

## *From Creation City to Infrastructural Urbanism*

### The Chinese National New Area as an Infrastructure Space

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Gui'an New Area was established in 2014 by China's State Council as part of a broader strategy to jump-start the economy of southwest China's Guizhou Province. The New Area was meant to serve as a demonstration site for eco-urbanism, and as a new service center for China's big data computing industry. That same year, Guizhou was designated as the country's first Big Data Comprehensive Pilot Zone. With an initial surge of investment from the provincial government, transfers of funds from the central government, and favorable tax incentives, Gui'an was meant to become a sort of southern Chinese Silicon Valley: a hub for innovation in artificial intelligence and virtual reality software development. President Xi Jinping visited Gui'an in 2015 and outlined a trio of development objectives that are displayed on signs and billboards throughout the area: "high-end production," "environmental sustainability," and "intensification of economic opportunities on all levels." Covering 1,800 square kilometers (more than twice the size of Singapore), the New Area is a vast stretch of land between the provincial capital of Guiyang and the city of Anshun. Gui'an contains some of the richest and most productive agricultural land in Guizhou, a province where chronically low agricultural productivity (due to the stony karst topography) has historically been the norm. In a place where opportunities for wealth have always been associated with leaving the villages and fields, Gui'an's promise of economic development begins with the simple fact that most of this vast region will be converted to nonagricultural uses. It also means that Gui'an will become a new kind of space, one in which new infrastructure is not only the means of development, but also development's objective.

In one sense, Gui'an is just one manifestation of a broader spatial reordering aimed at facilitating urbanization as the engine of development in China (Ren 2013; Hsing 2010). This reordering essentially positions cities as entrepreneurial growth machines (Wu 2015). But in another sense, Gui'an marks an important shift in the way urbanization is happening in China. In this chapter, I explore this shift by considering Gui'an as an infrastructure space. This concept was proposed by the architectural theorist Keller Easterling, in her 2014 book *Extrastatecraft*, as

a way to identify spaces (such as special economic zones and export processing zones) where governance is driven by the logic of infrastructure provision. Easterling's approach suggested a reconception of the zone format as a space defined less by the formal state administrative systems by which such spaces are designated, and more by the infrastructural assemblages that collect there. Easterling was particularly interested in how infrastructure space has come to define a new urban format. Infrastructural configurations, she argued, have displaced formal planning and design to become the basis for "the urban structure itself—the very parameters of global urbanism" (Easterling 2014, 12). While much of Easterling's concept overlooks the central role of state planning and territorial administration in China, infrastructure space nevertheless offers an intriguing perspective from which to consider the changing nature of urban agglomeration in China, where the differences between rural and urban have become blurred, and where everyday life is increasingly shaped by and lived through so many infrastructural grids.

I suggest that viewing China's new urban developments (like Gui'an) as infrastructure spaces moves us beyond the urge to understand them as cities. An infrastructural approach reveals how urbanization in China has shifted from a city-centered entrepreneurial growth model to a sprawling landscape of grids sprouting up on the edges of and in between established urban centers. At the same time, such an approach puts into sharp relief the way urban developments like Gui'an continue to be invested with a powerful ideological discourse, in which new urban developments are viewed as redemption cities: spaces where China's past urban failures will be set right, where a teleology of progress and civilization finds its apex, and where the social stability and harmony of Xi's China Dream are materialized for all to experience (Oakes 2019). Thus, even as the process of urbanization has changed in a way that renders the city analytically indistinguishable from the countryside, the conception of the city (and, by extension, that of the countryside) continues to shape urban development in significant, if contradictory, ways.

Gui'an, then, is both an infrastructure space and an ideological model that does not quite align with that space. In this chapter I follow the infrastructure to tease out the contradictions between the space and the model. I do this by first describing the infrastructural grids that anchor the New Area. I then offer a brief historical account of what I call China's infrastructural urbanism. This is a term that I borrow from architectural history to highlight how an infrastructural approach to China's modern urban history reveals key continuities across several eras of urban development. Those continuities suggest, on the one hand, a history of friction between the processes and spatial practices of urbanization and, on the

other hand, efforts of planners and other state actors to use those processes and practices to promote certain developmental and modernizing agendas. Examples of these state planning efforts are then discussed in the context of Gui'an. I construe these efforts in scalar terms as a view from above, in which Gui'an is imagined as an exemplary model and "creation city." The remainder of the chapter counters this planner's view from above with a description of Gui'an at the level of the street, where particular spatial practices emerging from both infrastructural configurations and ideological projects are redefining urbanization in China. These spatial practices offer an alternative scale at which to understand China's urbanization experience—one defined less by the administrative space of the city and more by the infrastructure that grids the land into a geography of networks and nodes.

This chapter is based on research that I carried out during several visits to Guizhou in 2017–2019. The research consisted of interviews with local officials, planners, and scholars, as well as ethnographic fieldwork, in Gui'an New Area.<sup>1</sup>

### Gridding the Land

A series of grids shapes Gui'an as an infrastructure space. The most prominent of these include a network of new multilane avenues and highways that crisscross the core of the New Area (figure 7.1); new drainage infrastructure meant to channel rainwater runoff throughout the built-up areas; and surveillance and security infrastructure, including ubiquitous CCTV and cameras equipped with facial recognition capabilities. The public security devices are meant to complement a grid of "smart-city" technologies that aim to turn the New Area into a vast data-generation tool—a smaller-scale version of what China hopes to develop on a national scale.

It is the layout of very wide and mostly empty avenues, boulevards, and highways that most viscerally establish a landscape of newness in Gui'an. An incongruous grid pattern of roads has been set down among the undulating hills and valleys of the New Area's core section. The grid consists mostly of municipal-level roads (城市道路), but it also includes arterials (城市干线路) and expressways (城市快速路).

This transportation infrastructure—categorized as "urban" (城市级)—has not augmented the previous rural system of county, township, and village roads so much as ignored it. The new urban grid of roads creates an entirely different space. Whereas rural settlements were previously linked in a dendritic hierarchy of roads and lanes linking market towns to villages and villages to fields, they now occupy uniform and equivalent spaces within a grid network. Local residents are largely

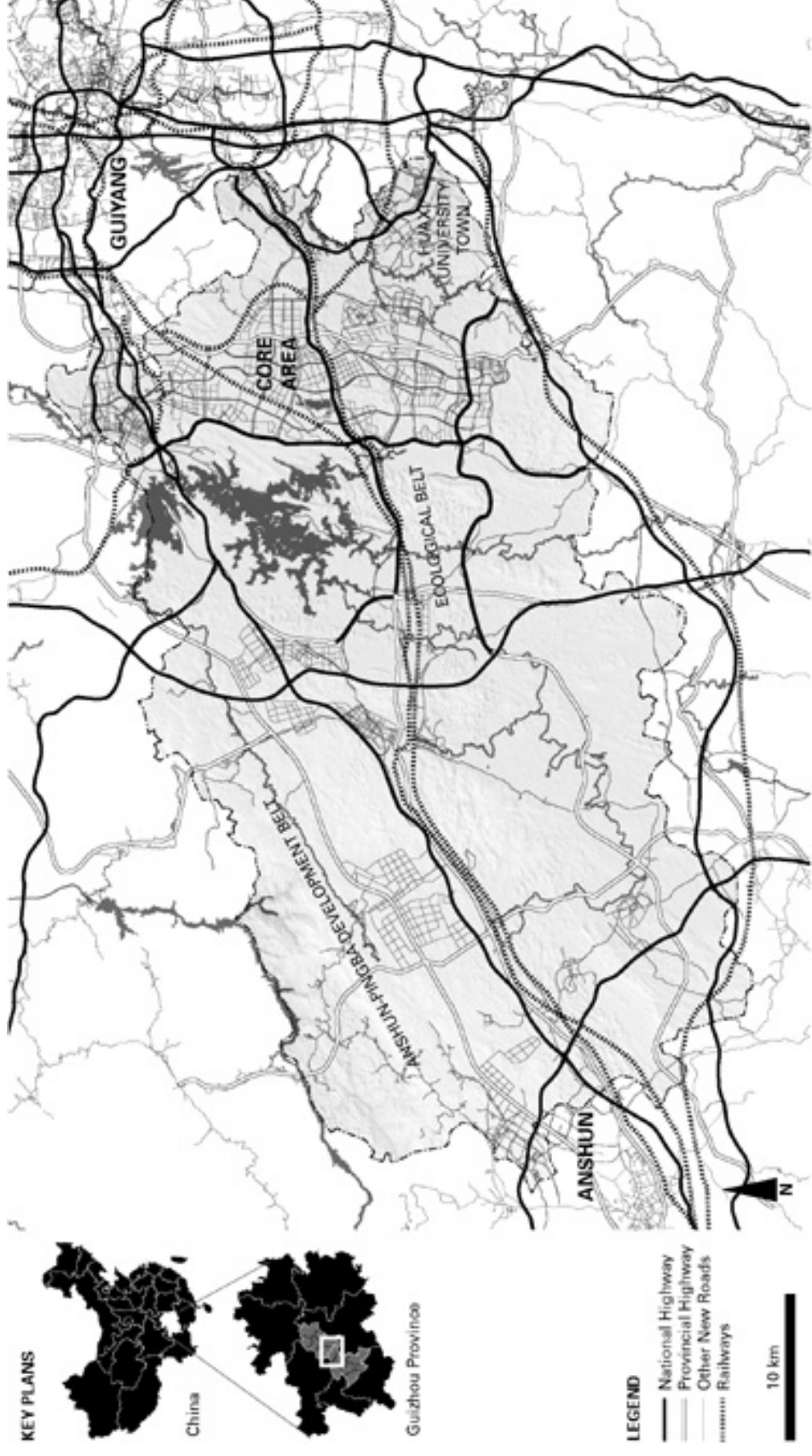


Figure 7.1. Gui'an New Area transportation grid. (Map by Dorothy Tang and Angus Oakes. Made with Natural Earth, Open Street Map, and NASA JPL data. See NASA JPL 2013.)

left to themselves to figure out a way to tap (or hack) into and make use of this new network of roads. The roads partition the land into separate blocks, often turning administrative villages into disconnected parts. In this new landscape, nearby places become distant, separated by ten-lane divided boulevards, while at the same time becoming closer to distant urban centers (figure 7.2). Villagers who hack into this grid with their own hastily built and potholed connectors (sometimes cutting directly through the new roads' guardrails) gain a new level of connectivity on a much larger scale, but only by appropriating a network that was seemingly not built for them.

The New Area is also engineered as an ecological grid, most directly materialized in drainage infrastructure. In 2015 Gui'an became one of sixteen so-called sponge city pilot sites around China. In Gui'an, roughly seventy-five projects were initiated to build roads, parks, and water-treatment facilities with permeable materials, accounting for an estimated investment of over USD 1 billion (Gui'an New Area 2017). The sponge city was a new urban design model proposed by Xi in 2012 after a series of floods devastated several Chinese cities. The model is intended to be an alternative to the conventional engineering practice of moving rainwater through pipes and drains: it creates spaces within cities that absorb rain like a sponge. In Gui'an, seventy monitoring stations were installed to collect data on rainfall use, water levels, and river systems. These monitoring stations demonstrate the expectation that Gui'an should function as a data-collection device as well as an engine of economic development in a relatively poor region of China. The gridding of the New Area might thus be thought of as a transition from landscape to datascape.

Becoming a fully gridded smart city is perhaps the most obvious aim of this transition. The New Area is a key experimental site for the development of so-called Sky Net technology, with the government touting the saturation of Gui'an by surveillance infrastructure. Even the Western media have been impressed. In a 2017 experiment, the BBC journalist John Sudworth tested the area's real-time pedestrian detection and recognition system by trying to make a thirty-minute drive from the New Area to the Guiyang train station undetected by police monitors (Zhao 2017). He was detected after seven minutes, and by the time he reached the station, local police had been alerted and were waiting for him. Sky Net identifies the age, gender, and clothing of pedestrians and drivers through surveillance cameras on the streets. This makes Gui'an a pilot zone not only for remote policing via digital surveillance, but also for algorithmic governance, whereby vast amounts of social media-generated behavioral data (which are increasingly being stored in servers also located in the New Area) are used to manage a whole range of administrative, economic, and security operations. Anticipating Gui'an's pioneering



Figure 7.2. A ten-lane road in Gui'an New Area. (Photograph by Tim Oakes.)

role in developing the “internet of things,” one study claims that by 2030, there will be 40–50 smart terminals in every household in Gui'an, each producing twenty terabytes of data every year. The data, it is claimed, will drive output value in Gui'an to over USD 35 billion (Nie 2019).

### **Infrastructural Urbanism in China**

In architecture and design fields, infrastructural urbanism was a response to the semiotic and representational excesses of postmodernism’s “architecture of surface.” It advocated a return to material instrumentality in architecture, as opposed to symbolism (Allen 1999). As a description of recent patterns of urbanization, however, infrastructural urbanism in China differs from this return to the material practice of Euro-American architecture. In China, a new kind of urban agglomeration driven by large-scale gridding can be seen in New Areas like Gui'an. Infrastructural grids produce not so much cities as networks and operational landscapes, within which new forms of settlement, economic activities, and governance take shape. In many ways, infrastructural urbanism marks a process of urbanization in which urban agglomerations emerge less in response to master planning or administrative policies (which often come *ex post facto*) and more in response to infrastructure expansions, extensions, and provisions that contain no particular vision of the future city.

To make a provocative claim, one might argue that even prior to the current pattern of urban agglomeration, infrastructure preceded any notion of the city as a distinct space in China. This is because the traditional walled city in China was not a distinct legal or administrative entity; there was no Chinese equivalent to the autonomous city of medieval Europe. Governance in China was scaled as local, regional or provincial, and imperial, but not as urban. The walls surrounding cities did not typically demarcate a spatial-administrative boundary. Walled cities did not have their own particular government structure distinct from that of the administrative territories within which they were located. Rather than marking a spatial divide, walls materialized the imperial order at the local scale. Some scholars have likened the walled city to the nucleus of a cell (see, e.g., Knapp 2000).

Jun Zhang (2017) has argued that modern city governance and the idea of the urban in early twentieth-century China emerged in part when city walls were demolished and replaced with streets. In her study of Republican-era Guangzhou, she traces the emergence of a new urban form made possible by infrastructure projects, and shows how new forms of governance regulating residents' behavior became necessary in the new street spaces created by these projects. Guangzhou's old city walls offered the most obvious sites for new streets and the modern forms of circulation they would bring. Their demolition marked, both materially and symbolically, the transformation of imperial space into modern urban space. Zhang (2017, 168) comments that in premodern China, the urban "was not a category that organized things and people in the Chinese imperial order. But with the collapse of the imperial court and the effort to establish a nation-state, a form of urban governance gradually emerged. The purpose of such governance was to manage the population and goods on the territory that was categorized as urban. From the very beginning, the category of urban was constructed in a way that spoke to a political agenda beyond the urban itself. It was an integral part of the nation-state building and of a modernity project." Crucially, it was through the requirements of modern infrastructure construction that this new category of the urban was materialized and brought into governmental being: "The streets projects were not only products of, but they also fostered, the emerging category of the urban. The streets provided the concrete material and the built environment for the imagination and understanding of the urban, or the modern city" (168).

Like Zhang, Michel Foucault was also interested in how replacing city walls with streets engendered new forms of urban management, new conceptions of the city, and new governmental apparatuses for security and surveillance. Referring to European towns of the eighteenth century, he notes that an important problem "was allowing for surveillance, since the suppression of city walls made necessary by economic development meant that one could no longer close towns in the

evening or closely supervise daily comings and goings” (Foucault (2004, 30). Both Zhang and Foucault, then, anticipate the way infrastructural grids reshape the social orders emerging from urban agglomerations. A century after Guangzhou’s walls were demolished and replaced by a modern streetscape that fostered a distinct spatial conception and experience of the urban, infrastructure continues to propel urbanization in China.

This is not to say that urban planning was not a factor in the development of urban spaces over the twentieth century. Indeed, the infrastructural urbanism identified by Zhang’s account of the emergence of modern Guangzhou was matched by efforts among early twentieth-century urban planners in China to create model cities set apart from existing urban centers, where state-of-the-art planning practices could be employed (Wu 2015, 16). But such plans were almost never implemented. In the 1920s and 1930s, resources were simply too scarce. And during the 1950s, initial plans for building new socialist cities were interrupted and ultimately subsumed by the state’s prioritizing rapid industrialization at all costs. The 1950s emphasis on transforming urban centers into industrial producer cities meant that many of these comprehensive urban plans were never implemented, either: “While the discourse of socialist city planning was to create a new built environment—the socialist city—to shape a ‘new socialist man’, in reality, the weak economy and the stress on ‘productive’ industrial investment meant that large-scale new town development was difficult in China” (Wu 2015, 38). This remained the case during the 1960s and into the 1970s, when most urban planning programs in China were shut down entirely as a result of the Cultural Revolution. To an extent, socialist urban planning during this time was defined by the highly constrained infrastructure of China’s existing urban system.

During the early 1980s reform era, rural restructuring stimulated a rapid process of rural urbanization. This Township-and-Village-Enterprise-driven process could be understood as a vernacular form of infrastructural urbanism, in which new agglomerations emerged virtually overnight, unplanned and largely informal. These “instant cities” (Hessler 2007) grew up around the infrastructure of production and assembly—makeshift factories in rapidly plotted and often illegal industrial zones—that characterized the early phase of peri-urban and rural development, particularly in China’s coastal provinces like Jiangsu, Zhejiang, Fujian, and Guangdong. But, as Xuefei Ren (2013, 25–30) argues, this trend of “urbanization from below” shifted to a policy-driven “city-centered urbanization” in the 1990s and early 2000s, as Beijing responded to the chaotic proliferation of zones with a significant program of retrenchment. This shift was complemented by the success of China’s special economic zones and the government’s subsequent



designation of fourteen Open Cities along the coast, followed by the establishment of Pudong as China's first National New Area.

In Guizhou, by 2010 city-centered urbanization had led to a trend of developing peripheral new towns in many cities throughout the province, particularly at the county level. Such urban projects were often characterized by the construction of an entirely new city center with large-scale public facilities, including parks and plazas. The most prominent of these was Jinyang New Area (now renamed Guanshanhu District), on the northern periphery of Guiyang. As happened throughout China during this period, municipal government offices were relocated to the New Area in an effort to rapidly populate the otherwise empty streets and apartment buildings. University branch campuses were also opened, along with numerous high-end residential compounds, leisure resorts, and even a theme park devoted to ancient Guizhou culture. Throughout China, the rapid overbuilding of these New Areas and districts contributed to the infamous ghost town phenomenon, while the devotion of government officials to spectacular architectural designs and ornately figured buildings—whose central purpose seemed to be little more than drawing attention to themselves—led to the popular criticisms that China was building “a thousand cities, all with the same face” (千城一面), and that such developments were little more than “face projects” meant to ensure the promotion of the officials who initiated them.

Jinyang might be viewed as one example of the kind of entrepreneurial growth-machine urbanization—what You-tien Hsing (2010) called “the urbanization of the local state”—that seemed to spin out of control during the early 2000s. It became common to see references (both in popular media and in academic accounts) to China's “urban sickness” and to “irrational” urbanization (Woodworth and Wallace 2017). By the beginning of the Xi administration, the central government was issuing prohibitions against the building of new lavish municipal government structures, followed by broader restrictions on new town development. In 2014 the administration even condemned “weird” architecture in an effort to douse local officials' enthusiasm for iconic buildings by which to promote themselves and brand their new town developments (Li 2014). While urbanization remained the government's primary tool for economic development, a different model was clearly needed.

This set the stage for the government's New Type Urbanization Plan, launched in 2014. The plan coincided with the emergence of a new pattern of infrastructural urbanism, in which the priority shifted from city-led urbanization to the construction of a comprehensive nationwide transportation and communication network that linked large regional urban clusters. While this new pattern was not

an explicit policy objective, it can be understood as a response to the plan's aim to spur urban-rural integration, as well as to tamp down the local state's enthusiasm for entrepreneurial urbanization. There has thus been an effort to shift away from hypertrophic expansion of existing urban centers. This shift has resulted in a decreased emphasis on the hierarchical nature of city-centered urban development, and an increased focus on the use of a flattened, more diffuse surface of infrastructure-driven urbanization. As one study of urbanization in the Zhengzhou-Kaifeng region of Hebei has suggested, large-scale infrastructure development throughout the region has uniformly taken over the land. Infrastructural gridding has created an "equipotential surface" aimed primarily at spreading opportunities for income generation by reducing discrepancies between different parts of the territory, resulting in a "syntrophic territory"—that is, "a territory that tends to be ever more orderly within its confines and differentiated in its components" (Ramondetti 2020, 32). Francesca Governa and Angelo Sampieri (2020, 375) refer to "infrastructuring," where new urban developments like Gui'an alleviate the "hyper-concentration" of central cities and mix rural, urban, and suburban spaces into a discontinuous whole.

The willingness of the state to invest heavily in large-scale infrastructural grids that overlap with and displace existing surfaces has contributed to this infrastructural leveling. At the same time, there has been a significant commitment to developing sets of uniform standards, particularly for eco-city and smart-city development. Eco-city pilot projects must meet sixty-one performance indicators laid out by the Ministry of Housing and Urban-Rural Development's Eco-City Assessment and Best Practices Program (Williams 2017). Standards like these drive performance criteria for each territorial section of the newly gridded space, making each section "equivalent and interchangeable" as long as it meets the criteria (Ramondetti 2020, 110). This has the effect of organizing territory along the lines of logistical principles, while aiming to turn cities into open resources for responsive technology systems.

### **Gui'an from Above**

The infrastructural urbanism that has driven the establishment of New Areas like Gui'an as a response to and correction of what some have called the "sickness" and "irrationality" of excessive city-centered urbanization (Woodworth and Wallace 2017) has, paradoxically, been accompanied by a policy and planning rhetoric that remains invested in a discourse of the city as a distinct, civilized, modern, and socially harmonious space of redemption. I suggest that this discourse is ideological, and that it rests upon an ongoing faith in the promise of a utopian "creation city"

capable of curing all the ills of urbanization. This is paradoxical because infrastructural urbanism has been busy obliterating the city as we know it, replacing it with what Neferti Tadiar (2016, 62), in a different context, has called “uber-urbanization,” which “entails continuous and expanding subsumption of life beyond the fixed geography and time metrics of ‘the city.’” This is perhaps why the city must be shored up, ideologically, with a utopian narrative that serves the political project of maintaining the authority and legitimacy of the party-state. As Kees Doevendans and Anne Schram (2005) noted, the creation city was one of the three urban archetypes proposed by the architectural theorist Bruno Fortier. Fortier’s creation city was purely ideological and purely geometrical, and—like Gui’an’s incongruous grid of roads—had no inherent relationship to the environment within which it was built.

A rhetorical version of the creation city clearly informed the ways in which urban planners and municipal officials articulated the ideas driving the development of Gui’an New Area. They referred to Gui’an as a new kind of city, the kind that could only be built from scratch. This is summed up in the following pairings, which were repeated to me several times during my conversations with municipal leaders:

First the infrastructure, then the buildings.  
 First the environment, then the project.  
 First take care of relocation, then demolish.  
 First industry, then the city.

Each of these pairings was meant to illustrate a principled cure for China’s “urban sickness.” One planner told me: “Beijing, Shanghai, cities like that, they’re already built; you can’t just add the eco-infrastructures to them later, you have to do it first. Here in Gui’an, we haven’t built the city yet; we start with the infrastructure under the ground—the sponge city infrastructure—then the roads. Then we build the city on top of that. It will be an important demonstration of how to fix [China’s] urban problems.”

Gui’an was also meant to demonstrate a solution to China’s demolition-led urbanization. Planners told me that they were acutely aware of China’s reputation as a “demolition and relocation” nation. The New Area was thus distinguished by the fact that the first major housing to be built was not high-end commercial residential developments, but relocation housing for rural residents, whose villages were demolished only after everyone had been successfully relocated and provided with employment. China’s entrepreneurial urbanization had been driven, I was told, by real estate speculation, leaving ghost towns of empty apartment towers

and no industry, economic activity, or jobs. Those were just “fake cities,” a blight on China’s urban landscape. Gui’an would be different, since a great deal of information technology, telecommunication, and big data industry had already been built there. Villagers were getting jobs in these industrial parks even before they needed to be relocated. As one leader told me: “We’re limiting real estate speculation: you can only buy land use rights if it’s for industry; you can’t just develop real estate. The only housing developments you currently see are relocation housing for farmers. Most of these apartments are still empty. There’s no karaoke yet, no foot massage.”

The focus on relocation housing for farmers is a reminder that the vast majority of the land occupied by the New Area is still rural. Gui’an is thus meant to model improvements in urban-rural integration. Initially piloted in Sichuan and Chongqing, urban-rural integration was an explicit part of the New Type Urbanization Plan, and it encouraged the extension of urban planning principles into rural areas that fell under municipal administration—often resulting in large-scale relocations of rural communities into new town developments. Ironically, urban-rural integration was accompanied by an aesthetic mandate that sought to maintain a visually rural character in the countryside, even as it became used in urban planning agendas. A focus on appearance thus informed the Xi administration’s signature rural development initiative: the “beautiful countryside” project. “The city should look like the city, and the countryside should look like the countryside” was a phrase that began peppering the policy and planning discourses that accompanied the development of New Areas like Gui’an. Even as Gui’an implemented a plan to reduce the area’s 366 natural villages to 170 by 2030, and to reduce the rural population of 120,000 by roughly half, planners sought to maintain clear spaces where the countryside would still look like the countryside.

The primary mechanism for achieving this was “village beautification,” which typically entails applying a uniform renovation standard to which all the village structures must adhere (figure 7.3). Village beautification extends the ideology of the creation city into the countryside, enacting an urban planner’s idealistic vision of the rural (Bray 2013). This aesthetic emphasizes whitewashed walls, sloping tile roofs, and various kinds of ornamentation, along with cleaned-up lanes and public spaces. The effect is to make villages look very tidy and picturesque, particularly from a distance. Many beautified villages in the New Area feature public signboards displaying information about the beautification project and the overall village plan. These displays bring the sensibilities of urban planning to the countryside. The village is treated by planners as a city would be treated, with the same kind of visual displays (including architectural renderings) that can be seen in urban planning all over China. The display images of the beautified houses



Figure 7.3. A beautified village in Gui'an New Area. (Photograph by Tim Oakes.)

manage to make them look like high-end suburban homes. The signboards also feature maps, charts, and diagrams: a whole performance of planning for the public to see.

### **Gui'an from the Street**

How, then, do people inhabit the New Area? To what extent have their spatial practices conformed to the ideological renderings of Gui'an from above? And how do people use this infrastructural space? To what extent are they able to appropriate infrastructural urbanism in their pursuit of wealth? I address these questions by exploring a more street-level scale of experience and examining how the gridded landscape of infrastructural urbanism in Gui'an is being used in practice as the New Area develops.

Gui'an's grid of broad and straight new avenues slicing through otherwise hilly and undulating terrain has sprouted numerous roadside attractions, as local communities, investors, and governmental entities seek to capitalize on the roads' promised flows of people. These attractions pop up unexpectedly and often appear

abandoned and decaying, quickly going to ruin even before the roads are completed. The roads themselves remain largely empty, though they are immaculately cared for by teams of villagers working alongside the roads and in the medians, pruning shrubs, raking leaves, weeding, and otherwise keeping the landscaping tidy. They wear straw cone-shaped hats and bright orange vests. Their work often results in a stark aesthetic contrast between the well-kept roads and the empty shopping streets, amusement parks, restaurants, and other structures that locals have built in the hope of capturing some infrastructure-driven wealth. The road's landscaping also contrasts with the weed-filled fields visible beyond the guardrails, left fallow in anticipation of the urban development to come, as well as the piles of rubble, demolished concrete, and twisted rebar that line the highways.

There is a wide range of attractions. One community built a virtual-reality theme park, while another built a very scruffy theme park dedicated to the Three Kingdoms story of the Rattan Armor Tribe. There is a park featuring miniature versions of world-famous structures (including the Sydney Opera House, the Colosseum, and the Arc de Triomphe)—all built from rice husks. And just down the road, there is an empty Swiss Town, based somewhat loosely on the Austrian village of Hallstatt (and not to be confused with a more famous, or infamous, replica of Hallstatt in Guangdong). Swiss Town features empty, padlocked shops with windows (many of them broken) covered with large photos offering the impression that the shops are full of luxurious (and very European) things to buy. Tourists stroll through the town, kicking at the weeds growing in the cracks between the flagstones in the public square. The only life in Swiss Town is out along the road that passes it, where villagers set up food carts and fruit and vegetable stalls for the tourists. The roadside thus teems with activity and commerce, and villagers do a brisk business, with the ghost town as an odd scenic backdrop.

As a result of village beautification projects, whole villages have been turned into roadside attractions as well. Some of these villages have had to make themselves accessible by constructing “hacker” roads that informally connect to the new boulevards. Some of these beautified villages have been transformed into leisure resorts, with the majority of households opening restaurants or inns. In the villages I have visited, roughly half of these businesses were owned by outsiders, many of them from Sichuan. Meanwhile, many native villagers have purchased apartments in Guiyang or the University Town and have opened more city-based businesses.

The New Area's sponge city grid of drainage systems and monitoring stations remains largely undeveloped, even though pervious concrete has been laid throughout. It has become the chief symbol of Gui'an's eco-city aspirations. Villages have laid many kilometers of pervious concrete bike paths across their lands,

and similar paths have also been built alongside many of the new roads. But these have typically not been maintained. Many of the bike paths have been claimed by vines, bushes, and weeds. Some village fields have been converted into wetlands as part of the sponge city plan. But villagers have complained about polluted water flowing into these wetlands from some of the industrial parks nearby. Meanwhile, real estate developments pay only token adherence to the sponge city plan. New buildings are being surrounded by normal, impervious concrete, suggesting that developers do not think the sponge city infrastructure is viable, so they are building the way they always do.

The surveillance grid is experienced mostly in the form of facial recognition technology used for residents to gain entry to their apartment buildings. Most of the people I have spoken with say the technology makes them feel safe, since they rarely know their neighbors in these buildings. This is particularly the case in the University Town, where university staff enjoy apartments at subsidized rates—which they then rent out at higher market rates, pocketing the difference. The result is a building that houses not university staff, as intended, but people from anywhere, few of whom know each other. Since many of the rental arrangements are informal and unregistered, many of the residents are not in the security system's database, and thus cannot gain entry through the facial recognition process. For this reason, the cameras, doors, or both are often disabled, making it possible for anyone to come and go as they please.

Facial recognition is also used to record work shifts for many of the low-level staff at the big data companies throughout the New Area. Cleaners, cooks, and other unskilled workers must get their faces scanned to check in and out for their shifts. For the most part, these people are villagers who have been displaced by the construction of the New Area. Now they are on the front lines of state surveillance. They have shifted, practically overnight, from living in the relatively invisible space of the village collective, generally beyond the state's gaze, to living within the grid of the surveillance state—becoming unwitting participants in the experimental project of algorithmic governance being piloted by Gui'an.

This rapid transformation of villagers from agricultural laborers to surveilled service workers speaks to the way in which the previously rural communities of the New Area become part of Gui'an's infrastructure space. Infrastructural urbanism renders the agricultural landscape upon which it is built as an operational landscape, functioning to service the leisure, production, research, and educational activities of the new city. This happens in a number of ways.

Farmers who lose their land are typically promised service-industry jobs in the New Area. Many of them try the jobs for a few months but bristle at the set schedules, supervision, low pay, and tedium, and they quit. Many of the landscapers and

gardeners of the University Town are working on their ancestral land. I was told that about a third of the villagers on whose land the University Town was built remain as service workers. Another third are unemployed, and the rest have scattered in search of work in other cities. Those farmers who still have land flock to the University Town with food carts and wagons, selling barbeque and noodles to the students at the main university gates. They are an arresting sight, with their beat-up old carts and three-wheelers belching cooking smoke next to the slick architectural spectacles of the new university campuses around them.

The government has worked to keep members of the rural population of Gui'an from scattering when their land is appropriated for construction. When the New Area was established, incentives were provided for people to move back to the area and start businesses. This was part of the Xi administration's broader set of policies, under the slogan "send capital to the countryside." The policies were particularly effective in providing start-up capital for turning houses into restaurants and leisure guesthouses in villages that had been beautified. One villager told me that the incentive package was CNY 5,000 (about USD 775) plus an air conditioner. This program was discontinued after a couple of years, but it had a significant impact. Many village proprietors told me they had returned from working in coastal cities to their home villages because of the incentive program. This has also been good for children. In the rural schools in the New Area, there are now very few "left behind children." Throughout Guizhou, roughly half of the students in rural schools are such children, left behind with relatives while their parents seek employment in distant urban centers. In Gui'an the number is about 5 percent.

The ideology driving Gui'an's vision of itself as a new model of urban-rural integration has led planners to advocate for a more pastoral and culturally authentic countryside amid the industrial zones and commercial housing estates of the New Area. The ideology of keeping the urban and the rural aesthetically separate means that beautified villages are supposed to remain quiet and peaceful—not like the commercial theme parks or crowded "villages-in-the-city" that some rural communities have become after being engulfed by urbanization. One village head told me that "the government has a plan for tourism development here, and so we have to protect our land, and keep things peaceful and quiet here—not like the city. Our village will not be like Xijiang, which is overcommercialized. We will be more bucolic and pastoral, more authentic." In referring to the highly developed Miao tourist site of Xijiang in southeast Guizhou, the village head was suggesting that commercially intensive theme-park-style village development was no longer the model that it had been just a few years earlier. Discourses of cultural authenticity encapsulated by the term "*yuanshengtai*"—which indexes a more natural and



primal version of cultural development—have emerged to reshape popular notions of the rural and “rural nostalgia” (Kendall 2019; Luo 2018).

While a few beautified villages have been turned into bucolic repositories of rural nostalgia for urban residents, the remaining rural communities throughout the New Area are rapidly being demolished, with their residents relocated (theoretically, at least) into large resettlement compounds that can also be found alongside the roads in the new grid. Many villagers I interviewed said that they were happy to become workers in the New Area, and that this was preferable to working in some distant city. And they *want* the government to buy their land—the sooner the better. Many told me they were able to work in or near the New Area and still take care of their aging parents. Most told me that nobody farms anymore; much of the land lies fallow. Nobody is interested in farming, and nobody is interested in renting the land. Everyone is just waiting for a compensation package to come their way.

These compensation packages have been relatively generous, in comparison to what one finds throughout the rest of Guizhou, and in rural China more generally. Residents of demolished villages have the option of taking a cash payment or getting relocation housing. While no one could provide me with actual numbers, officials in Gui’an believe that most of the villagers take the cash payment, leaving much of the relocation housing empty. “Many of them gamble away the cash,” one told me. “Or buy a car, just so that it looks like they’re rich and successful, even if they don’t know how to drive.” At the same time, many rural residents are defrauded by schemers who have swarmed into the area, knowing that it is newly awash in cash. Some farmers, I was told, have lost all their compensation money this way.

The relocation compounds are built on a large scale, with the idea that they will eventually become thriving commercial and residential communities with parks, shops, and restaurants. But for the most part, the shops remain empty. Weeds push up between the paving stones in the courtyards between apartment towers and in the empty parking lots, playgrounds, and pathways (figure 7.4). Playground structures and exercise equipment—the tools of the civilized urban life that Gui’an seeks to demonstrate—seem abandoned and broken, covered in dust and weeds. At one of the compounds I visited, only about 10 percent of the apartments were occupied. Across the broad fourteen-lane boulevard that it stood next to (yes, fourteen lanes!) stood forlorn villages, also empty, awaiting demolition. Some of the workers in the New Area told me they are afraid to venture into the relocation housing. They fear it is too chaotic, too full of hooligans, drugs, and gambling. They assume that the compounds are full of thieves and drugs because the residents have money but no jobs.



Figure 7.4. Decaying relocation housing in Gui'an New Area. (Photograph by Tim Oakes.)

There is a broader discourse among officials and many residents that the loss of farmland and village communities, combined with generous compensation, creates a situation ripe for moral decay. One day, I was talking to some women who were playing cards in a village lane. I said, "Oh, you get to relax and play cards on a Sunday—that's nice." A woman replied, laughing, "Sunday or not, we play cards all the time!" My driver took the opportunity to tell me that everyone in Guiyang is joking these days about how they want to marry a Gui'an villager because they have gotten so rich. The woman went on to say that she now loves to travel: "I've been to Shanghai, Beijing, Nanjing, Hong Kong—all just for fun!" Another woman commented: "The new road here makes everything so convenient for us now. We can come and go easily. Nobody needs to do any farming anymore. Most of the younger people in the village work at Foxconn. They don't have to go to the distant cities of the coast to work anymore; they can work right in our own backyard. The Foxconn salary is OK—not as high as if you own a restaurant here in the village, but it's pretty good." I was told that Foxconn employs about twenty thousand people in the New Area, many of them villagers. In several of the villages I visited, the majority of village youth were working there.

Later in the same village, I talked with a restaurant owner about the rise in drug use and gambling. There was a sense in our conversation that the place had become somewhat unmoored and that some people had lost their way. “They don’t need to work, they don’t want to farm. They can just gamble and get high,” the man said. He told me the price of tobacco had been going up because “old guys just sit around and smoke; they don’t care about the price. If they want to go to the University Town, they just hire a taxi. In the past they used to walk!” Local officials have made it a point to try to introduce villagers to a healthier lifestyle, one that involves exercise and other recreational activities like travel. In response to my question about whether anyone farmed anymore, for example, a village schoolteacher said, “Now the villagers understand that they still need to do some farming. It’s good for their health, a kind of exercise, and it gives them a little bit of something to sell to tourists.”

### **Infrastructure and Ideology**

When farming is promoted as a form of exercise for a healthier lifestyle—as opposed to a means of survival and sustenance—a significant transformation in spatial practice has occurred. This transformation has been generated through a form of infrastructural urbanism that has produced an infrastructure space of grids. This space in turn reshapes the land into a service platform with interchangeable uses. Such interchangeability can be seen in the way that the grid of new roads creates separate and equivalent sections of countryside; in the way that the beautification of villages in these sections achieves a generic “rural bucolic” appearance that is the same across the entire landscape; and in the way that agricultural labor, unmoored from these sections, becomes unskilled service-industry work throughout the New Area. As an infrastructure space, Gui’an is not only an interchangeable landscape, but also an open resource for wealth generation. Residents have responded with ephemeral roadside attractions, and by turning their villages into sometimes vibrant commercial centers for leisure and recreation. The government has encouraged this with generous compensation packages and incentives for entrepreneurial residents to open businesses.

Yet Gui’an is also an ideological space, and as such it presents often conflicting messages. Beautified villages are supposed to be peaceful and bucolic, not commercial and theme-park oriented. And villagers themselves should have healthy and civilized lifestyles, rather than gambling and using drugs. Model designs for resettlement housing have gone unrealized as many villagers take their compensation packages and buy apartments in the city. Meanwhile, the government seeks to brand Gui’an with a degree of “local Guizhou color” in terms of design themes

and motifs, even while beautified villages appear generic and similar to rural reconstruction projects throughout China. In short, the ideological and infrastructural spaces of Gui'an fail to complement each other, resulting in contradictions embedded within the policies and practices that shape the outcomes in the New Area. These contradictions are most apparent when we consider the way Gui'an as an infrastructure space has transformed the Guizhou countryside into an operational landscape of service provision for the creation city ambitions of the New Area. As Tadiar (2016) has argued, such landscapes depend on grids of roads and highways (the infrastructure of circulation) to bring the "vital infrastructure" of a newly displaced service class to the sites where their labor adds to the value of the "trans-territorial city." The tensions between these ideological and technopolitical projects of creation city and infrastructure space are producing unexpected and uncertain landscapes that are neither conventionally urban nor rural. Viewing Gui'an as an infrastructure space, rather than as a city in the making, thus helps make clear the constellation of forces that are shaping the spaces of development in China today.

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