup>41</sup> (2019), workers' accommodation is organized in dormitories that costs 150 CNY per month. The rooms are 25 square metres and bunk beds are used to accommodate 8-10 people, who share a bathroom and a small balcony to hang washing. The dorms located in six-storey buildings use solar power for supplying hot water, while the ones sited in taller buildings have electric water heaters. Every dorm is equipped with air conditioning controlled by the property management department. The dining halls and canteens are three-storey buildings able to hold up to 2,000 people; the Foxconn Science Park also includes recreational facilities such as sports fields, basketball courts, table tennis rooms, billiard rooms, gyms, libraries, reading rooms; and the company holds several cultural and sports events. Finally, a system of shuttles and free buses connects the parts of the area so that the employees may commute to work and back to the dormitories. However, although the company usually attempts to encourage workers to live inside the Foxconn Science Park, this policy is reversed during the peak season. In fact, when the dormitories are full, the company introduces rewards for workers to move out for a certain period, that is, a further payment of 1,000 CNY in three months.



**9.12.** Foxconn Science Park, 2016, © Gilles Sabrié

According to the report by China Labour Watch (2019), in 2017-2018, during the peak period (August-November), the factory hired over 300,000 workers. The recruitment procedure is as follows<sup>42</sup>: first, registration, that is, providing personal details on the official website, WeChat or other devices; then, an interview at the recruitment centre and a physical examination; after that, completion of a one- or two-day company training course and accommodation in the dormitories; finally, after the probation period of three months, the worker is called to sign a labour contract and become a formal employee [fig. 9.14]. Workers are given 400 CNY per month to spend at the canteen, 20 CNY every day for meals. The company provides them with a uniform while the laundry, that was for free until 2018, is now a paid service. The basic salary for the probation period is 1,900 CNY per month; thereafter, it increases for the employees to 2,100 CNY per month. As there are incentive bonuses during the peaks of production, the pay can even reach 3,200-5,000 CNY per month. Employees are expected to work five days a week, 8 hours per day, for a total of 40 hours per week; they are entitled to 11 days of vacation per year, and they are covered by social insurance. Despite these conditions, the study conducted by China Labour Watch (2019) reveals that each employee is given production quotas to meet and the factory takes away overtime hours for those who do not reach the quota as a form of punishment.<sup>43</sup> The study also reports several rights violations, such as the over recruitment of dispatch workers (i.e. temporary short-term workers) that now make up 50 percent or more of the total workforce. Furthermore, during the peak period, students from vocational high schools are also taken on to work at the factory as interns, with the same conditions as regular workers.<sup>44</sup>



**9.13.** Zhengzhou Airport Industrial Cluster, April 26<sup>th</sup> 2019, © Leonardo Ramondetti



The Zhengzhou Foxconn Science Park is an exemplary case of well-known and documented manufacturing zones located at the outskirts of the major cities **[fig. 9.15].<sup>45</sup>** As for the agricultural parks, it is not possible to foresee whether these places for industrial production and their logistic platforms will become something more than merely sweatshops for the exploitation of workers. However, even now, these corporate estates are promoting global imagery based on the rhetoric of modern technological development. In this way, they establish somewhat weak connections between places that until a few years ago were considered ‘off the map’, and outside the global production system.



**9.14.** Two Foxconn recruiting agents stations nearby factories, Foxconn Science Park, 2016, © Gilles Sabrié



9.15. Zhengdong Building Material Centre, Zhengdong New District, May 7<sup>th</sup> 2019, © Leonardo Ramondetti

### 9.3. University Towns and Research Clusters

In parallel with the initiatives undertaken to improve living conditions in rural areas and support industrial development, in recent years, central and local government has fostered the development of cultural enterprises. According to the Henan Province Bureau of Statistics (2018), in the Zhengzhou municipality alone, the number of ‘enterprises in culture and related industry above a designated size’ (i.e. enterprises that have at least 20 million CNY in annual revenues and 5 million CNY in fixed asset) amounts to 556, for a total of 80,910 employees.<sup>46</sup> The total asset value of these activities is 88.2 billion CNY, and their revenues reach 69 billion CNY. The success of cultural industries is closely related to universities and cultural institutions, which have improved greatly in recent years. In fact, in 2017, Zhengzhou municipality counted 352 cultural institutions including 24 cultural centres, 38 museum, 17 public libraries, and 16 artistic performance groups (Zhengzhou Municipal Statistics Bureau, 2018). Furthermore, in the municipality, there are 58 university colleges (almost half of the universities in the Henan province), the total educational personnel amounted to 64,500 people for 935,332 enrolled students (Henan Province Bureau of Statistics, 2018) **[fig. 9.16].**

*Legend*

- railways
- main roads and waterways
- ▒ areas under construction
- ▒ built up areas
- ▒ ecological corridors
- ▒ airports
- ▒ universities, research cluster and cultural areas



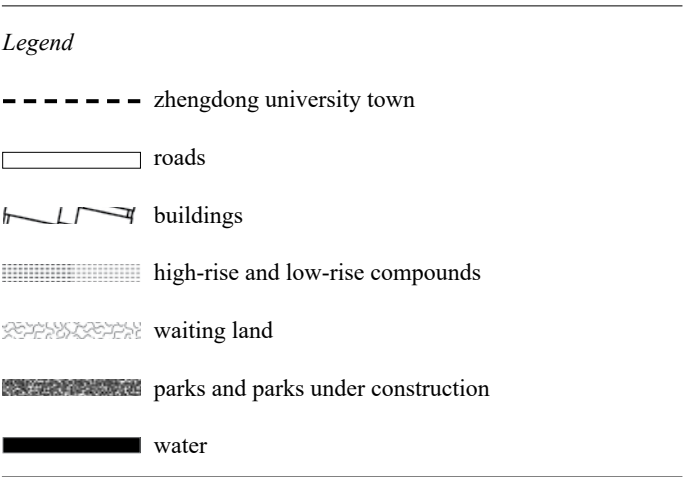
**9.16.** Cultural areas and research clusters in the Zhengbian New District



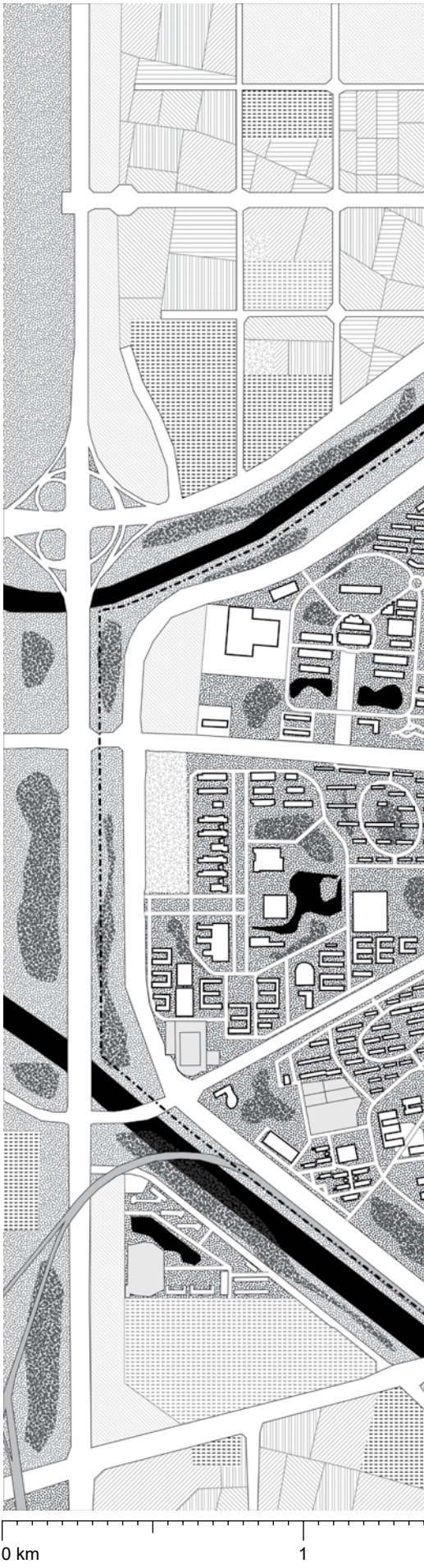


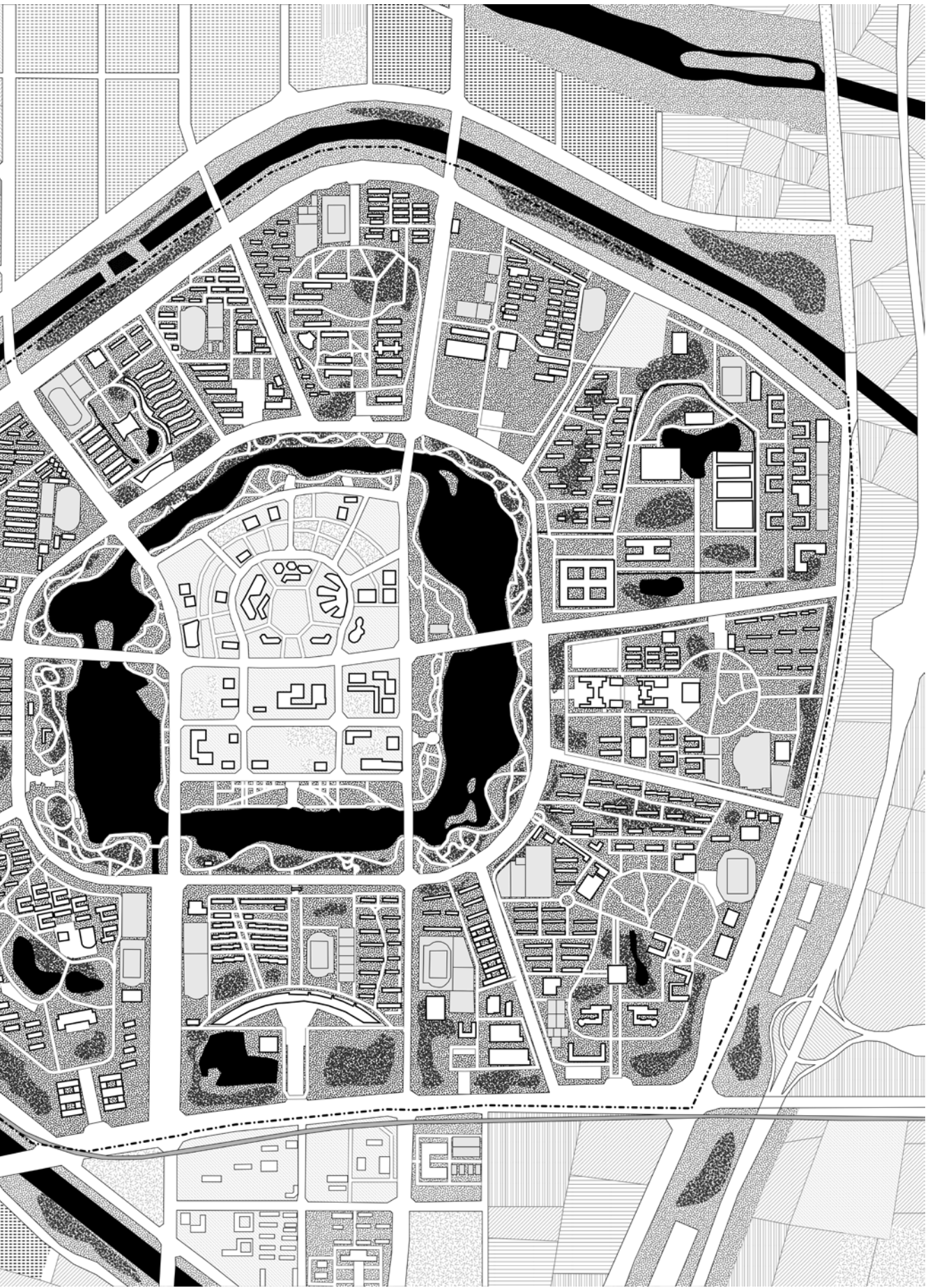


The Longzihu Area, 28 square kilometres, in the Zhengdong New district hosts the so-called university town of Zhengzhou. The site was first envisaged as a residential area in Kisho Kurokawa’s plan for the Zhengdong New District, with a ‘sports city cluster’ located in the north and a ‘research city cluster’ sited in the south (K. Li et al., 2010b). However, during the development of the project, the Longzihu Area was put up for planning competition again, and finally redesigned by the Zhengzhou Research Institute of Urban Planning and Design (K. Li et al., 2010b).<sup>47</sup> The final plan envisages a ‘research and university cluster’ at the centre of the Longzihu Area, occupying 13.5 square kilometres located north of Zhengdong railway station and east of the CBDs (sample C) [fig. 9.17]. The designated site is located between four infrastructural corridors: the eastern border is the G4 highway, the western is the G107 expressway while the northern and southern boundaries are the Jialu river and the Dongfeng canal respectively. Apart from these infrastructures, a metro line connects this area to Zhengzhou city centre while another one has to be built (Busquets & Yang, 2019). Inside, 8.5 square kilometres is occupied by eleven university campuses located in a circle around a central artificial lake.<sup>48</sup> Finally, an island of 1.3 square kilometres located in the centre of the lake hosts a ‘creative cluster’ that includes research centres, hotels, banks, and malls. According to the data provided by the universities, the total number of full-time enrolled students is about 235,000 and the faculty members total about



9.17. Sample C: the university town in the Zhengdong New District







15.000.<sup>49</sup> Considering that some universities have more than one campus in Zhengzhou even if the largest are all in this area, it is reasonable to assume that at least 150,000 persons work and live in the university town; although scholars such as Wade Shepard (2015) argue that this figure may even reach 240,000 persons [figs. 9.19-9.23].

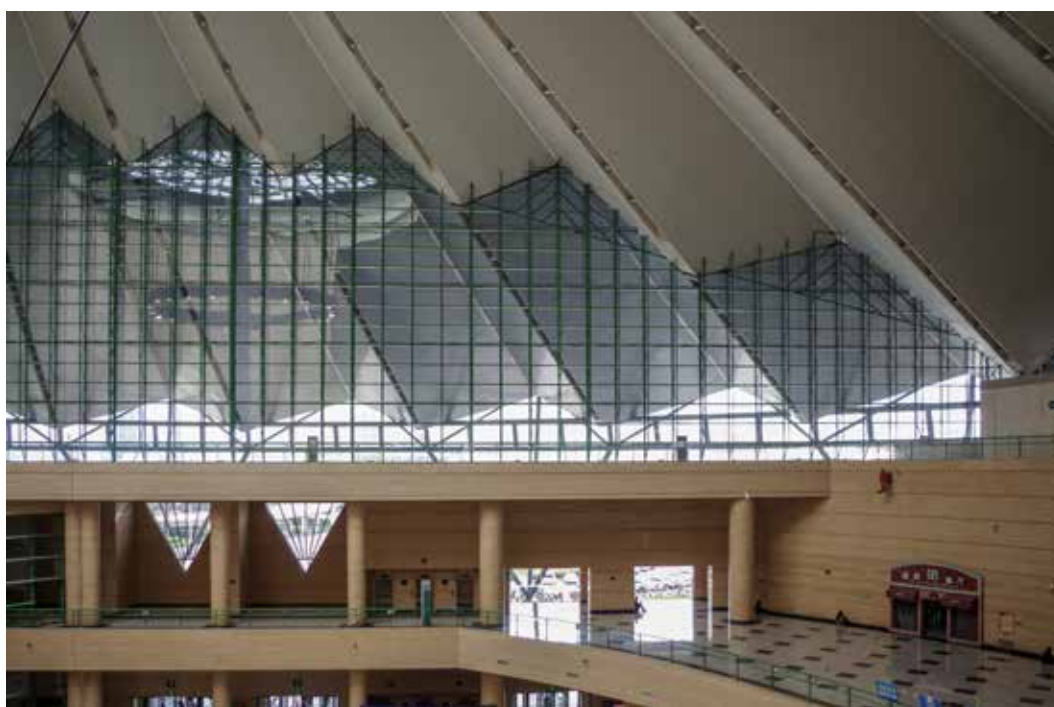
Even if the campuses have different spatial layouts from one another, they all share some common features.<sup>50</sup> Apart from two minor faculties, all the others occupy a portion of land that ranges from 750,000 to 1,000,000 square metres, of which from 160,000 to 540,000 square metres are built-up areas, from 20 to 50 percent of the total surface area (K. Li et al., 2010d).<sup>51</sup> Each university provides accommodation facilities for a number of students and faculty members that ranges from 13,000 to 20,000 persons (K. Li et al., 2010d). Each complex has one main entrance with a 70-metre-wide ceremonial boulevard that links the external street to the central area of the campus. Here, the main library, the auditorium, the administrative offices and all the representative buildings are located [fig. 9.22]. Commonly, these constructions have monumental and iconic shapes, and are surrounded by vast open spaces and landscape elements, such as parks and small lakes. This core zone is usually enclosed by a street that organizes the internal layout and divides the site into different functional areas. Generally, a quarter of the entire campus is occupied by the dormitories, that in most of the cases are six-storey buildings oriented north-south. Inside the dorms the students' accommodation is normally 28 square metres (4x7 metres) plus 4-6 square metres of balcony (K. Li et al., 2010d).<sup>52</sup> In some campuses, such as the North China University of Water Resources and Hydropower, every room has its own toilet (2x2 metres) which is accessible from the balcony; in others like the Zhengzhou Institute of Aeronautical



**9.18.** International Convention Centre, Zhengdong New District, April 25<sup>th</sup> 2019, © Leonardo Ramondetti

	Number of Campuses	Total Area (Km <sup>2</sup> )	Enrolled Students (persons)	Faculty Members (persons)	Enrolled Professors (persons)
North China University of Water Resources and Hydropower	2	1.55	34,100	2,376	1,707
Zhengzhou Institute of Aeronautical Industry Management	/	1.25	28,000	1,822	527
Henan Vocational and Technical College	1	0.83	19,000	/	375
Henan Economic and Trade Vocational College	3	0.55	21,000	/	996
Henan Institute of Economy and Finance	2	1.00	20,000	1,200	/
Henan Institute of Animal Husbandry and Economics	3	1.40	33,000	1,700	1,120
Henan Agricultural University	/	2.83	30,000	2,162	757
Henan Police Academy	1	1.12	5,537	/	/
Henan University of Economics and Law	3	1.33	30,000	2,000	/
Henan Judicial Police Vocational College	3	0.33	/	/	229
Henan University of Chinese Medicine	3	1.03	20,000	1,399	1,175
Zhengzhou Institute of Technology	4	0.98	12,866	1,144	788

**9.19.** The universities in the university town of Zhengdong New District



**9.20.** International Convention Centre, Zhengdong New District, April 25<sup>th</sup> 2019, © Leonardo Ramondetti



Industry Management, there is a communal bathroom for every three rooms (K. Li et al., 2010d). The dorms also include a laundry room and small meeting rooms; most of the main communal services, such as the canteens and the study rooms, are generally sited in one or more buildings located nearby. The remaining parts of the campuses are generally lecture theatres and laboratories. Finally, each university has its own area for sports activities that normally includes: a football field, a covered swimming pool, and from 5 to 10 tennis courts and basketball courts.

The construction of university towns has been underway in China since the beginning of the 2000s. For instance, another example of this is the university town promoted by the Guangdong government in 2002 accommodating ten faculties on a circular island of 15 square kilometres, with an overall urban layout similar to that of the Zhengdong University Town (Liang, 2014). At present, the university town of the Longzihu Area is not the only one in the Zhengbian new District, another six campuses are located in the northern part of the Kaifeng New Area. In more general terms, nowadays, all the major centres of the Central Plains are building university towns since they are used “to boost commercial real-estate development in remote areas by attracting a population of students and faculty first, providing a consumer base” (Ren, 2013, p. 107). This trend has been criticised by scholars who argue that “the university town functions as an enormous unit of higher education resulting from a top-down bureaucratic process” (Liang, 2014, p. 39) that turns “hundreds of thousands of university students and government employees [...] into troops of urbanisation” (Shepard, 2015, p. 74). While this may be true, there is no doubt that university and cultural institutions are certainly used as an instrument to populate newly urbanised areas; this trend also demonstrates the efforts to promote the ‘cultural industry’ able not only to improve the educational level but also to change the narrative of spaces located on the fringes of the main cities [fig. 9.18-9.20-9.21].



**9.21.** Henan Museum, Zhengzhou, April 27<sup>th</sup> 2019, © Leonardo Ramondetti



**9.22.** The University Town, Zhengdong New District, April 26<sup>th</sup> 2019, © Leonardo Ramondetti



**9.23.** The University Town, Zhengdong New District, April 26<sup>th</sup> 2019, © Leonardo Ramondetti

## Notes

- 1 Nowadays this action seem particularly relevant. In fact, if “in the age of technologized vision one of the most important functions of the witness is to de-militarize military perspectives – that is, open [...] forms of image data and intelligence to a range of critical practices and uses” (Parks, 2001, p. 589), the construction of new representations “generate sophisticated metaphorical meanings well beyond the confines of kingly symbolism and the territorial imperialism” (Cosgrove, 1999, p. 15).
- 2 The critical use of satellite images has been recently inquired by several scholars adopting different perspectives (Parks & Schwoch, 2012; Warf, 2012). For instance, some scholars such as Julio González Álvarez or Daniela Petrelli work in order to ‘anchor’ a specific meaning to a satellite images through ‘autotopography’ (Petrelli et al., 2008); on the contrary others such as Paul Kingsbury and John Paul Jones III (2009) claim for a ‘displacement discover’ exploiting their ambiguities. Feminist scholars used remote sensing in order to refiguring the global vision, for instance by tracking the movements of women driven by sex trade as done by Ursula Biemann (2002). Lisa Park (2001, 2005, 2009, 2012) explores both the ‘footprint analysis’ as well as the ‘semiotic infusion’; while Laura Kurgan (2013) claims for a ‘para-empiricism’, using art and maps in order to inquire the social and political implications of satellite images
- 3 The critical uses of cartography has been explored by several scholars and practitioners with different purposes. For instance scholars, architects and urbanists such as Saverio Muratori (1960; 1963), André Corboz (1993) or Anuradha Mathur and Dilip Da Cunha (2006; 2001), use maps in order to recover the spatial transformations of a place. In the field of landscape urbanism scholars and practitioners such as James Corner (2000) or Secchi and Viganò (2011, 2014; 2016) use cartography as instrument of both investigation and design; while other such as Raoul Bunshoten and CHORA architectural office (2006) use maps as a participatory tool for debating territorial transformation involving different actors. Finally, recently urbanists and geographers such as Clare Lyster (2016) or Nikos Katsikis (2018a) are exploring the potential or cartography in visualizing the territorial implication of phenomena such as ‘the space of flow’ or the ‘planetary urbanisation’. Related to each of these purposes different techniques of representation has been developed, for instance the ‘drift’, the ‘layering’, the ‘gameboard’; or the ‘rhizome’ (Corner, 1999; Waldheim & Desimini, 2016).
- 4 This methodology has been recently adopted by several scholars for inquiring the landscape transformation in China, for instance by Rem Koolhaas et al. (2001), Bruno de Meulder, Yanliu Lin and Kelly Shannon (2014), Christopher C.M. Lee (2016a), Yang Dingliang et al. (2017), Joan Busquets and Yang Dingliang (2017, 2018, 2019), and Michele Bonino et al. (2019).
- 5 See <http://www.zzzglby.com/> (accessed on February 4th 2020).
- 6 These measures and values has been retrieved using satellite images and GIS instruments.
- 7 These measures and values has been retrieved using satellite images and GIS instruments.
- 8 See <http://zhengzhou.fangte.com/fareInforms.aspx> (accessed on February 4th 2020).
- 9 These measures and values has been retrieved using satellite images and GIS instruments.
- 10 These measures and values has been retrieved using satellite images and GIS instruments.
- 11 These measures and values has been retrieved using satellite images and GIS instruments.
- 12 Information about the Kaifeng Materplan (1995-2010) have been retrieved at the Exhibition Hall of Kaifeng Municipality, Kaifeng New Area, visited in April 8th 2019.
- 13 Information about the Kaifeng General Plan (2010-2020) have been retrieved at the Exhibition Hall of Kaifeng Municipality, Kaifeng New Area, visited in April 8th 2019. Moreover, see <http://kfxq.gov.cn/m/news/gaikuang/2018/0129/2283.html> and <http://2016.kfxq.gov.cn/list.php?fid=42> (accessed on February 4th 2020).
- 14 The most relevant industry in the area are: the Henan Anlida Auto Parts (Electronic Industrial Park); Kaifeng Weichang Auto Parts Co., Ltd.; Kaifeng Sung Denso Co., Ltd.; Henan Dunhan Group Technology Industrial Park; Kaifeng Opal Automation Co., Ltd.; Kaifeng Air Separation Group Co., Ltd.; Kaifeng Rijin Automotive Wiring Harness Co., Ltd.; Chery Automobile Henan Co., Ltd.; Zoomlion Kaifeng

Industrial Park. The two shopping malls are the Zheng Kai Impression City and the Wanda Square, both sited along the Zhengkai Avenue.

- 15 The university campuses are: the School of Applied Science and Technology (Shangqiu University); the Kaifeng Technician College; the Kaifeng Cultural Tourism School; the Henan Medical Technician College; the Kaifeng Special Education School; the east campus of the Henan Vocational College of Applied Technology; and the new campus of the Kaifeng High School.
- 16 See the link: [http://www.zhongmu.gov.cn/template/viewList?catalogId=ce5b7ee5605a43ae9390f894aaa0b363&id=s\\_14a5f53bd57d4b5f8c4dd636c1d7785a](http://www.zhongmu.gov.cn/template/viewList?catalogId=ce5b7ee5605a43ae9390f894aaa0b363&id=s_14a5f53bd57d4b5f8c4dd636c1d7785a) (accessed on February 4<sup>th</sup> 2020).
- 17 See also: <http://upspr.thupdi.com/project/view?id=2149> (accessed on February 4<sup>th</sup> 2020).
- 18 See also the study conducted by Christopher Lee (2016a) on the ancient agricultural villages in Zhongmu County, in particular the cases of Tiaqian, Dongzhao, Yantai and Heniuzhang villages (all demolished in 2017 and 2018).
- 19 The study on dwellings that compose the ancient villages has been conducted in several places in the Zhengbian New District during my fieldwork periods. Furthermore, several information on the internal organisation of the housing units have been provided by the study of Christopher Lee (2016a).
- 20 These information result from the empirical investigation based on satellite views and GIS technologies, and the fieldworks in Zhongmu County (from October 12<sup>th</sup> to 15<sup>th</sup> 2017 and from April 24<sup>th</sup> to May 2<sup>nd</sup> 2019) during which I visited the modern agricultural villages of Weigang, Mushan, Wangjia'an, and Luzhuang.
- 21 As for the case of Wangjia'an and Guanduqiao villages.
- 22 The spatial organisations described in this subchapter correspond to the typical typologies adopted in building the modern agricultural villages as reported by Christopher Lee (2016a) and Roland G. Knapp (1992), and they correspond to the ones of the new modern agricultural villages that I visited during the fieldworks in Zhongmu County.
- 23 These values result from empirical investigations based on satellite images and GIS technologies.
- 24 During the two fieldwork in Zhongmu County, one conducted from October 12<sup>th</sup> to 15<sup>th</sup> 2017 and the other from April 24<sup>th</sup> to May 2<sup>nd</sup> 2019, I visited many new agricultural towns, such as Madu Shequ and Zhugu New Agricultural Towns. Among them, I stayed in Taiqian, Yaojia, and Yangzhuang Communities planned between years 2013 and 2016 by the Zhengzhou Design Institute, which provide me documents and information regarding these cases. According to the planning documents, Taiqian New Agricultural Town has an overall area of 583,086 square metres, for an expected population of 5,112 inhabitants in 1,402 houses (421 size 180 square metres, 421 size 240 square metres, and 560 size 280 square metres). Yaojia New Agricultural Town (Shandian Community) has an overall area of 683,170 square metres, for a planned population of 4,384 inhabitants in 1,370 houses (279 size 180 square metres, 286 size 240 square metres, and 805 size 280 square metres). Finally, Yangzhuang New Agricultural Town has an overall area of 704,850 square metres, for a planned population of 4,755 inhabitants in 1,486 houses. The survey on Zhugu New Agricultural Town reported in this chapter also highlights a similar condition: the overall area of the community is 725,000 square metres, it has an estimated population of 5,400 residents, and 1,682 houses (349 size 180 square metres, 392 size 240 square metres, and 941 size 280 square metres).
- 25 For instance, according to the planning documents in Yangzhuang New Agricultural Town will host: eleven areas for offices and commercial activities (17,644 square metres total), two community centres (4,985 square metres total), two centres for cultural activities (4,985 square metres total), a kindergarten (3,240 square metres) and a primary school (5,396 square metres) with apartments for teachers (4,651 square metres total), a nursing home (3,240 square metres), two houses of worship (2,849 square metres), an hall for holding celebration (1,424 square metres), a medical centre (1,362), two waste dumpster areas (759 square metres total) and five public toilets (416 square metres total). The same amenities are also planned for the Taiqian and Yaojia New Agricultural Towns.
- 26 The prizes refers to Zhugu and Taiqian New Agricultural Towns. The former are reported in two ads dated June 11<sup>th</sup> and September 11<sup>th</sup> 2018, see the links <https://zz.58.com/ershoufang/32370526521277x.shtml> and <https://zhongmou.baixing.com/xinfangchushou/a1507723965.html> (accessed on February



4<sup>th</sup> 2020). The latter are reported in two ads dated February 27<sup>th</sup> and December 23<sup>th</sup> 2018, see the links <http://zhengzhou.grfy.net/sale/d-7637800.html> and <http://www.zhongmou.ccoo.cn/post/fangwu/chushou/7555749x.html> (accessed on February 4<sup>th</sup> 2020).

- 27** The spatial layouts described in this subchapter are the one of Zhugu New Agricultural Town that I visited during the two fieldworks in Zhongmu County. These three typologies correspond also to the ones of the planning documents provided by the Zhengzhou Design Institute for new agricultural town of Taiqian, Yaojia, and Yangzhuang New Agricultural Towns. According to Christopher Lee (2016a) “the villagers choose the size, construction team and building materials. But for the most part, almost all families choose the largest model and relatively low-quality materials” (p. 268).
- 28** I had the opportunity to join one of these ceremony on May 1<sup>st</sup> 2019 at the Greentown compound in Yangming Lake Town.
- 29** All the information about the prizes and the dimensions of the compounds of Yanming Lake Town have been retrieved from the archives of real estate agencies, in particular such as Soufang Technology Development Co. ([www.zz.fang.com](http://www.zz.fang.com), accessed on February 4<sup>th</sup> 2020), Cabin Information Technology Co. (<https://zz.ke.com/>, accessed on February 4<sup>th</sup> 2020), Tencent (<https://house.qq.com/>, accessed on February 4<sup>th</sup> 2020), and Fang Duoduo ([www.fangdd.com](http://www.fangdd.com), accessed on February 4<sup>th</sup> 2020), and visiting the exhibition halls of the compound in Yanming Lake Town during the fieldwork activity conducted on May 1<sup>st</sup> 2019.
- 30** A survey conduct in Zhongmu County the research by Christopher Lee (2016a) highlights the great income inequality of workers in. As reported in the study *Common Framework*, the wider gap is registered between the revenue of a retired or disabled person who received 125-375 CNY per month, and a contractor with a good connection with local government who earns 10,000-18,000 CNY per month. The average income of farmers that own from 1 to 3 square kilometres of arable land ranges between 200 to 500 CNY per month, while if the farmer leases the same plot to a modern farming company the value may increase to 625 CNY per month. The higher income in the primary sector is the one of the recent graduates in an agricultural university who work for the modern farming companies, that can reach 2,500 CNY per month. People living in rural areas and working in the secondary sector (such as the Foxconn factory) earn from 1,900 to 3,500 CNY per month, while villagers that sell produce in town markets earns 3,500-5,000 CNY per month.
- 31** See, for instance the official promotional video at <https://v.qq.com/x/page/a0173gt3fvk.html> (accessed on February 4<sup>th</sup> 2020).
- 32** See the links: <https://baijiahao.baidu.com/s?id=1631029224427938735&wfr=spider&for=pc>, [http://www.360doc.com/content/16/1108/21/8448336\\_605003536.shtml](http://www.360doc.com/content/16/1108/21/8448336_605003536.shtml), and <http://www.shsee.com/yj/nygy/7516.html> (accessed on February 4<sup>th</sup> 2020).
- 33** See <https://baijiahao.baidu.com/s?id=1631029224427938735&wfr=spider&for=pc>, and <http://www.zhongmou.ccoo.cn/bendi/info-105261.html> (accessed on February 4<sup>th</sup> 2020).
- 34** See the link: [http://www.zhongmu.gov.cn/sitesources/zmxzf/page\\_pc/zmyx/cyzm/y/articleaadc49842d1e4611874240e4eb052104.html](http://www.zhongmu.gov.cn/sitesources/zmxzf/page_pc/zmyx/cyzm/y/articleaadc49842d1e4611874240e4eb052104.html) (accessed on February 4<sup>th</sup> 2020).
- 35** According to the official report “24 million CNY were spent for an efficient water-saving irrigation project; 1.32 million CNY for agricultural machineries; and 310,000 CNY for a river dredging treatment” (Bai, 2016).
- 36** As reported in the website [www.ccg.gov.cn](http://www.ccg.gov.cn) (accessed on February 4<sup>th</sup> 2020), according to the administration the three main objective were: “1) to develop an urban ecological agriculture, and make Yanming Lake Town a model of urban ecological agriculture, not only for the Central Plains but for the entire country; 2) to develop the ecological and leisure agriculture and build an international and beautiful ecological rural town; 3) to create a unique ecological brand in Yanming Lake Town for supporting the processing of basic products” (Ministry of Finance of the People’s Republic of China, 2015b).
- 37** See also <http://www.thupdi.com/project/view?id=2149> (accessed on February 4<sup>th</sup> 2020).

- 38** Which are: the Luming Lake Park in Zhongmu County, the Zhongmu County Wetland Forest Park, and the Shawo Forest Park (Dahe, 2019; You Li, 2019).
- 39** Sector I are the headquarters while sectors M, H and J are still under construction (China Labor Watch, 2019).
- 40** The working units has been designed by the real estate company Zhengzhou Tianyuan Industrial Investment Co., Ltd. and a view of the project is available at the following link: <http://www.zzytjt.cc/newsdetail.aspx?dir=compro&xid=3> (accessed on February 4<sup>th</sup> 2020).
- 41** As reported in the official website <http://chinalaborwatch.org>: “Founded in 2000, China Labor Watch (CLW) is an independent not-for-profit organisation. Over the past 17 years, CLW has collaborated with unions, labour organisations, and the media to conduct in-depth assessments of factories in China that produce toys, bikes, shoes, furniture, clothing, and electronics for some of the largest multinational brand companies. CLW’s New York office creates reports from these investigations, educates the international community on supply chain labour issues, and pressures corporations to improve conditions for workers” (accessed on February 4<sup>th</sup> 2020).
- 42** See the official website of Foxconn Zhengzhou is: <http://caa.foxconn.com/> (accessed on February 4<sup>th</sup> 2020).
- 43** As reported in the document by the China Labour Watch (2019): “There is a production quota every day. During the busiest time in peak season, the maximum number of phones that can be produced is 12,000. But on average, each workshop and each shift (day and night shift) produces 11,000 iPhones. In off-peak season, workers produce around 3,000 iPhones, and despite the production quota being much lower than in peak season, there are also fewer workers. As such, workers may have to workharder. If the production quota is not completed, workers will be reprimanded. Generally, workers are able to complete the production quota” (p. 26).
- 44** The production plant has recently draw the attention of many national and international observers in relation to the work conditions of the employees, the strikes and struggles, and in particular, the high number of suicides. See, as an example the article of Ngai Pun et al. (2016).
- 45** See for instance the movies by Wang Bing: *Tie Xi Qu: West of the Tracks* (2003), *Bitter Money* (2016), and *Shanghai Qingnian* (2018).
- 46** Of these enterprises 352 are ‘cultural services enterprises’, 103 are ‘cultural manufacturing enterprises’, and 101 are ‘culture wholesale and retail enterprises’ (Henan Province Bureau of Statistics, 2018).
- 47** The competition for revising the detailed schemes for the university park involved the office Kisho Kurokawa Architect & Associates and the South China University of Technology (SCUT) (K. Li et al., 2010b).
- 48** Actually there are twelve university in the Longzihu Area, eleven are located around Longzihu Lake: the North China University of Water Resources and Hydropower, the Zhengzhou Institute of Aeronautical Industry Management, the Henan Vocational and Technical College, the Henan Economic and Trade Vocational College, the Henan Institute of Economic and Finance, the Henan Institute of Animal Husbandry and Economics, the Henan Agricultural University, the Henan Police Academy, the Henan University of Economics and Law, the Henan Judicial Police Vocational College, the Henan University of Chinese Medicine. On the contrary, the other Zhengzhou Institute of Technology is located in between Dongfeng canal and the expressway G107.
- 49** See the following links: <https://www.ncwu.edu.cn/contents/3/1.html>, <http://www.zua.edu.cn/xxgk/xxjj.htm>, <http://www.hnzj.edu.cn/xygk.htm>, <http://jjjian.hnjmxy.cn/>, <http://www.hacz.edu.cn/xxgk.htm>, <http://www.hnuahe.edu.cn/xxgk/xxjj.htm>, <http://www.henau.edu.cn/gaikuang/lsyg/index.shtml>, <http://www.hnp.edu.cn/jgsz/jxxb.htm>, <http://www.huel.edu.cn/xxgk/xxjj.htm>, <http://www.hnsfjy.net/Portal/More.aspx?pcode=0000>, <http://www.hactcm.edu.cn/xxgk/xxjj.htm>, <https://www.zzut.edu.cn/> (accessed on February 4<sup>th</sup> 2020).

- 50** Five of the major campuses (the North China University of Water Resources and Hydropower, the Zhengzhou Institute of Aeronautical Industry Management, the Henan Vocational and Technical College, the Henan University of Chinese Medicine, and the Zhengzhou Institute of Technology) were planned by different Chinese design institute in 2004 and 2005, and their plan included in the document *The Urban and Architectural Design of Zhengdong New District* by Li Keqiang et al. (2010d).
- 51** The minor universities are: the Henan Judicial Police Vocational College and the Zhengzhou Institute of Technology.
- 52** Plans and prospects of the dormitories are reported in the publication by Li Keqiang et al. (2010d).

CONCLUDING REMARKS  
**THE PROJECT  
OF THE  
ENRICHED FIELD**





The decision to take on a Ph.D. topic of such breadth and ever-changing trends and dynamics, as well as being the subject of a global debate, was neither easy nor without reservations. What inspired me to undertake this research into the urbanisation processes underway in China today was a keen interest in this field based on two reasons: firstly, it is a once-in a-lifetime opportunity for any scholar to study a phenomenon which has exploded onto the academic field of urban studies; secondly, the desire to investigate, in this specific context, some forms of contemporary urban planning in the conviction that the radicality with which such projects are expressed in this setting might assist in uncovering some specific characteristics, not merely relevant to a Chinese context. Investigating the urbanisation processes in the Central Plains of China implied examining the impact that economics, politics and local values have had on the landscape and modelling of the physical space. In this sense, I looked at the territory and its transformations in the certainty that this would allow me to reveal more complex processes which go beyond the inertia and physical composition of the things observed, and, in particular, beyond a Chinese or Asian context. Based on this hypothesis, the thesis puts forward an *interpretation* which queries conventional models and proposes novel theories and tales of urban studies and urban projects.

In order to achieve this goal, the urbanisation processes underway in China today and, more specifically, those in the Central Plains of China were observed, studied and described in relation to previous urbanisation processes that took place in the last century in other settings: mainly in developed countries. This does not mean to say that China should be regarded as a ‘foreign body’ in terms of literature or theories on this topic, nor does it need to be handled from a safe distance or used as a point of contrast. Indeed, as well as constructing a theoretical framework,

the first section of this thesis (chapters 1-3) aims to underline the normality, the ordinariness of the subject in question despite the opinion in some quarters that frequently cloud the issue by regrading it as exceptional in nature (Robinson, 2006). This approach does not intend to deny in any way the uniqueness of the places and the settings; the detailed description of the phenomena and the physical space reported in the second section of the thesis (chapters 4-6) reconstructs the history and the mutations of a political, economic and spatial nature which have characterised the territory of the Central Plains of China over the last century and, in more detail, over the last two decades. Great attention has been given to the urban plans drawn up to guide the expansion of the cities, to local and super-local policies, to the form of territorial government, and the scenarios produced. In addition, this type of investigation is accompanied in the third section by a detailed description of the *physical spaces* in the Central Plains of China (chapters 7-9). A description which was developed through first-hand experience of the places based on three different periods spent there during my time of doctoral research. This experience benefited greatly from the assistance provided by local scholars and experts, who work in fields and disciplines different from mine. The entire body of observations reported in these three sections has been used to develop a *synthetic interpretation* of the territory of the Central Plains of China; an *interpretation* that does not aspire to be exhaustive or univocal, but is a gamble although backed by arguments and facts; an attempt to propose a new reading of the transformations in progress in order to stir a discussion and, with this, new prospects for future research.

The hypothesis which forms the basis for such an interpretation is that the Central Plains of China can be described as an *enriched field*, where the term enriched is used with the meaning given by Luc Boltanski and Arnaud Esquerre (2017) in *Enrichissement*; a meaning that recalls the long tradition of socio-economic studies which investigates how the socio-cultural dimension affects the trade of the material goods.<sup>1</sup> The authors (2019) associate the term with a type of economy that “on one hand [...] attempts to enrich things [...] especially associating them to tales; on the other hand [...] it exploits the trade in things that first and foremost cater for the rich and that constitute, even for the rich who trade in them, a supplementary source of wealth” (p. 9). According to the authors, this type of economy is driven by everyone: public institutions, culture, the market and private individuals. This because the value of goods depends in large part on the tales that surround them: tales created by a multitude of actors (manufacturers, salespeople, users) and guaranteed by institutions that are public in nature (Boltanski & Esquerre, 2019). This interpretation rests on some contemporary economic forms that are peculiar to a European setting, and specifically to the French state. The divide between this and the Chinese experience is total; so much so that when the analogies are set alongside the radical contrasts, the two appear strangely to grow closer to each other. Just like the hypothesis of this research, it is not a question of comparing the two contexts: how far and in what way is China distant? How near and in what way is it close? Instead, the aim is to bring about a collision, shattering multiple and diverse contexts, similar interpretative categories. By way of example, what would happen

if the Central Plains of China were regarded as a great *bassin d'enrichissement*? What would happen if the new infrastructural equipment, the residential places and the overall general functional reorganisation in progress in the Central Plains of China were all interpreted as support produced for grounding an economy rooted on the symbolic value of the material goods? The questions that are raised, which the final part of this study attempts to answer, are multifarious. For a start, how can we turn our attention once again to that *equipotential surface*, investigated in relation to mobility infrastructures, parks, leisure spaces, scenic and amusement spaces, if this is interpreted as primarily an enormous operation of *environmental enrichment*? That is, as the main vector for the affirmation of a new environmental comfort in contemporary China. How can we re-examine the residential spaces when their design is regarded as completely subjugated to *branding*, channelled by a mix of global imaginaries and local history together capable of generating a pervasive process of *enrichment of the everyday*? An analogous reasoning is valid for production spaces. Industry becomes a creative district, capable of displaying the laborious character of places devoted to extolling cultural and technological advances, art, the spectacle. It holds true for agricultural spaces, useful for putting on displays of Chinese pastoral progressivism made up of agricultural parks packed densely together. It is just as true for railway stations and the CBDs, as cities in cities with their rich aesthetic of symbols simultaneously celebrating distant futures and ancestral pasts. It is true, all in all, for the entire space observed, so much so that wherever the gaze falls we can observe this kind of *growth, expansion and exaltation of spaces and meanings*. What can we say then, in a final analysis, about the design, when this is primarily assumed as an *wealth-generating operation*<sup>2</sup> which can freely take advantage of everything necessary to augment the real by altering it?

## Empowered Environments

The modifications that the infrastructural system in the Central Plains of China has undergone are ascribable to three main phases in the urbanisation process of this territory.<sup>3</sup> In the first phase, which occurred by means of a slow process of sedimentation of minor infrastructure, the territory took shape as a form of *continuous surface*, upon which the urban elements are placed in strong relationships to one another. The second phase, beginning at the turn of this century, was characterised by a radical mutation caused by the appearance of an infrastructural system of major channels for mobility. This transformed the territory into a *hierarchical surface*, displaying great polarisation. Finally, the current phase highlights how a new homogenous and pervasive infrastructural system is reconfiguring the territory of the Central Plains of China to a *equipotential surface* which, wiping out any positional values, lays the foundations for novel forms of occupation of the space.



The result is that, through the articulation of the roads, power supply, parks, mobility channels and leisure spaces, there has been an *environmental enrichment* that has affected, uniformly, every part of the territory.

The Central Plains of China were long characterised by a series of small cities quite evenly distributed over the territory reflecting the expansion of the population and its density. Outside of these urban centres, a large expanse of mainly agricultural spaces was organised by a minute, capillary infrastructural system; this was made up of a dense network of small roads and canals linking the villages. This type of configuration categorised the territory as a *continuous surface*, where the elements relate to one another in a contiguous mode, establishing, thus, a reciprocal relationship of dependency. In other words, the infrastructural devices had the task of regulating and mediating the transition between similar environments that together make up a single, unified agricultural production space. An example is provided by observing in cross-section some portions of the land that are still unchanged today. In ancient farming villages, the passage from the rooms of the house to the street takes place through an inner courtyard, just as the access to common areas is through a street which opens onto the central square of the settlement. Likewise, the transition between the agglomeration of houses and the flat expanse of fields is mediated by a road that skirts around the buildings, more often than not, surrounded by groves of trees or a small pond or lake which acts as a filter (Knapp, 1992; Lee, 2016a). Beyond the fields lie other villages all organised according to the same logic.

This familiar scene was upset by the arrival in the early-2000s of the great channels of mobility, which redrew the lines of the dense infrastructural web which had characterised this territory. The new infrastructures gave birth to a system linking specific terminal points, defining importance and fixing new relations of scale. In this way the *continuous surface* was redesigned, becoming a *hierarchical* surface instead. The transformation can be likened to that observed in some European territories in recent years, that is, the superimposition of a rapid transit system (*tube*) over a slower system of mobility (*sponge*), with a consequent progressive *polarisation* of economies in specific settings (Secchi, 2000; Secchi & Viganò, 2014; Viganò et al., 2016). In the Central Plains, the most exemplary case of this polarisation is the Zhengdong New District, the new town of Zhengzhou built as a node of the national transport system, in particular, the high-speed rail system.

This concept of urbanisation of the Central Plains of China through a structure which takes shape based on the main arteries of the transport and mobility network was the cornerstone of urban plans for the region drawn up at the end of the last decade. An example of this strategy is the design by ARUP for the Zhengbian New District, which developed a linear urbanisation between the cities of Zhengzhou and Kaifeng based on a series of main nuclei set along the major infrastructural axes that connect the two cities (ARUP Engineering Consulting Company et al., 2009, 2010). However, due to the hypertrophic growth of the urban areas Zhengbian has

continued to grow around a different urban layout: a road-based grid that marks out lots of 500x500 metres; the carriageways are generally lined by parks to hosting other minor mobility devices (pedestrian paths and cycle lanes) and water canals. Differently from the infrastructural devices that have gone before, this new layout does not stop at simply providing a rapid link between terminal points, or at defining privileged spaces ready for interventions in which to develop new urbanisation; the grid affects large swathes of the territory: redefining the topographical characteristics, the historical pre-existence, the environmental specificity and its positional values. It is in this sense that we can refer to this territory as an *equipotential surface*: a space capable of arranging different functions and equipment, one beside the other, without determining congruity or incongruity, relations or conflict. Such an infrastructuralisation is clearly quite different from anything that regulates spatial articulation in other territories, mainly European, characterised by a diffuse, continuous urbanisation that is just as pervasive as that taking place in the Central Plains of China. There are many reasons; firstly, the infrastructure here is no longer regarded as an *in-between* space for mediation, capable of giving “shape to the city by tempering the fragmentariness and parataxic juxtapositions” (Secchi, 2000, p. 159). Nor can it be regarded as an open space capable of hosting practices that are performed in public, that is, a negotiation space, ‘a room for manoeuvre’, at the disposal of the individual and his/her relations with other individuals; hence, a space subject to constant appropriation and modification (Sieverts, 2003). The infrastructural space here is a strictly technical space, but, at the same time, highly suited to *enrich* the territory it crosses. Let us attempt to define what we mean by *enrichment*.

The contemporary infrastructuralisation of the Central Plains evokes, in many ways, the grid layout that organised the North American territory in the 1800s. A similarity which is not just due to morphology (Busquets et al., 2019), but rather the strong analogies present between the devices for territorial organisation, as has been documented by the theories of *agrarian urbanism* and *landscape urbanism* (Corner, 1999; Waldheim, 2016). Devices that have been described as “irrigating territorial with potential” (Koolhaas, 1995, p. 969) while preserving within a “scale of undecidability” (Berrizbeitia, 2002, p. 125), that is, keeping their options open for future re-conformations and changes. The infrastructuralisation of the Central Plains of China, while evoking this paradigm, presents, however, many differences that are due to disregarding the original will to create a unified landscape: that is, ignoring the search for that ‘internal harmony and continuity’ that was the goal for the landscapes of mobility in the US (Tunnard & Pushkarev, 1964), and, in general, lacks the celebration of the landscape through the construction of its crossing (Corner & MacLean, 2000). Hence, we find ourselves far from the conviction that from the landscape a form can be shaped representing an “organic and complete totality [...] able to include and conserve things that lie side by side, impossible to separate” (Sampieri, 2008, p. 67). Instead, here, we are in the presence of the inverse: an infrastructuralisation that produces an expansion of non-contiguous, no-proximal fragments, that remain so even when placed next to each other. Just

like contemporary logistical spaces, which are able to spring up (more or less) everywhere, whenever necessary, and in a way that is relatively indifferent to the landscape and the context.<sup>4</sup>

If, however, it is true that there is no celebration of the landscape in the infrastructuralisation of the Central Plains, nor the will to create a spectacle based on cohesive compositions, it cannot be interpreted solely as the instrument for reorganising the territory freely and functionally with the objective of attracting domestic and foreign capital investment (Jie Shen & Wu, 2017). Infrastructuralisation has here, as, perhaps, it has always had in the past, a touch of magnificence. A trait that contributes to ‘enrich’ the crossed space, and not only in terms of good logistical function, but also, and more importantly, environment. The infrastructural spaces of the Central Plains of China assume representations and values that are mainly environmental in nature. The infrastructures built between Zhengdong and Keifeng are spaces in which to display a wealth of (enriched) technology able to rebalance ecologies, re-compose environments and generate well-being. We are, therefore, far from the representations of that ‘socialist monumentalism’ that marked the high point of modern magnificence and, with it, the extolling of the virtues of the *masses* and the *public* in their 1900s’ definitions (Harvey, 1989; Liang, 2014; F. Wu, 2015). We are far from infrastructuralisation as the exaltation of the crossed landscape, with its wild or pastoral monumentalism (Corner & MacLean, 2000; Machor, 1987; Waldheim, 2016). However, we are also far from the spectacularising of the so-called *Potemkin metropolis*, with their nodes of globalisation whether they are Olympic spaces in Beijing or those of the transnational capitalist class of Pudong in Shanghai (Isozaki, 2001; Koolhaas et al., 1995; Ren, 2011; Sklair, 2005). On the contrary, it is brimming with the rhetoric that we find in eco-cities, sponge-cities and in contemporary environmentalism, the new infrastructuralisation of the Central Plains responds (or at the very least simulates a response, through the expedients offered by technological innovation) to the imperatives demanded by any sustainable, resilient and healthy city, wherever it may take new layouts and configurations.

## **Branded Homes**

The development of a rich, capillary infrastructure, what we have called an *equipotential surface*, including the way in which it brings about a pervasive enrichment of the environment, allows every artefact within its bounds to establish its own characteristics of quality independently of the setting. It follows that every part that makes up the infrastructural scenario of the Central Plains of China (residential compounds, industrial zones, parks and leisure facilities, fields and so on) can legitimately claim its singularity and specificity. This is particularly evident in the

central business districts, in the university towns and numerous theme parks, where the specificity carries on through the search for a strong expressive impact; hence, the constructions are usually designed and executed by international architectural firms in collaboration with local design institutes and real estate companies. This strategy has increasingly been employed even for residential developments, regardless of being located in what are considered marginal territories (such as Zhongmu County for example) compared to the large property development projects of the city centres and the new towns.<sup>5</sup>

For instance, observing the new agricultural towns of the Central Plains, it can be noted that these developments have abandoned the formal and functional features of a typical traditional village, instead they have adopted a completely different morphology (Bray, 2013; Lee, 2016a). The new dwellings are like suburban villas and have a floor area ranging from 150 to 300 square metres with the majority exceeding 200 square metres. Each house has more than one storey with large rooms, bow-windows and a composite system of pitched roofs; and each dwelling has its own fenced garden, parking spaces, and, sometimes, even a garage. The overall layout is similar to that of a suburban neighbourhood of semi-detached houses separated by small parks and gardens and tree-lined pavements. This set of elements, while being common to almost all the new agricultural towns, is never exactly the same way in each case. Unlike modern agricultural villages built during the first decade of the 2000s, the houses and urban plan of the new agricultural towns was not developed based on a standard template. On the contrary, the design institute in charge of the project drew up a specific plan which included small variations on the common themes. However, what is most striking in the new agricultural settlements is the total absence of utilizable space for farming activities when, instead, as proven by the improper use of private and public open spaces, these are essential (Lee, 2016a). Consequently, the inhabitants of the new towns are forced to store their farm equipment and harvests in their gardens or other spaces nearby so that these become improvised open-air granaries or storage spaces (Bonino et al., 2019; Lee, 2016a). However, this aspect seems trivial to the eyes of the local administration, which, on the contrary, encourages the development of spaces for functions that, till a short time ago, were not envisaged in these settings. In fact, next to the schools or clinics that demonstrate the strong and capillary investment in public welfare, there is a clear commitment to creating areas for cultural and leisure activities (small parks and sport equipment); but, above all, there are large shopping areas integrated into the design of every village.<sup>6</sup> With the introduction of these areas and functions, as well as through the expressive impact of the new buildings, the new settlements become part of the “*new city*, [which is] a space of redemption” (Oakes, 2019, p. 405), distancing itself from the traditional farmer’s house and the very world of agricultural production itself (although the cultivated fields are still the landscape within which the new villages are constructed). As is reasonable to expect: the distance in style and form is also a distance from the conditions of destitution, poverty and suffering of the past (Bolchover et al., 2013; Knapp, 1992; Lethbridge, 1963).



The trend to highlighting the individuality and exclusivity of the living space is even more evident if one observes the compounds built by the real estate companies. These developments are made up of houses on a number of stories with dimensions between 150 and 400 square metres; equipped with a private elevator; double-height ceilings in the living room and, sometimes, having a terrace with an outdoor swimming pool. In order to stand out, these developments seek architecturally decorative expedients, such as the Canadian-style Vancouver Village, the French themed Little Paris, or the Italian inspired Italian Town. Moreover, they are strongly associated with the brand name of the real estate companies that built them: Vanke, Greenland, Greentown, and many others (Carota, 2019). In the exhibition halls, where the projects under construction are advertised and sold, these characteristics are highlighted so as to drive home the idea of the 'unique' design of these products and, at the same time, the quality of the product backed by the brand of the real estate company.<sup>7</sup>

The exhibition halls do their utmost to turn dwelling into a spectacle. For each compound the exhibition highlights the formal characteristics that make it unique compared to those nearby, and emphasis the services it has to offer to the residents (sports facilities, shopping centres, educational facilities), its relations with the surrounding (nature reserves, historical areas, financial districts), and most importantly, its convenience for luxury amenities (such as golf clubs, ports and scenic areas) as well as its connection with the rapid transport system (like international airports, airports for private traffic, high-speed rail stations and motorways). In order to assure prospective clients regarding the quality of the construction, the history of the developer is recounted: the previous developments by the same constructor in other places, the constructor's achievements, public awards, and the prestigious architectural firms the constructor has worked and is working with.<sup>8</sup> Alongside all of this, there are the technical specifications of the house, with great emphasis on the technological devices and construction materials, such as security doors, sanitations, walls insulation and much more (Repellino, 2019).

As for the process of *urban diffusion* in the 1900s, here the dwelling spaces of the Central Plains of China seem to 'shout their uniqueness' and, hence, compose that ensemble of fragments able to generate continuous differences, exceptions to the point of becoming, paradoxically, compositions where everything is just 'more of the same'. It is not really so. At least, not totally. Looking more closely, we can observe that the spaces that make up the Central Plains of China do not manifest the slightest affirmation of the individual, no celebration of truly individual character. For many reasons. Examining the new agricultural towns, the house is a keyhole project supplied to the final user complete with all the necessary equipment, including, often, a fictional history. Consequently, the inhabitant, just as he/she has had no hand in building the house, does not change it nor rewrite it unless there is a need to occupy the private and common spaces with equipment necessary for fieldwork. Here, the realisation of new spaces cannot be interpreted as the reward of hardworking people who enjoy exhibiting through their home the fruits of their

labours and entrepreneurial spirit (Sennett, 2009). Differently, the houses are a product of the market to select and use like it was any goods.

The divide that separates this Chinese development from *urban diffusion* is all too clear; therefore, it is more relevant to cite, as does so much of the literature, analogies with global suburbanisation, although the forms of this phenomenon are extremely variegated (Clapson & Hutchison, 2010; Phelps & Wu, 2011). If we consider it rooted into the suburbanisation process that characterized the territory of United States in the second half of the 1900s, what analogies can we really expect to derive from its comparison to New Urbanism, which characterised the American *middle landscape*? Furthermore, ignoring the differences in political and economic systems in the two countries (Jie Shen & Wu, 2017; Zhou & Ma, 2000),<sup>9</sup> is this the root of the suburbanisation that is defining the Central Plains of China? What is certain is that there is no sign of that celebration of that progressivist myth (Mozingo, 2011; Rowe, 1991), which transformed the non-urban dwellings in the United States into ‘machines in the garden’ (Marx, 1964), that is, colonies able to ‘tame’ the setting and to build, based on this, a new relationship between man and nature (Machor, 1987; Waldheim, 2018). Moreover, the romantic conviction that viewed the rural environment as the custodian of superior values has no equivalent in a Chinese context, where, instead, the rural environment recalls only the recent past with its memories of hardships and shortages which had led the government to adopt slogans such as “it is glorious to be poor” (Dikötter, 2013, p. 42). In any case, as demonstrated by the new agricultural towns, the myth of progress is undermined by an environment that, although is the process of modernisation, tends to purge any reference to work and fatigue.

In a wider view, it is clear in these territories that there is nothing left of those anti-urban roots which led to dispersion in Europe and suburbanisation in north America, but also the past Chinese countryside. This is not an *anticittà*, that is, a territory made up of small private worlds built thanks to the hard work of individuals in search of their independence and freedom (Boeri, 2012; Sampieri, 2014). Nor are we dealing with *disjunct fragments* of American (or global) suburbanisation which are founded on the paradigm of privacy, autonomy and segregation (Keil, 2018; Krieger, 2019; Mozingo, 2011). The agricultural villages and compounds distributed in the space of the Central Plains are urban: *they are the city*. Perhaps, the characteristic which best returns their being *the city* is this very cohesive representation of a clear, shared idea of ‘collective enrichment’ which is expressed in various ways: the celebrated assortment of architectural forms, the wide accumulation of local and international brands and, above all, to large number of tales regarding the history and the genealogy of each place. It is of little importance how much and how arguable or legitimate it all is because what is at stake is an enormous process of asset building which does not allow for setbacks and holdups, that is contradiction.

## Altered Meanings

The considerations made in the previous parts described the Central Plains of China as an entire space *enriched* by an infrastructural system that generates and spreads nature, wellbeing and urbanity, as well as by artefacts that celebrate their uniqueness. This condition brings to mind the image of a ‘crazy mosaic’ in which the tiles, laid without any positional rules, can associate in free compositions, deregulated and easily the object of speculation. In this sense, a collection of spaces similar to those that Keller Easterling (2016) defines as ‘extra-statecraft zones’, that is, landing sites for global capital; in other words, “a quintessential apparatus of the neoliberal state” (p. 66). However, the Central Plains of China, are actually anything but ‘extra-statecraft’. In fact, the many government agencies and institutions involved in urban planning focus ever more attention on what can feasibly be housed in the ‘mosaic’, even given its free composition. An excellent example of this is the policies implemented under the definition of ‘land quotas’, which aim to limit the consumption of land and to preserve farmland (F. Wu, 2015). Moreover, we can also cite the plans new urbanisations such as the Zhengbian New District, conceived as a unified expression of an entire project under construction, recomposing the individual parts into a greater whole (ARUP Engineering Consulting Company et al., 2009, 2010; Zhengzhou Municipality, 2009).

In order to achieve this goal, specific strategies have been put into practice. Firstly, the plans rely heavily on ‘the power of symbols’ (Ren, 2011), that is, they repeat, despite being in different settings, places turgid with ‘meanings and significations’ (Lefebvre & Smith, 2003; Schmid, 2014). Secondly, they change the names of functions, thus, altering the meaning and the use of the spaces (a phenomenon that takes place in the most interesting urbanisations, within which uses and functions multiply and superimpose on one another). Thus, the cultivated areas become ‘agricultural parks’, ‘ecological areas’ and ‘scenic zones’; the logistic spaces transform into ‘transit-oriented development’ (TOD) or into Economic and Technological Development Zones (ETDZs); the spaces assigned for industrial production transmute into ‘science parks’.<sup>10</sup> The ‘Zhengzhou Science Park’, also known as ‘iPhone City’, is an excellent example (Barboza, 2016; Barnett, 2012; China Labor Watch, 2019; Jacobs, 2018); however, there is no shortage of examples in the Zhengbian New District, where the ‘Nissan Zhengzhou Technology Centre’, the ‘Automotive Park’ or the ‘Henan International Agricultural City’ tower over other nearby industrial parks of new production spaces, able to host diverse functions inside their areas. Thus, the Foxconn Zhengzhou Science Park hosts, alongside the production spaces, research centres, dormitories, restaurants and sports facilities. Similarly, the agricultural park of Yanming Lake Town not only comprises glasshouses, fishponds, new agricultural towns and other spaces for agricultural production; but it also has research buildings, resorts, small shopping centres, a golf club and an aviation club. Therefore, every single portion of the territory is altered and empowered in order to offer increasingly high standards. As a result, through every fragment the entire city can be experienced.

Thus, it is possible to conceive of the Central Plains of China as a space that we may call *syntrophic*. Syntropy (or negentropy) is a physical state contrary to entropy, that is, a process that gives rise to structures that are evermore ordered and differentiated internally. Analogously, the planning of the Central Plains of China seems to be aiming to attain an overall organisation of functions and spaces that is evermore unified and compact, while retaining the diversity of the single components. Needless to say then, the current situation appears to be light years away from that occurring in the territories of the *urban diffusion* governed by a substantial “freedom in the location of functions” (Sieverts, 2003, p. 10) and a consequent comingling or *mixité*, of uses and practices (Secchi, 1996; Bonomi & Abruzzese, 2004; Bianchetti, 2014). On the other hand, in the Central Plains of China, specific uses coagulate in determined portions of territory without pursuing the logic of development by district. This is because the economy acts in a trans-scalar fashion and is not based on a relationship of territorial proximity (Governa, 2019). Despite this fact, the overall composition forms a unit, in a whole, in a syntrophic space supported by the presupposition that “[the] confrontation [between parts] evolves into a mutual ‘understanding’” (Schmid, 2014, p. 72). This mutual understanding is made possible by the reiteration of symbols and the adoption of a new language capable of rewriting uses and functions. In this way, the single pieces of the puzzle lose their property of ‘functional enclave’ and claim their place as members of a common whole. As we observed before in the history of the *middle landscape* of the United States, where the ‘modern technical orientation’ determined a rigid separation of uses within defined spaces (for living, working, playing, shopping) immersed in a comprehensive landscape (Rowe, 1991). Hence, in the *middle landscape* the ‘corporate estates’, ‘corporate campuses’, ‘office parks’, ‘strip commercial centres’, ‘roadside franchises’, ‘shopping villages’ and ‘pedestrian malls’ defined the interdependent sequences organised according to a specific logic and the dynamics of territorial usage (Easterling, 2001; Mazingo, 2011; Rowe, 1991). In the Central Plains of China, interdependence and continuity between parts are more symbolic than physical, and the sequences are never linear, not even when the things are being organised along privileged axes such as that in the Zhengbian New District.

In this way, the city appears to be made up of an ensemble of ‘empowered clusters’ which at first sight show ambiguous analogies with local stories. They recall, in fact, the ‘cellular urbanism’ of the *danwei*, which were constituted not only as workspaces, but also hosted social activities (Bonino & De Pieri, 2015; Liang, 2014). However, the meaning appears to be the inverse today: if socialist urbanisation operated within an anti-urban concept, dismembering the city into independent cells (Liang, 2014; F. Wu, 2015); the modern transformations taking place in the Central Plains of China show how every place is a *little bit more city*. An inclusive operation through which highly-specialised technical places, traditionally considered as extraneous to the city, have slowly become a normal part of the everyday living environment. Therefore, from the matching of all these parts the entire territory becomes a sort of ‘augmented reality’ within which it is possible to experience everything that a modern city has to offer.



## The Project of the Enriched Field

What has been examined up to this point allows us to pause and reflect upon how the project of the *enriched field* operates with respect to the three forms of action highlighted: firstly, an adherence to the principles of *ecological universalism*; secondly, a *spectacularisation/branding* of each transformed space; and finally, an *alteration* of the relationship between the spaces and uses through which the inhabited territories are made to provide the greatest possible number of ‘qualified experiences’. This final paragraph will discuss these actions, proposing the idea that, through these, the project of the *enriched field* has an end to prioritise the construction of a space within which past and future coincide in a present that is, insofar as possible, devoid of tensions and conflicts (among times, functions and practices).

The project of the *enriched field* is based, firstly, on the development of the environmental characteristics of the place; thus, participating in a globally recognised ethical and, nowadays, ever more institutionalised position. Thus, the ecumenical aspirations of the modernist project are recovered, and with this the capacity to promote interests shared by everyone. This despite abandoning the case for social justice based on redistribution or participation in the name of an environmental justice, ecological justice and non-human justice (Schlosberg, 2009). What ensues is the gradual abandonment of anthropocentric arguments, as much from an *enlightenment* stance, which wished for a city that developed based on the intellectual and physical components of man (i.e. the *modulor* by Le Corbusier); as from a *humanist* viewpoint, which celebrated the cultural characteristics of each space and its practices (i.e. the *analogous city* by Aldo Rossi or the *incremental housing* by Elemental). This is evident in the configuration of open spaces in *enriched territories*. These no longer extoll the virtues of the masses as in the public space in the 1900s and, in particular, in the socialist ideology. Not even raising the differences or affirmation of a mass of varied individuals, as it was in the late-modern and post-modern urban projects, especially in the western countries. On the contrary, the project of the *enriched field* affirms that green belts, huge irrigation systems, new plantations, reforested areas, hydroponic horticulture, wind and solar farms and low-emission public transport networks are spaces that work for the planet, even more than for humans (unless that implies humans as just one of the many species inhabiting the planet). Consequently, a holistic approach is required that operates in a techno-scientific mode, able “to neutralize, quantify and objectify planetary space through technoscientific reasoning [...] understanding urbanisation as a politically neutral almost organic force” (Katsikis, 2014, p. 499). An approach that was the foundation for many modernist projects such as the *Ecumenopolis* by Constantinos Doxiadis or the *4D Time World* by Buckminster Fuller (Katsikis, 2014) and is present even today in projects like *Roadmap 2050* (2010) or *The Energy Report* (2011) drawn up by OMA for the European Climate Foundation (ECF),<sup>11</sup> the World Wildlife Fund (WWF) and Ecofys,<sup>12</sup> as well as by the *Chinese National Ecological Security Plan* developed by Turenscape for the Chinese government

(Yu, 2014). The same attitude is reproduced on a smaller scale in the evermore numerous eco-cities, low-carbon cities and sponge cities being built in China and elsewhere (Juke Liu et al., 2017; Williams, 2017). It is evident that, by subscribing to a theory of technocratically-based ecological universalism, the project promotes a position of rigidly coded collective wellbeing that is, simultaneously, the object of wide consensus and fierce criticism.<sup>13</sup>

Secondly, the *enriched fields* are connotated as being rich in narrative threads representing the raw material for a project to build interconnected relationships as well as heightening an effect of constant surprise. This objective is pursued through the search for expressive characteristics that may imbibe all the spaces; features that are mainly traceable to a coded brand. The use of these characteristics recalls the search for a global imaginary that must not, however, owe its existence to a transnational architectural production linked to the emergence of a transnational capitalist class (Sklair, 2005), or to the repositioning of territorial elites (Ren, 2011), as has also been argued in the literature that considers this spaces as simulacra or fake copies or spaces and architecture produced elsewhere (Bosker et al., 2013; Piazzoni & Banerjee, 2018). Paradoxically, the current flourishing in construction of symbolic spaces so strongly characterized responds to a growing demand for *authenticity*, that is, the need for every place to be part of a specific tale, better yet, a local one. A process of *place creation* is underway which bears a strong resemblance to that observed recently in the territories of cultural tourism, even those in China, “in which identities may be consciously localized as strategy to engage structures of political economy which increasingly connect local actors with broader geographical frameworks and more distant sources of power” (Oakes, 1993, p. 48). This requirement is met by the action of *branding* that, through the reputation of the brand, certifies that the territory and the urban material of which it is composed are objects of value and quality. However, the objective is not just to apply a clear connotation to the space: expression and brand also promote a specific lifestyle. Thus, living spaces are “standard products, but with a *collector effect*” (Boltanski & Esquerre, 2019, p. 309): they are no longer perceived as catering for an indistinct mass, but as collectible products by virtue of their peculiar characteristics. In China, this phenomenon has been made evident by the way in which real estate companies operate (Carota, 2019; X. Zhang et al., 2011); these companies represent the guarantee for the residents of the *enriched field* that they are indeed living in a *brandscape* (Goldman & Papson, 2006; Klingmann 2007; Löfgren, 2014): a ‘collectible space’ that, as such, possesses an intrinsic value, which must keep providing proof of its exceptionality.<sup>14</sup> Hence, the extraordinary character of each places must be explicit, recounted and celebrated. That is why everyday living space undergoes such a spectacularisation through design processes with the primary aims of seducing and convincing. In this case too, the distances from the modernist project that intended to regulate, regardless of the setting, fair and right spaces for all based on quantity, size and relation between the parts are evident (Baburov et al., 1976; Hilberseimer & Anderson, 2012; Le Corbusier, 1946). However, what appears even more clear is the overturning of

the post-modern project that, in disagreement with the universalism of modernity, sought legitimisation in the setting, from the *genius loci*, from an origin in the presumed individual and collective memory, which is grounded in a specific space (Halbwachs, 1950; Rossi, 1966). In contrast, the project of the *enriched field* (re) invents the setting time after time on the basis of the construction of a new specific narration. In this sense, the project of the *enriched field* finds to some extent its own archetypes in the *24-hour museum* designed by AMO and Vezzoli in 2012 for the Prada foundation: “an ephemeral ‘total museum’ that hosts a sequence of rituals unfolding through the 24 hours”.<sup>15</sup> The reason for this is that in the *enriched field*, the project places more emphasis on the symbolic aspect of the construction rather than its effective use.

Narrative freedom is, however, not unlimited. As Timothy Oakes (2019) affirms, the narrative must be controlled in order to be coherent, “and the urban landscape has become perhaps the most prominent medium through which that narrative is both articulated and contested” (p. 401). Hence, not everything can be said. This does not imply censorship, rather an *alteration of the meaning* attributed to the space, to its uses and its practices. In the Central Plains of China, this phenomenon is evident observing the production sites that have become science parks or ETDZs, farmland that has been transformed into ‘agricultural parks’, and logistic zones that have turned into TOD.<sup>16</sup> Again, in the *enriched field*, every place – even those for agriculture, industry, financial or cultural purposes – is not confined to its simple practical function, such as the manufacture of a particular article, but must, at the same time, enable an experience that is as highly edifying as possible. For this to occur, the project must act so that spaces, till a short time before excluded from everyday life, become accessible and open: to the point of including in the everyday living environment spaces and functions that previously had usually been set outside *the city*. Thus, there has been an overturning of the modern project based on the division and separation of spaces, uses and functions, which organised the city into distinct zones each self-contained and highly efficient. At the same time, however, the project of the *enriched field* is clearly a great shift from the ones that attempt to construct continuity, relations and unity based on the virtue of the values of proximity (Secchi, 1989). Thus, we have come a long way from the modernist utopia of Brasilia by Lucio Costa (El-Dahdah, 2005), as much as from the recent plan by MVRDV for Oosterwold, Almere (Maas, 2018). The project of the *enriched field* acts primarily through ‘the power of symbols’: every single part must abide by and live with every other even if this slightly, or radically, alters the meanings.

The three points examined in this concluding paragraph formulate a hypothesis regarding the actions of an urban project in settings which, similar to the Central Plains of China, may be considered *enriched fields*. Observing the Central Plains of China has been, in fact, in the hypothesis of this work, an opportunity to highlight issues that do not regard exclusively the urbanisation processes in China; however, these issues, as a result of the rapidity and profound transformations they have wrought in the Chinese context, are more striking and more easily scrutinised there.

The issues raised are not trivial: the conversion to a non-anthropocentric universal ethic; the spectacularisation of the everyday, and the alteration of relations between spaces and uses. A final question hovers in the background: what is the tension that encompasses all three actions? I believe that the project in an *enriched territory* acts to affirm an *eternal present* in which “nothing more can be produced; [...] [in that it] is outside the tension, sheltered from danger and, especially, conflict” (Boltanski & Esquerre, 2019, p. 463). What are in actual fact all the plans drawn up by various government agencies if not a form of assumption, in the present, of all possible future transformations? To what do we owe the constant relaunch of plans and projects before their completion unless it is to the construction of a narration which affirms that the future is not tomorrow, but what we are experiencing now? This *presentification* of the future, just like the same process for the past in Europe, implies not only an abandonment of the progressivist tension of the modernity, but also a detachment from the recent trend of the project that celebrates the myth of constant change, of all transformations as a process, of the instability of events and their lack of inertia (Mostafavi & Doherty, 2016; Waldheim, 2016). All because of the tendency of the project in *enriched field* to cause the collapse of the future, all possible futures, into a continuous present which is capable of performing them on stage, of making them visible, making them liveable. Hence, there is no common ground with the project as “construction of a future which extends over the long term” (Secchi, 2000, p. 42). *The project of enriched field* works to actualise the changes (both past and future), cancelling, in the process, every tension between times (the weight of the past, the uncertainty of the future), and affirming a state of stasis that is both reassuring and pacified. There is nothing to fear from the transformations in progress: “the city has become the epitomized landscape of social stability” (Oakes, 2019, p. 404). However, it would be wrong to believe that change will fizzle out. In China, it is evident, but this evidence allows us to reflect upon the situation in the West and in Europe. In fact, it is not true that “the stronger the identity, the more it imprisons, the more it resists expansion, interpretation, renewal, contradiction” (Koolhaas et al., 1995, p. 1248). On the contrary, in the *enriched fields* meaning and identity undergo continual alterations in sense and meaning, that may be small and imperceptible or great and dramatic as in China. The task of the project is to ‘accompany’ this shift, accepting that the future state is already and has always been in the present. Indeed, it has already become the past and, thus, will be here forever. Hence, it is said that the Central Plains have been, and will forever be, prone to property speculation; the territory of the south of France has been, and will always be, a place for leisure, recreation and wellbeing; Silicon valley has been, and will always be, the home of technological innovation; London has been, and will always be, the global financial capital. In other words, *the project of the enriched field*, rather than exalting the discontinuity, becomes an instrument through which discontinuity and disconnections are interiorized and obliterated in a universal story able to perpetuate itself, unchangingly, in time.



## Notes

- 1 I am referring in particular to the studies: *Distinction a Social Critique of the Judgement of Taste* (1979) by Pierre Bourdieu; and *The System of Objects* (1968), *The Consumer Society* (1970), and *Symbolic Exchange and Death* (1976) by Jean Baudrillard. On this topic in the fields the urban studies are relevant, among others, the works *The Cultures of Cities* (1996) by Sharon Zukin.
- 2 I refer to the French term *patrimonialisation* (or the Italian term *patrimonializzazione*) as it has been described by Luc Boltanski and Arnaud Esquerre (2017): “the *patrimonialisation*, driven or not, can be realized regardless of the age of the site or the building, which may be entirely rebuilt or renovate, or it may even be new; this because it is mostly based on the story attached to it that introduces this place into a genealogy” (p. 36). Since this definition slightly different form the one commonly adopted in the field of urban studies, that it usually links the term *patrimonialisation* to the English word *heritage*, I decide to adopted the term *capitalization*.
- 3 See chapter 7.
- 4 A similar feature was observed in the Chinese new towns recently built, which are considered “a backup space available to be used when necessary” (Sampieri, 2019, pp. 210–211).

- 5 See chapter 8.
- 6 For instance, the research *Common Framework* (2016a) by Christopher Lee investigate four agricultural villages un Zhongmu County (Taiqian Village, Yantai Village, Dongzhao Village e Heiniuzhang Village). In 2014 these villages present about 45 buildings for the agricultural production and the goods storage, eleven shops and three schools. The village has been recently demolished and the dwellers relocated into the Tushan New Agricultural Town. In the new settlement are: public and sport facilities, a clinics, four primary schools, one secondary school and fifteen buildings for commercial activities. In spite of this, in the agricultural town are not any spaces for agricultural activity.
- 7 According to Luc Boltanski e Arnaud Esquerre (2019): “the brand needs to meet various contradictory demands. If a good is expensive, the brand needs to give the impression that, even if always available it remains an uncommon object; something it does by giving value to the particular features of the good that differentiate it to similar objects which are considered banal” (p. 231).
- 8 This phenomenon is someway analogous to the one observed by Luc Boltanski e Arnaud Esquerre (2019), who argue that the craft workshop in French are “living museum where is not only showed the object to sell, but also the activity of the man who realized it” (p. 427). Richard Sennet (2018) indicates something similar referring to the international residential compounds in Shanghai: “all these imitations correspond to a tested brand; they arouse the feeling to live in a precise place and by association they exempt a peculiar aura, that of being deeply rooted” (p. 136).
- 9 In recent years many Chinese scholars have compared Chinese urbanisation with the process of north American suburbanisation bringing to light analogies and differences that are mainly centred on the political, administrative and economic issues (Phelps & Wu, 2011; Jie Shen & Wu, 2017; Zhou & Ma, 2000). A perfect example of this is the paper by Yixing Zhou e Laurence J.C. Ma (2000) that evidences five differences between the two phenomena: the different role of the State in driving the urbanisation processes; the different relation among the city centre and the peripheral urban in the two contexts; the diverse social composition of the population living in the American suburbia (middle-class) from the one the Chinese new urbanisation (rural migrants); and finally the level of suburbanisation which is defined as ‘incipient’ in China and ‘mature’ in America.
- 10 See chapter 9.
- 11 See the website: <http://www.roadmap2050.eu/> (accessed on February 4<sup>th</sup> 2020).
- 12 See the website: <https://assets.panda.org> (accessed on February 4<sup>th</sup> 2020).
- 13 For instance the critics made by Gili S. Drori et al. (2006) that consider this “aggressive universalism [...] much in common with traditional religious movements [...] [and] circulate doctrines of human rights and empowerment, principles of the natural environment, and rationalized models of action and coordination. These doctrines, principles, and models, it is understood, can integrate people and nature in effective and tranquil society - and increasingly on a global scale” (p. 262-273).
- 14 In a similar way, even if regarding other contexts, may be considered the way in which supranational institution, such as the UNESCO, brand specific territories and intangible assets, to *capitalized* them (Evans, 2009; Pearson & Pearson, 2017; Ryan & Silvano, 2009). But not only, also policies undertaken by public authorities are acting in the same way, a perfect example of this is the European Union that has recently established the ‘vice-president for protecting our European way of life’ (J. Rankin, 2019; Stevis-Gridneff, 2019).
- 15 See the websites: <https://oma.eu/projects/24-hour-museum> and <http://www.fondazioneprada.org/project/francesco-vezzoli-24h-museum/> (accessed on February 4<sup>th</sup> 2020), and <http://www.24hourmuseum.com/> (accessed on November 7<sup>th</sup> 2019).
- 16 Ambiguous analogies can be found in other contexts: nowadays the major port of the European cities, such as Rotterdam, Genova e Marseilles, are primarily touristic destinations with museums, entertainment areas and places for exhibition; in the Silicon Valley most of the well-known campuses for producing software are open to the public and contain fitness centres, auditoriums and other facilities; finally the sites for viticulture in Italy and French are now mainly considered beautiful landscapes, places of wellbeing and good-living.



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## Note

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