Cities for Whom?

The 2017 Beijing Demolitions in Context

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Abstract

Many studies have examined urban demolitions in China. However, the confrontational nature and vast scale of the recent demolition waves point to the need to investigate if existing explanations continue to hold or if additional factors have come into play. Based on the case study of the 2017 Beijing demolitions, we argue that a political shift has occurred that contributed to the demolition wave's ferocity. As Xi Jinping and his team took power, the central leadership changed tack and has repeatedly emphasized the need to accelerate the upgrading of housing in cities while deemphasizing concerns about protecting residences of migrant workers. This move in the center's political priorities aligned the central and local government's perspectives in a way that allowed for the marginalizing of migrant workers in large cities in recent years. As a consequence, the 2017 Beijing demolitions show new features: they have become fiercer, more systematic, and less related to economic incentives compared to the 1990s and 2000s. This chapter also discusses the opportunities of using satellite images as a new source of information on China's urbanization and a call for further research.

Introduction

On 18 November 2017, a building in Beijing's Daxing district was engulfed in flames. The fire killed nineteen, including eight children. Two days later, Cai Qi, Beijing's mayor, launched a forty-day campaign to demolish "all illegal residential structures" in the city. Local officials and their agents acted with haste to participate in the campaign and used aggressive tactics: cutting off water, electricity, and heating supplies to targeted areas as well as sending police officers to intimidate tenants by smashing their property and dragging their belongings out of the structures and into the streets. Ultimately, thousands of migrants abandoned their homes, shops, and factories, which were then demolished into rubble.

Many studies have examined urban demolitions in China. While some see an underlying economic logic linking demolition with local states' desire to maximize capital accumulation (Ho and Lin 2003; Hsing 2010; Wu 2016), others find releasing demographic burdens (Duckett and Wang 2015; Song, Zenou, and Ding 2008; Wu and Frazier 2018; Zhu 2004) or embracing modernization and formality (Gilbert and Ward 1985; Shin and Li 2013; Smart and Lam 2009) as significant explanatory factors. Separate from parsing why these demolitions are happening is understanding the urban reality they leave behind in their wake. Many dislocated migrants disperse following a demolition episode, and those migrants who avoided demolition still face heightened stress when others like them are forcefully shoved aside.

The Beijing demolition wave's confrontational nature and vast scale point to the need to investigate the case in more depth to see if existing explanations continue to hold or if additional factors have come into play. How do we understand the Beijing 2017 demolitions? While fully answering this question would have required an on-the-ground presence during the demolitions and in the decision-making rooms of the officials who ordered them, a focus on examining the

national and local political context leading up to and during the demolitions can shed additional light on them.

We argue that a political shift has occurred that contributed to the demolition wave's ferocity. Until very recently, central and local government officials have had divergent interests on questions of urban land requisition and demolition, with local officials pushing for more land grabs and the central government curbing this tendency with its more balanced focus on both economic growth and political stability. However, as Xi Jinping and his team took power, the central leadership changed tack and has repeatedly emphasized the need to accelerate the upgrading of housing in cities while de-emphasizing concerns about protecting residences of migrant workers. This move in the center's political priorities aligned the central and local government's perspectives in a way that allowed for the marginalizing of migrant workers in large cities in recent years.

In so doing, the analysis here fits neatly into the book's broader aims. We demonstrate the complex and mutual relationship between space, people, and their interactions under urbanization. On the one hand, the changing realities of Chinese cities influence the incentives of central and local governments. On the other hand, the outcomes of these interactions, namely demolitions, are ground zero for urban redevelopment—taking land being used by some people at one time and shifting its use and form for others in the future. Redevelopment can restrain sprawl and connect to efforts at environmental improvement, including fighting climate change; but while it certainly alters the trajectory for urbanization of land, it also threatens the already weak bonds of migrants to cities. The demolition data that we examine here comes from migrants, news reports, and, crucially, satellite imagery, which allows for the possibility of systematically measuring the scale

and scope of demolition not only in Beijing during this wave but also in other Chinese cities at various times.

The rest of the chapter proceeds as follows. We present our argument on the shift in central government policy direction and how it amplifies the array of local factors that the literature has analyzed in prior cases of demolitions in Chinese cities. We then detail some of that changing context, including leaders' speeches, actions on the Greater Beijing Megacity project (Jing-Jin-Ji), the promulgation of national penghuqu (棚户区) policies, and Beijing's Dispersing, Regulating, and Upgrading Action Plan. Descriptions of and reactions to the demolitions follow, including using satellite imagery to document their thoroughness. Next, we analyze how the changing context helps explain the brutality of the demolitions as well as the limitations on what context can account for. We conclude by discussing the opportunities of using satellite images as a new source of information on China's urbanization and a call for further research.

Argument

China's political structure and economic growth created expanding cities and urban villages. While ultimate political authority rests at the top, China's system is quite decentralized in terms of actual expenditures (Landry 2008). This decentralization of expenditures is paired with limitations on the ability of local governments to generate revenue, resulting in local governments being fiscally constrained, which then causes them to turn to land as a source of funds (Liu et al. 2018; Rithmire 2015; Wu and Frazier 2018, 822).

Rural and urban designations were given to Chinese land—as well as Chinese people—with regulations limiting how a given plot of land could be used. Essentially, urban land could be developed or redeveloped to a much greater extent than rural land, as the central government held

on to concerns about self-sufficiency related to agricultural production. Local governments held the power to convert land from rural to urban status, which dramatically increased its economic value. As workers increasingly left the agricultural sector throughout the reform era, cities grew and demand for space increased; officials interested in economic growth for corruption or promotion opportunities pursued land conversions and development, even pushing people off the land. Some villages close to the urban core retained their rural status and took advantage of this proximity by focusing on rental income from migrants wanting access to the city's labor markets (Hsing 2010, 17).

Urban villages developed as relatively underregulated spaces where cheap housing for migrant populations could proliferate and migrants could forge social bonds, making life in the city more bearable (Wang, Wang, and Wu 2009; Wu, Zhang, and Webster 2012). Such cheap housing was particularly important because the Chinese economy's turn toward real estate as a major growth sector—and site for financial speculation—led to apartment prices being above what the residential market alone could support (Woodworth and Wallace 2017). These communities housed urban laborers, and so while pressures to absorb the villages into the city proper and claim control over the land existed, they were moderated by the presence of other lands on the periphery of cities that could be converted as a substitute.

Eventually, lands on the urban periphery at a reasonable distance to the core became scarcer, leading local governments to turn their eyes to urban villages and contemplate demolitions of those communities. Of course, the demolition of migrants' homes could inflame social conflict and generate grievances among the urban poor (Hsing 2010; Smart 2002; Smart and Lam 2009). With local officials strongly bent in favor of development, the central government balanced an overall interest in development with more concern for political and economic stability and thus

acted as a constraint on local officials. On the one hand, the central government acknowledged the importance of the real estate market to GDP growth and local fiscal balance; thus, land transactions and forced demolitions were tolerated to some extent at the local level (He, Zhou, and Huang 2015). On the other hand, the central government made some efforts to protect migrant workers' rights from the overexpansion of land commercialization, including raising the barrier to entry in the real estate sector (Hsing 2010; Rithmire 2015), passing the labor contract law (Gao, Yang, and Li 2012), subsidizing migrant schools, and encouraging social insurance (Gao Yang, and Li 2012; Wu and Wang 2014). While the central government did take such pro-migrant actions, it has also long pushed to reshape China's city system, controlling the population of its largest cities and encouraging the growth of small and medium-sized cities (Wallace 2014). Acquiring local hukou status and access to urban amenities was consistently easier in smaller cities than it was in those atop the urban hierarchy.

By the mid-2010s, the central government's attitude toward migrant workers became less ambiguous. It began shifting away from the dilemma of balancing stability and development toward a more strongly "pro-development" line. Under Xi's rule, the central leadership has repeatedly emphasized the necessity to accelerate housing upgrades, which implies the demolition of urban villages and the eradication of extant housing for migrant workers (Wong, Qiao, and Zheng 2018). Local states' roles changed from the stakeholders of land grabbing to the lead actors of the national demolition plan. The Beijing city government came up with plans to disperse its non-capital functions and prioritize the development of nearby smaller cities. But pushing growth to small cities, while having political utility for the regime, is in contrast to the desires of the migrant population, who mostly wish to move to large and medium-sized cities in order to participate in their labor markets.

Under this newly remade central-local relationship, the demolition of urban villages shows novel features. Starting from Beijing's large-scale demolition in November 2017, we find that the eviction of migrants has become more systematic, fierce, and serving for noneconomic goals. A willingness to be more amenable or encouraging of demolition fits into the regime's general trend of being more accepting of repressive actions. This strong-handed approach can be seen in crackdowns on activists, lawyers, and organizations supporting workers (Fu and Distelhorst 2018) as well as the forcible reeducation facilities and mass internment of Muslims in Xinjiang (Zenz 2018; C. Zhang 2018).

Beyond this new repressive tendency, why have central priorities changed? First, China's overheated housing market has been slowing down from its rapid pace. In the metropolitan areas of big cities, ever fewer plots of land at reasonable distances to the urban core remain for real estate developers to build new commercial projects, reducing the potential volume of land rents. By pushing redevelopment of urban villages, the central government identifies spaces that urban governments have not controlled or profited from directly. The reality of redevelopment is demolition, but its costs are borne principally by those migrants residing and working in the demolished areas, who lose their homes, their communities, and likely their access to the labor market. Those suffering the concentrated costs from demolition may protest but are unlikely to spark a broader movement, due in part to their limited incorporation into the city. Second, the central government sees the population concentration in large cities as threatening to political stability and the legitimacy of the ruling class. The soaring population growth of China's megacities has produced many urban problems (城市病), such as environmental pollution (Smyth et al. 2009), traffic congestion (Yang, Purevjav, and Li 2020), and harm to public health (Gong et

al. 2012), and the urban middle class's discontents can turn into disapproval of the party-state's governance and strategies (Chen et al. 2015; Solinger 1999, 110–45; Sun et al. 2018).

Cleaning up urban villages is one of the most effective ways for the state to reassert control over the city's population and its level of growth. Political difficulties of governing cities increase with the population of a given city (Wallace 2014), but Chinese officials have gone beyond simply worrying about the total number of people in first-tier cities to emphasizing the "quality" of the population and arranging the population to simplify governance for the state, or making the city more legible (Scott 1998). Densely populated urban villages provide space for the emergence of poverty (Démurger et al. 2009), uncertainty, public disorder, and social resistance (Duckett and Hussain 2008; Duckett and Wang 2015; Smart and Lam 2009). China's largest cities have turned to point-based systems for giving migrants the ability to transfer their hukou or enroll their children in public schools. These systems are complicated, varying not just across cities but within them, as different districts often have their own policies, but overwhelmingly grant more access to those with more resources (Friedman 2017; C. Zhang 2018).

Policy and Political Context

From the mid-1990s to the mid-2010s, the central government gradually changed from a regulator to an enabler of urban village demolition in large cities. Unlike Hu and Jiang, who went back and forth between resolving social inequality and boosting the local economy, Xi's team delivers a clearer message of their attitude toward urban villages: it is crucial to control the population of migrant workers and clean up the shantytowns in Chinese metropolises. Local governments, who used to be the main actors pushing forward urban village demolition, became eager cogs in the national demolition agenda. The shifting roles of central and local governments are reflected in the

promulgation of national penghuqu policies; leader speeches; Beijing's Dispersing, Regulating, and Upgrading Action Plan; and the Greater Beijing Megacity project (Jing-Jin-Ji).

The Chinese government uses the term penghuqu (shantytown) to refer to residential areas with high building density, poor infrastructure, and security threats (Wong, Qiao, and Zheng 2018, 601). Penghuqu includes urban villages as well as other temporary residential buildings in mines, forest factories, and state-owned farms. According to publicly available official documents, the State Council first openly talked about the necessity of upgrading penghuqu in March 2008 (State Council of China 2008). However, it was in 2013 under Xi that the State Council published its first national document that solely and directly targeted penghuqu (State Council of China 2013). One year later, a follow-up document came out, claiming that more than 3.2 million households had been "redeveloped (改造)" in 2013, and 4.7 million were slated to be redeveloped in 2014 (State Council of China 2014). Later, the central government set a target of redeveloping nine million households every year from 2015 to 2017 (Ministry of Housing and Urban-Rural Development of China, 2015). On the State Council's open document archive, twenty national documents mentioned penghuqu (shantytown 棚户区)/chengzhongcun (urban village 城中村) from 2008 to 2010. This number increased to ninety during the period from 2016 to 2018. Moreover, the central state began to praise openly the localities in which urban village redevelopment and demolition were well implemented. In 2016, the central state applauded Anhui, Shandong, Hunan, Guizhou, and Shaanxi Provinces for their performances in urban village redevelopment (State Council of China 2017). Similar public acknowledgment of successes in penghuqu redevelopment was extended to almost two dozen municipal-level governments in 2018 (State Council of China 2019).

The city of Beijing responded to the national agenda of penghuqu redevelopment and demographic regulation with its plans of relocating non-capital functions and pushing forward Jing-Jin-Ji coordination. In 2017, Beijing's new party secretary, Cai Qi, who was widely believed to be nominated by Xi Jinping as his close political ally in the Beijing government, showed his loyalty to the center as soon as he took office. In Cai's first conference about Beijing's future urban plan, he fixed a target maximum on the city's population—23 million—as well as hard constraints on land for urban development by the year 2020 (BASS 2019). The plan also emphasized the city's cultural development and made clear its preference for high-income denizens with references to seeing Beijing as a "world-class harmonious and habitable capital" (BASS 2019, 145, chap. 5). Another official local document that came out in early 2017, the Dispersing, Regulating, and Upgrading Action Plan (疏解整治促提升), again reiterated the city's desire to disperse low value-added economic activity and more rigorously control land use inside the city limits to upgrade the city's image and functioning (Wong, Qiao, and Zheng 2018).

These documents reflect two important themes of Beijing's migration governance plan in recent years: the relocation of non-capital functions (疏解非首都功能) and Greater Beijing Megacity project planning (Jing-Jin-Ji coordination). Both trends are central and state-led, followed by local-level implementation. The term "dispersing and relocating the non-capital functions" in Beijing was first proposed by Xi Jinping in the meeting of the Chinese Communist Party's economic and financial affairs team in February 2015. Five months later, the Beijing government specified the realm of non-capital functions as general manufacturing, regional logistical clusters and wholesale markets, redundant medical and educational services, and administrative services.

The relocation of non-capital functions would greatly reduce the job opportunities of migrant workers, since the majority of them work in manufacturing, logistics, and low-end services. As a substitute, the Beijing government sought to encourage the development of nearby smaller cities. This prioritization of smaller cities can be first seen in the major 2014 announcement of the

National New-Type Urbanization Plan (2014–2020), which emphasized "townification" (城镇化) rather than citification (城市化) and people centered rather than land driven (Looney and Rithmire 2017).

Xi announced that more integrated planning of the Jing-Jin-Ji metropolitan region would be a priority in February 2014, and a June 2015 Coordinated Development Outline laid out the general plan, summarized by Kan: "Beijing will remain the center of politics, culture, and innovation; Tongzhou, beyond Chaoyang district in the city's east, will become the seat of the municipal government; Tianjin will be a hub of high-end manufacturing and technology; and Hebei is slated to be a national test site for upgrading manufacturing industries with new technologies" (2016, 6).

For Beijing proper, in addition to moving local government offices from the urban core to Tongzhou, this reconfiguration entails the removal of various industrial operations from the city, continuing a long-running process in which low-end manufacturing has been pushed out due to both market and policy pressures. However, five years on, the integration of the area remains unclear, and issues such as changes to hukou status have remained off the table. The scheme for the offloading of other industrial and commercial activities ("non-capital" activities) that had been taking place in Beijing to elsewhere in the region became clearer in early 2017.

On 1 April 2017, Xi inaugurated another part of the greater Jing-Jin-Ji plan with the announcement of the Xiong'An New Area in Hebei (Xinhua News 2017a). Xiong'An is projected by some analysts to be the most expensive investment project in Chinese history, with a Morgan Stanley analysis looking at between 1.2 and 2.4 trillion yuan, although the scale of the project remains in flux (Ren 2017). Xiong'An consists of three counties—Rongcheng County (容城县), An'xin County (安新县), and Xiong County (雄县). As in the broader Jing-Jin-Ji plan, certain kinds of operations are being placed in particular locations, with the government offices in Rongcheng, an

ecological role for An'Xin, and industrial operations centering in Xiong. While state-owned enterprises and other politically connected firms in China are dutifully complying with the central government's desire to build up the economic vitality of this area by establishing offices in Xiong'An, it is unclear if and when these investments or plans will actually occur or produce positive economic returns. Apparently frustrated by the lack of progress, Xi returned to Xiong'An in January 2019 to reaffirm his commitment to the area (Jiangtao and Mai 2019).

In summary, we see the central state as the leader in this push toward redevelopment and demolition. By ceasing to hold back cities, the politics of local development changed. Many local officials had been wary of the potential for political blowback from redevelopment and demolition of urban villages in their cities—despite having an economic interest in pursuing such actions—and so held off doing so until the central government made it clear that its priorities had changed. Local officials are implementing redevelopment and demolition as yet another piece of the hierarchy's promotion game (Landry 2003; Manion 1985).

Demolitions

With the central-local relationship changing from mutual balance to top-down coordination, the demolition of urban villages under Xi shows new features. Empirical evidence indicates that demolitions have become fiercer, more systematic, and less related to economic incentives compared to the 1990s and 2000s. In this chapter, we use the demolition in Beijing in November 2017 as a case study to examine how demolition in the new era differs from prior experiences. The 2017 Beijing demolition wave followed a tragic fire in the Gathering Good Fortune Apartments (聚福缘公寓), which combined residences, storage, and production facilities. At 6:15 P.M. on 18 November, local firefighters responded to an alarm and were on the scene shortly

thereafter (Xinhua News 2017b). While the building was not tall, it was extensive; at twenty thousand square meters, it housed an estimated four hundred individuals (Beijing Wan Bao 2017). Many, perhaps dozens, were rescued from the fire's wrath, but nineteen succumbed. In its wake, the city's political leaders jumped to attention.

On 20 November, Cai Qi, the party secretary of Beijing, announced the launch of a forty-day campaign to demolish "all illegal residential structures" in the suburban areas of the city, which includes most of the outlying districts, namely Daxing, Fengtai, Chaoyang, Haidian, Tongzhou, Shunyi, and Changping (BASP 2017a). In the video release of Cai's speech in an internal meeting, he said sincerely, "At the grassroots level, use 'real swords and spears (真刀真枪).' Don't be afraid of causing conflicts, our real goal is to solve the problem. . . . All district-level parties should be responsible for their territories. I want the top district leaders to be directly involved in this" (YouTube 2017).

Twenty-one bureaus of the Beijing government joined with district-level governments, identifying 25,395 places to be cleaned up within one week (BASP 2017b). The commands of the district-level party cadres to their fellows were similar to Cai's. Wang Xianyong, the party secretary of Fengtai, said in his internal meeting, "You need to be really tough! If you can demolish them today, don't leave it until tomorrow. You know what the toughest way is, arresting the troublemakers!" (Buckley 2017). As a result, media reports suggested dozens of locales were demolished and thousands of residents evicted by the end of December 2017 (Suwen, Lu, and Gang 2017; Hornby and Zhang 2017).

The first and most important characteristic of Beijing's urban village demolition in 2017 is that it was a state-planned, systematic, and top-down process. Prior to the Daxing fire, most actions along these lines were individualized rather than citywide or systematic, and focused on residences

and migrant schools (Ziyi and Wei 2017; Friedman 2017; Wong, Qiao, and Zheng 2018). Under a market-driven logic, such demolitions took place in scattered localities where officials and commercial developers saw the potential of generating material interests. However, in 2017, the demolition became more systematic and campaign-like, incorporating all areas on Beijing's urban fringe. The decision-making process was clearly top-down—from the municipal government to the communities—with the Beijing government setting the general agenda and the district-level bureaus making detailed plans. There was minimal bottom-up negotiation, unlike what was seen in previous demolitions (Rithmire 2015).

The second characteristic of the demolition is the force and speed with which it occurred. In the past, demolitions benefited local cadres while the central government played a regulative role in setting constraints and compensating migrants and homeowners (Gao, Yang, and Li 2012; Rithmire 2015; Xiang 2004). On the contrary, the central and local government shared the same goal of evicting migrants out from large cities in 2017. With the upper-level government being supportive of population control and migrant eviction, local agents were encouraged to take more aggressive action. The central government stressed the importance of redeveloping shantytowns and created incentives for the Beijing government to push forward the demolition more fiercely. The message of being tough and aggressive was delivered through the hierarchical system of parties and executive branches. Individuals were forcibly removed from their residences, their property dumped onto sidewalks or the street. Numerous photographs document notices indicating that evictions were mandatory by 22 November, the Wednesday following the Friday night fire (Suwen, Lu, and Gang). The eviction team pushed thousands of migrants onto the streets, cutting off electrical or heating supplies and urging people to pack within forty-eight hours. In some

villages, the police broke into people's homes, smashing windows and doors if the residents refused to leave (Buckley 2017).

Last but not least, the demolition targeted noneconomic goals rather than the maximization of investments and local GDP growth. The official narrative for why the fire led to the demolition wave focused on safety. Officials from the Beijing Emergency Management Bureau (北京生产安全委员会) claimed that the demolitions were undertaken to eliminate the source of the accidental fire and to protect the personal safety of migrants. They said, "Locals rent out their temporary factory buildings as residential apartments. Hundreds of people lived in a tiny factory building. The electronic wires were as dense as a spiderweb. Wide public alleys were blocked by low-quality compounds. Once an accident happens, it is hard for fire trucks and police cars to enter the village" (Sina News 2017). The government confessed that migrants involved in the eviction were not aware of the latent danger and might be upset because they had to find a new place to live immediately. From a long-term perspective, however, the officials insisted that the migrants would come to understand that the demolition was being done to protect their lives and property from the possibility of future accidents and tragedies.

In the 322-page Analysis of the Development of Beijing (2018), the discussion of the fire in Daxing and subsequent demolitions is referenced only on a single page, which offers the following: "a major fire occurred in a 'three-in-one' site with storage, production, and residence functions in Daxing District." While casualties and deaths are mentioned, it lacks specifics. The rest of the discussion notes the steps that each of five governmental bodies—the Public Security Bureau, the Municipal Fire Bureau, the Capital Comprehensive Management Office, the Beijing Commission of Housing and Urban-Rural Development, and the Municipal Safety Supervision Bureau—undertook to "uncover and rectify safety hazards across the city." The analysis ends its brief

description of the events and their aftermath with a more general statement: "Beijing is a megacity. As such, for the elimination of various hazards in society it is necessary that long-term mechanisms for urban public safety be established and detailed plans be made and implemented, and that such plans are implemented in an orderly manner with strong publicity" (BASS 2019, 115).

Neither the word development nor the word modernization is placed at the center of the explanation. This rhetoric again emphasizes the idea that to ensure the safety of Beijing, some "hazards" face elimination. There is no suggestion of recognition that removing those hazards implied harming residents of the mega-city or of the deservingness of the residents to have their place in the city protected.

In sum, as the central government changed its role from mediator to initiator of urban village demolition, the demolition began to exhibit new features. Our study of the 2017 demolition wave finds that the changes in local-central incentives made the demolition more thorough and systematic and that its goal was not to enhance economic development but to remove hazards and ensure safety.

Satellite Imagery as a New Source of Information

Besides the quotes found in official statements and leaders' speeches that reveal the noneconomic purposes of the demolition, is there more evidence that shows the government's intention? Taking advantage of the newest technologies, we can use alternative tools to gather more information about Chinese cities. One of the most useful of these resources is satellite imagery. The advancement of high-resolution, high-frequency satellite images makes it possible for researchers to identify the location of urban villages and trace the changes in their spatial and temporal patterns.

We see the potential of combining different evidence, conducting data analysis, and discovering new theories with the adoption of satellite imagery.

While conventional sources of information provide many valuable insights into the understanding of Chinese cities, researchers have been concerned about their limitations. Previous literature uses official documents, state-generated data, and on-site interviews and surveys to study the demolition of urban villages in China. However, the accessibility and reliability of these sources vary depending on the political circumstances. First, as China has been tightening up its policies of information security, these conventional sources of information are becoming less accessible. Many archives about contemporary China have limited the availability of documents to external researchers. In some cases, official data previously published by the government have been removed from the Internet. Such restrictions appear to be expanding rather than fading at the time of this writing, making conventional data sources less fruitful for analyses going forward. Second, scholars have discovered that local cadres sometimes manipulate both qualitative and quantitative data to serve their interests in promotions (Wallace 2016) or corruption, with land transactions a prime culprit (Chen and Kung 2018). Local officials can publicize some information to show their loyalty and competence while hiding other information. It is hard to establish the credibility of state-led data—or falsify it—given the prevalence of manipulation. Third, governance of urban villages is delegated to district or township-level governments, which means that the information-collection process is fragmented. Most state-led surveys about urban villages lack a centralized agency to mandate consistency across units or concepts. The term "satisfying living conditions" has different meanings across towns and districts. Qualitative information published by local governments faces similar issues.

For these reasons, many researchers conduct on-site interviews and surveys to study urban villages in China. While fieldwork improves the reliability of empirical evidence and provides ground truth validity, it has several limitations. If the party-state continues to intensify censorship and information controls, more restrictions on field research seem likely. Moreover, fieldwork cannot solve the challenges of small-N problems and limited scopes of analyses. Due to the time and budget constraints, most fieldwork covers only a few regional cases. Interviews and surveys have difficulty tracing historical circumstances that no longer exist. Comparative historical studies require immense financial and time investment in long-term projects.

With the help of high-resolution satellite images and digitized street views, we are able to gather alternative information about Chinese urban villages. Free satellite imagery resources like Planet and Google Maps provide their users with accurate and updated depictions of the areas under observation. Google Maps updates its satellite imagery on a roughly monthly basis, while Planet, an independent satellite operator and data analysis firm, has daily imagery at a lower resolution. The street view of Baidu Maps covers most of the areas in large cities so that users can observe the details of each street and its buildings.

The combination of satellite and street-level imagery helps researchers identify the spatial locations of urban villages and observe their patterns. To examine the visual features of urban villages, we made a list of the preexisting urban villages reported by credible news agencies during the demolition wave in 2017. We then observed how urban villages differ from agricultural villages and middle-class residences. Figure 2.1 shows the satellite image of Xinjiancun (新建村), an urban village that appeared in many news reports about the demolition wave in 2017. The small brown buildings serve as residences of farmers and their families, while the large red and blue buildings are occupied by migrant workers for residential and industrial purposes. By repetitively observing

that the urban villages in recent years are "three-in-one" buildings used for production, storage, and residence, with larger and brighter roofs, and are distributed irregularly. These features help us identify more urban villages not mentioned in qualitative materials. In this way, we can use satellite imagery to incorporate a large number of observation units in the analysis.

Our research does not suggest that the urban villages in China have always been three-in-one buildings. This chapter focuses on the temporary three-in-one buildings on the periphery of the metropolitan area in Beijing in recent years. However, the procedures of implementation extend across various scenarios; thus, we can locate the areas known as urban villages, observe their features, and infer the places that have similar features.

Satellite imagery can provide information beyond the urban villages' location. For example, it also documents the speed of demolition. The thoroughness of the demolition can be seen in Figures 2.1a and 2.1b. In addition, the patterns of demolition in these urban villages reflect the government's intentions. Figure 2.1 shows that no commercial real estate has been built six months after the demolition. Moreover, only the buildings occupied by migrant workers were demolished (large buildings with brighter roofs), while the natural villages adjacent to them survived (small buildings). The image implies that the government was targeted in its actions and did not grab all available land from village collectives and transform it for urban use. The satellite imagery also reveals that many of the demolished spots lacked a convenient traffic system and sufficient urban facilities. For instance, some demolished urban villages in Daxing District were two hours away from the city center, with no direct subway services. As a comparison, Figure 2.2 presents the demolition of Beiyuan (北苑) in 2010, in which both urban villages and natural villages were

removed. Satellite images show that construction began at the earliest in June 2012, and within less than two years, new urban residential buildings rose in the same location.

This exploration shows how satellite imagery can reinforce the argument that Beijing's demolition in 2017 was not triggered by economic incentives. To improve the robustness of the findings, we recommend that researchers combine conventional sources with satellite imagery and cross-validate various types of empirical evidence. If consistent, observations from satellite imagery can provide concrete examples to compensate for the limitations of conventional sources of information. When satellite imagery goes against other forms of evidence, researchers have an opportunity to reexamine the reliability of data and explore the gap between official statements and actual implementations.



Figure 2.1a: Xinjiancun (新建村) before demolition



Figure 2.1a: Xinjiancun (新建村) before demolition







Figure 2.2a (upper left): Beiyuan (北苑) before demolition

Figure 2.2b (upper left): Beiyuan (北苑) after demolition

Figure 2.2c (below): Beiyuan (北苑) after construction

We also see the potential of building new theories based on satellite imagery. Since satellite images offer a new perspective compared with conventional sources, we expect that they can bring to light new patterns and theories to explain them. Using automated image-reading techniques, one could construct a large-scale data set of Chinese urban villages across time and place. Scholars have used remote sensing data to automatically identify the slums in South Asia and Latin America (Friesen et al. 2019; Kit, Lüdeke, and Reckien 2012; Kuffer, Pfeffer, and Sliuzas 2016). And Planet has launched an AI-based project that detects the changes in buildings and roads automatically on a global scale (Planet, n.d.). A big data set of Chinese urban villages will create more opportunities for future research.

Discussion

This chapter studies the urban development of Beijing as a typical case to show how the shift in the central-local relationship impacts the demolition of urban villages in large Chinese cities. As the capital city, Beijing is more attuned to central directives and comparatively prioritizes political stability. We argue that Beijing's November 2017 demolition wave fit neatly into the political and policy context. All of the policy documents that emerged at the national and local levels suggest that China's major cities, and perhaps especially Beijing, should focus on controlling their population growth and sprawl. From the top of the government on down, support for penghuqu redevelopment—and attendant demolitions—has increased, with their advantages seen to outweigh their potential downsides.

Of course, these demolitions are not the first in Beijing's long history. Urban village demolition in the city and its periphery has long been a focus of study, with perhaps the most famous case being that of Zhejiangcun (浙江村) in the 1990s (Xiang 2004). The example of

Beiyuan (北苑) depicted in Figure 2.2 also shows that such demolitions and redevelopments have continued to occur.

What the demolition wave shows us, then, is twofold. First, it is further evidence of the government's increased willingness to use repressive tactics, especially on populations that it desires to rectify—whether this remaking be related to religion, political attitudes, or location. Second, despite its scale and thoroughness, obviously not all urban villages or three-in-one buildings in the greater Beijing area were subject to evictions or demolition during the wave. If one can locate enough demolition sites and pair such locales with others that seem similar but were not demolished, then calculations assessing the motivations and explanations of the demolitions can be answered. For instance, are larger or smaller communities more likely to be targeted? Are different districts more aggressively pursuing demolition than others, or is proximity to urban infrastructure such as subway stations linked to demolitions?

In recent decades, China's national government has attempted to encourage the movement of migrants away from the country's largest and most prestigious coastal enclaves to lower-tier cities in the interior through a variety of household registration (hukou) reforms. However, the vibrancy of Beijing retained its pull for migrants looking to make good wages. City officials, along with the central government, desired a population of people who have done well, with the thought that they will be the ones most inclined to do well by the regime. Following a tragedy that showed the dangers of migrants' living situations in Beijing, those officials forcibly pushed thousands of those migrants—the people who deliver goods, cook meals, and build and clean the city's towers—out of their residences into a North China winter. These actions were cold calculations that followed and flowed from the political and policy context.

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