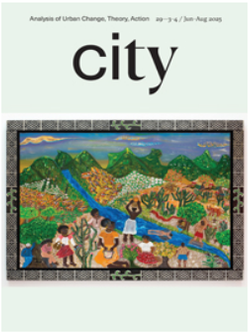

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Imposing immobility and making mobility: an infrastructural reading of Beijing's impactful but ineffective temporal mode of COVID governance

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Imposing immobility and making mobility: an infrastructural reading of Beijing's impactful but ineffective temporal mode of COVID governance

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This study examines China's COVID governance through the case of Beijing from April to June 2022. To manage the biopolitical paradox between mobility and immobility brought forward by the pandemic, the Chinese state mobilised a temporal mode of COVID governance, implementing drastic containment measures aimed at 'zeroing out' viruses in the shortest possible time while minimising socio-economic cost. This approach entailed imposing immobility and making mobility according to the specific temporal—spatial arrangements of time—space compression in a state of exception, within which a spatial configuration of simultaneity for infrastructural intervention emerged. However, the two groups of infrastructures deployed for these purposes ultimately

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generated excessive socio-economic costs, while achieving 'zeroing out' over an extended period, revealing Beijing's impactful but ineffective COVID governance. This outcome invites reflection on how China's temporal mode of governance was enacted and reciprocally challenged by the very infrastructures deployed as its instruments.

Introduction

At dawn on 11 May 2022, a young man in Beijing suffered a sudden angina attack and collapsed on the roadside in excruciating pain. Although his home was only a ten-minute drive from the nearest hospital, the ambulance did not arrive until nearly an hour after the emergency call. During that long and desperate wait, his life slowly slipped away. At the time, Beijing was experiencing its largest local COVID outbreak since 2020, with strict containment policies in force. The hospital, ambulance crews, and the grassroots authorities in his neighbourhood had to go through layers of cumbersome communication before a vehicle could be dispatched. By the time he was finally admitted to the emergency room, the critical window for treatment had already passed, and hours of resuscitation efforts proved in vain. Weeks later, Beijing municipal authorities disclosed this tragedy and disciplined 3 party cadres from local health authorities and 1 doctor, all deemed responsible. Yet nothing could undo the loss of the young man's life, and the causes of this tragedy went far beyond the mistakes of just a few individuals.

Such an incident epitomised the conspicuous failure of the state to coordinate the paradoxical relation between immobility and mobility during the pandemic. At the time, the Chinese government was enforcing stringent containment measures in the name of protecting public health. Yet, this very governance, through the excessive imposition of immobility, produced fatal consequences: an ambulance meant to deliver life-saving mobility failed to arrive in time to save the young man's life. Alarmingly, such incidents were not isolated during the pandemic; they kept occurring in 2022 across the country during this prolonged state of exception, and the failure to reconcile mobility and immobility was not limited to access to medical care. Whereas people's everyday lives were suddenly encircled by infrastructures that hindered their trips to obtain daily necessities, leading in some areas to acute shortages and even famine (Xiang 2024), whilst economic growth was also severely disrupted with repressed mobility of production factors (BBC-1 2022). Although the state attempted to mitigate these outcomes by deploying infrastructures aimed at facilitating the mobility of people and goods, the persistence of such tragedies suggests that China's COVID governance was fraught with tensions. To reflect on this issue, this paper examines Beijing's COVID governance in the spring of 2022, and the research question put forth is: *What material effects emerged from the production and deployment of infrastructures in Beijing's COVID governance?*

Drawing from literature on China's temporal mode governance (Shin, Zhao, and Koh 2020), this paper seeks to grasp the state efforts to reconcile the biopolitical paradox between mobility and immobility from a temporal—spatial

perspective. In post-reform China, the state has cultivated a distinct temporal mode of governance, wherein the state's concern for speed and efficiency, which is exercised through institutional arrangements and ideological inculcation, is valorised as a key driver of capitalist development. In the context of pandemic conditions, in response to the intensified biopolitical paradox between making mobility and imposing immobility, the state formulated a series of temporal—spatial arrangements to reconcile their relation. This paper conceptualises these arrangements as *the time—space compression in a state of exception* that entails *a spatial configuration of simultaneity*, and to instantiate these arrangements, various immobility and mobility infrastructures were tactically produced and deployed.

Bringing this understanding into dialogue with the growing literature on infrastructure as an analytic lens, infrastructures can be understood as urban things, whether taking physical, digital, or human forms, that possess material dispositions enabling them to be mobilised for specific political-economic processes (Chu 2014; Larkin 2013). In the case of Beijing's COVID governance, two groups of socio-technical infrastructures were deployed for making mobility and imposing immobility, respectively. Yet these infrastructures did not merely serve as neutral instruments for realising the state's governance agenda. The incompatibility between their material dispositions of the two groups of infrastructures challenges the governance agenda reciprocally, leading to spatio-temporal effects that deviated from the state's original intentions and ultimately making Beijing's COVID governance impactful but ineffective. This infrastructural analysis thus offers a relational account of how China's temporal mode governance model encountered structural constraints and societal pushback.

The empirical evidence of this research is based on the COVID governance practice in Beijing Municipality, the capital of China, between 22 April and late May 2022, the period when an Omicron epidemic occurred and lasted for around 5 weeks until the goal of 'zeroing out' infections was allegedly achieved. As by then one of the largest-scale outbreaks since 2020 in Beijing, it provoked the municipal authorities to enact a series of stringent measures with both groups of infrastructures deployed. During this period, these infrastructures produced not only efficacy for realising 'zero out' but also unintended temporal—spatial effects as well as political frictions and collateral socio-economic costs, thus providing an opportunity to further engage with China's temporal mode of governance and its lack of resilience.

In the ensuing section, China's temporal mode of governance will be discussed to provide the basis for the third section, in which the definition of infrastructure and why it could be mobilised as an analysis lens to reflect on the complex material effects of governance will be briefly outlined. Methodology will be covered in the fourth part, explaining the methods and sources of data collection and how these data were analysed. The findings will elaborate on the specific intention of China's COVID governance and the temporal—spatial arrangements that were entailed, along with the actual material effects that emerged out of the infrastructure dynamics revolving around it, which would then be followed by concluding remarks in the last part that briefly reflect on the issue of the lack of resilience of China's temporal mode of governance.

The temporal mode of COVID governance over mobility and immobility

China's COVID governance unfolded around a biopolitical paradox of making mobility and imposing immobility. In a modern market economy, the frictionless movement of human bodies as socio-economic production factors is crucial for capital accumulation; restrictions imposed upon them risk undermining the very foundation of political power (Bærenholdt 2013; Foucault 1984). This Foucauldian insight also holds in contemporary China's context, where the inauguration of marketisation reform since the 1980s has been substantially underpinned by the state's top-down unleashing of the mobility of people along with commodities and capital (Brady 2021; Shin 2015). However, with the outbreak of the pandemic, the imperative to suppress virus transmission by repressing spatial movements of both human bodies and, by extension, goods, as the carriers of viruses, clashed head-on with the requirement to circulate them as production factors. This posed a serious task for the state: how to reconcile the imposition of immobility for virus containment with the facilitation of mobility for economic growth?

The Chinese state responded to the biopolitical paradox between mobility and immobility through a temporal mode of COVID governance. Post-reform China exemplifies 'the temporal mode of governance', in which the concern of rapid economic growth and urbanisation has been installed as a central concern of the party-state (Shin, Zhao, and Koh 2020). The party-state's obsession on speed and efficiency is institutionalised into the bureaucratic system (Chien and Woodworth 2018), which proactively engages in fixed capital investment in a timely manner to accumulate wealth and power, the process coined as 'state-led time—space compression', at the direct expense of constant destruction of built areas and drastic interference in people's everyday lives (Shin, Zhao, and Koh 2020). Moreover, this obsession was not only implemented institutionally but also ideologically imposed on society to quell resistance, thereby facilitating the speedy but brutal capitalistic growth undergirded by the authoritarian state apparatus (Shin, Zhao, and Koh 2020, 247–248).

According to Zhao (2020), as the pandemic ascended, whilst the party-state's long-term obsession with speed and efficiency, alongside the coercive institutional ground, of the temporal mode of governance remained stable, the concern for the speed of economic growth was temporarily substituted with the speed to contain virus transmissions. In addition, due to the urgency of containing the virus swiftly, drastic containment measures were frequently framed using the rhetoric of war (e.g. 'the people's total war') and widely disseminated through propaganda to instil obedience to the state's pandemic policies among the society (Fu 2022), constituting the ideological imposition of the state's temporal concern. Within this temporal logic of COVID governance, the short-term, drastic imposition of immobility for rapidly suppressing viral transmission became a means for restoring socio-economic normality, wherein the mobility of human bodies as production factors could be reactivated for accelerated capital accumulation. Accordingly, the temporal mode of governance during the pandemic was embodied in the re-prioritisation of immobility over mobility along a linear timeline.

However, the biopolitical paradox of mobility and immobility brought about by the pandemic also manifests in the spatial dimension. In the realm of everyday life, whereas people's trips to amenities like shops and hospitals were strictly restricted under the COVID containment measures, the significance of creating mobility of life-essential goods and services across the urban space was expanded (Xiang 2024; Zhan 2024). Usurped necessary mobility across the urban spaces must be compensated in some ways. People had to rely more on online delivery services to obtain these resources, which led to some Chinese commercial business platforms and private logistic companies even seeing their market expand during the pandemic (Zhan 2024). The demand for making mobility of life-essential resources and personnel in urban space did not vanish under the state's intrusive containment areas. Instead, the imposition of immobility simultaneously generated a compensatory demand to make mobility, raising the question of how to reconcile the two. This challenge was particularly amplified under the political context of China's Dynamic Zero Policy (hereafter: DZP), which required local states to achieve zero infections within their jurisdictions. As a result, even minor instances of sporadic movement by a single virus carrier could trigger mass nucleic acid testing at the neighbourhood level or even citywide lockdowns to eliminate the virus (He and Zhang 2023). The argument this paper proceeds to develop is that, in response to this challenge posed by the biopolitical paradox in spatial terms, China's temporal mode of governance has also made corresponding arrangements that are projected onto urban space through the mobilisation of various infrastructures.

Infrastructure as an analytic lens for understanding COVID governance

Indebted to Larkin, infrastructures can be regarded as 'built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space' (2013: 328). As the default types of infrastructure in Larkin's account, physical infrastructures' techno-engineering material dispositions are provided as a basis for enabling the circulation of production factors and political ideologies. Meanwhile, as 'the things and relations between things' (Larkin 2013), individual infrastructures should be regarded as 'partial objects' whose enabling capacity must be completed by 'gesturing to other flows and transactions' (Chu 2014, 353). In this sense, the political-economic functions attributed to infrastructures emerge through their material dispositions and are realised through interactions with surrounding objects and actors.

Based on this relational reading of infrastructure, urban things that are embedded in specific socio-technical relations and play out enabling capacities therein can also be epistemically constructed as infrastructures, in which way the extension of infrastructure can be expanded beyond merely physical facilities. Current scholarship has identified a wide range of things, including social systems (Cowan 2021), people (Simone 2004; Tse and Pun 2023), and commercial business platforms (Lin 2022) as infrastructures in specific settings. Though these non-physical infrastructures, especially human infrastructures,

are often more tentative and ever-shifting than physical counterparts that are usually fiscally costly and delivered under formal state political framework, they nonetheless play a pivotal role alongside or in supporting the operation of physical infrastructures flexibly in particular the realm of everyday life (Simone 2004; Tse and Pun 2023, 13). In this regard, infrastructures can be identified as 'socio-technical assemblages' that create diffuse political and cultural effects across different domains (Rippa and Oakes 2023, 7–8).

By epistemically constructing non-physical urban things, encompassing digital surveillance platforms, human and commercial platforms, as COVID governance infrastructures along with physical ones, extant research has identified a material network of China's COVID governance over mobility and immobility. To cut off virus transmission chains, field hospitals were rapidly constructed (Rippa and Oakes 2023), allowing for the isolation of diagnosed cases and close contacts from the general population. Multiple digital surveillance platforms were national-widely deployed by the state to monitor and restrict people's movements (Zhan 2024). In addition, existing urban structures were reconfigured as COVID governance infrastructures. For example, the enclosed neighbourhood, which is one of the most prevalent forms of residential space in contemporary urban China and is characterised by its walled-off feature to provide security and privacy for residents, was reasserted as a key physical infrastructure to restrict residents' movements during the pandemic (Chiu-Shee 2014). These infrastructures collectively facilitated the state's objective of imposing immobility on human bodies. At the same time, delivery workers affiliated with online platforms and logistics companies were coordinated by the state as material planes to distribute life-essential resources and services to residents in quarantine isolation (Xiang 2024; Zhan 2024). Just as other socio-technical infrastructures, these actors were flexibly mobilised by the state and played an infrastructural role in making necessary mobility to sustain people's lives under virus containment measures.

Infrastructure can be utilised as an analytic lens to interrogate the temporal—spatial effects of the party-state's political response to the health emergency, and how the COVID governance was reciprocally challenged by the infrastructures, thus awarding a less state-centric understanding of state governance in urban China. Literature to date has expounded extensively on how infrastructures operate as instruments of governance. The hegemonic party-state mobilises socio-technical infrastructures not only to facilitate capital circulation, which is crucial for enhancing fiscal capacity and state legitimacy at a macro-scale (Furlong 2022; Ngai 2024), but also to embed its power into citizens' everyday life via controlling over people's movements and ideological inculcation (Brady 2021; Byler 2020; Oakes 2019; Tse and Pun 2023). However, infrastructures are not just passive instruments deployed by the state for realising its governance agenda. To draw from Rippa and Oakes's (2023) insights, governance should be taken as a set of confounded material effects co-constituted with infrastructural configuration, and the relations between infrastructures and governance could be tension-filled: the material dispositions of infrastructures cannot be fully controlled by the state, but instigate political effects that exceed the state's agenda or even force it to constantly adapt itself relationally (Oakes 2023; Rippa

and Oakes 2023). In light of this, the temporal—spatial effects of China's COVID governance emerged not only through the exercise of the potent state power, but also from the production and deployment of infrastructures, which could diverge from the governance agenda and strategy.

In the following sections, this paper examines an impactful but ineffective temporal mode of COVID governance in Beijing through the infrastructure as an analytic lens, and argues that the tension between infrastructure and governance manifests in two key aspects. First, to advance specific political agendas, the state often mobilises multiple socio-technical infrastructures (Oakes 2023), yet as reflected in Beijing's experience, the material dispositions of these infrastructures are not always mutually compatible. This incompatibility generates temporal—spatial effects that diverge from the original intentions of COVID governance. Second, infrastructures can be understood as interfaces between the state and the citizenry when deployed in the social realm to project the state's imperatives onto the population (Chiu-Shee 2024; Lemanski 2022). The implementation of COVID governance over mobility and immobility through infrastructures entails dense and negotiated interactions, which in turn produce unintended consequences, pushing the spatial—temporal effects of infrastructure beyond the parameters of the state's governance objectives.

Methodology

This paper examines Beijing's COVID governance practices from April to early June 2022, using qualitative methods to analyse over 110,000 Chinese characters of web-based data and 20 additional documents. The data comes from three sources: official documents, governmental press releases, and news coverage. 'Official documents' relate to white papers, guidelines, normative documents, and statistics published by different state agencies on official digital platforms. 'Governmental press releases' refer to the texts of the press conferences held by the Joint Prevention and Control Mechanism of Beijing (hereafter: JM), the primary entity coordinating numerous municipal agencies' response to the pandemic. 'News coverage' refers to reports and comments from both Chinese and international media, with Chinese media further divided into state and commercial media, the latter still under state censorship but enjoying a greater latitude.

'Official documents' are used to extract factual information, like the health authorities' regulations and operations. 'Government press releases' offer factual information and discourse analysis. The JM held news conferences every afternoon to update the latest epidemic developments and countermeasures, with transcripts published on several social media platforms. Information from this conduit is largely credible as withholding could trigger discipline for the functionaries after the Wuhan outbreak, and the state actively sought transparency on epidemic information to craft self-disciplined citizens (People-2 2022). These transcripts are also utilised for discourse analysis by identifying the emotive language cum the frequency of specific wordings in these texts and then coded for further analysis of the governance rationales. The state media

then supplements the government press release, as they usually come with more details and explanations of policies.

The problems with data from state media, official documents, and government press releases are that these conduits are highly selective to avoid negative publicity, and biased narratives are deeply entrenched in the texts. The first issue can be alleviated by cross-checking with international media and Chinese commercial media like Caixin, one of the most prestigious of this type. For instance, they invest a great amount of attention to the deployment of steel hoardings and the death of the aforementioned young man, which were rarely mentioned in state-generated data. As for the biased narrative, commercial media like Caixin usually take a more reflective stance, and the international media most often employs an even more blatant critical attitude about China's COVID governance, thus balancing biased state narratives to some extent.

The time—space compression in a state of exception under China's 'Dynamic zero Policy'

After the Wuhan outbreak was put under control in early 2020, China's sweeping COVID containment measures ebbed into regularised prevention protocols, ushering in two relatively calm years. Despite local-scale outbreaks continuing to emerge sporadically throughout the country, especially in border and port cities, they were typically contained within a few weeks by the local governments, and at the national level, the economy even underwent a strong recovery (BBC-1 2022). By December 2021, the National Health Commission (hereafter: NHC, the State Council's health administration) retrospectively named China's COVID governance strategy 'Dynamic Zero Policy' (Xinhuanet 2021). Under this policy, while still guided by the principle of 'zeroing out' all infections, the NHC acknowledged that, given the COVID-19 pandemic's global spread, local outbreaks from imported cases were inevitable. Thus, containment measures had to be implemented 'dynamically': local governments were required to detect outbreaks at the earliest possible stage, trace cases within 24 h, and impose lockdowns promptly. The goal was to break transmission chains within a single incubation period of viruses to prevent their further spreading, thereby 'minimise the impacts of the epidemic on economic development and social life' (Xinhuanet 2021). The ideal scenario envisioned under DZP was that, though nationwide zero cases of infection was no longer feasible, as long as outbreaks were contained locally, the rest regions across the country could still maintain extremely low infection rates, whilst society and the economy would continue to operate largely as normal at the national scale.

Unfortunately, this vision soon collapsed. On 9 December 2021, Omicron, as by far the most contagious variant since the Wuhan outbreak, arrived in China. With a shorter incubation period and significantly higher transmissibility than the previously dominant Delta variant, Omicron swept across the country at an unprecedented speed. Within a few months, it triggered large-scale outbreaks in China's major economic hubs, Shanghai and Shenzhen, forcing city governments to respond with intensified lockdowns, sparking social discontent as well as a sharp slowdown in economic growth (BBC-2 2022). Meanwhile,

Hong Kong SAR, where the DZP was not enforced, saw a devastating wave of deaths caused by Omicron. This served as a grim warning to the Politburo of CPC (BBC-2 2022), as the socio-economic vulnerabilities leading to such high mortality in Hong Kong were seen as even more severe in mainland China; abandoning the DZP was not yet a viable option if a similarly disastrous death toll was to be avoided. Yet Omicron's shortened incubation period and higher transmissibility also made containment far more difficult. Without more sophisticated and effective responses, the enormous social and economic disruptions seen in Shanghai and Shenzhen would likely repeat.

Against this backdrop, authorities began to further refine the DZP; the terms '*dynamic calculation*' and '*cost*' were increasingly invoked in official texts. On 17 March 2022, amid growing social discontent and mounting economic pressure, Xi sternly reaffirmed adherence to the DZP but emphasised that it intended to 'achieve the maximum effect of pandemic containment at the *minimum cost*' (People-1 2022). Soon after, the NHC elaborated that the '*cost*' should be assessed through a '*holistic and dynamic calculation*' (算总体账、算大账) that confines the negative impacts in a 'short-term and limited scope' in exchange for 'greater benefits' (Xu 2022). Later, Liang Wannian, one of the chief NHC officials, explained that such a '*dynamic calculation*' required 'a systematic perspective', in which factors like 'people's mobility' along with 'fiscal, material and human resources' etc should be counted as '*cost*', whilst 'the public health' and 'economic recovery' etc could be taken as 'overall social benefits'. Through '*dynamic calculation*', the implementation of DZP could 'balance epidemic containment with economic development and the normality of daily life and production' (Caixin-1 2022).

In these accounting-like rhetorics, the effectiveness of the COVID governance was framed as relative to its socio-economic cost, and a model of time—space compression in such a state of exception can be discerned from official accounts on measures for cost reduction. China's containment responses started with tracing the infected cases together with their close contacts and identifying the areas they had stayed in as 'containment areas' (封控区), whose spatial scope could range from a single shopfront to a whole neighbourhood in practice and within which people's mobility was strictly controlled. As Liang explicitly classified mobility alongside other factors as a form of *cost*, because, as he noted, 'restrictions on people's mobility [...] cause negative impacts on the economy, [...] as well as anxiety and restlessness' (Caixin-1 2022), it follows that limiting mobility was itself a socio-economic cost. In order to minimise this cost, Liang argued that the key was compressing the spatial scope of containment areas, thereby reducing the number of people affected by mobility restrictions. To achieve this, the local states were required to 'counter the speed with speed' (以快制快): by rapidly identifying the precise location of infected cases before viruses reach elsewhere, the scope of the containment area delineated can be minimised (Caixin-1 2022). Smaller containment areas could be easier to manage, and thus viruses within could be cleared more quickly, allowing them to resume normality sooner, which process described by Liang as 'trading space for time' (以空间换时间). As such, compressing the spatial scope of enforcing containment measures and their speedy implementation reinforces each other. Through this time—space compression, the overall

temporal duration of COVID-induced disruptions would be curtailed to reduce the socio-economic costs.

Apart from shortening the temporal duration, the time—space compression was also meant to exempt the rest areas from gratuitous disruptions as much as possible and thus reduce the overall cost in the spatial sense. In Liang's view, narrowing the spatial scope of containment areas could allow the rest of the regions to maintain normal operations. He framed this approach as 'sacrificing the life convenience of certain localised areas [...] to ensure normal life and economic development for the greatest number of people and regions' (Caixin-1 2022). Since the very point of compressing the containment areas' scope was to preserve normality elsewhere to the greatest extent possible, it gave rise to a demand for at least maintaining mobility outside of them. Therefore, during this period, the central authorities repeatedly criticised certain local governments for counterproductive actions, like shutting down the transportation infrastructures and interrupting the logistical supply lines that were outside of containment areas (Yu 2022).

Meanwhile, within containment areas, whereas citizens' daily movements were heavily restricted, supplying necessary goods and services to them became imperative to prevent collateral damage caused by shortages. As a result, local states were increasingly coordinating with volunteers, logistics companies, and commercial platforms to enhance the mobility of life-essential resources (Xiang 2024; Zhan 2024). The benefits of rapidly imposing immobility could only be justified if they outweighed the socio-economic costs incurred in the process, which, in turn, created the need to make mobility both inside and outside containment areas.

The temporal mode of COVID governance reflected a rationale of *a time—space compression in a state of exception*, which entailed *a simultaneity of spatial configuration* to be managed by both immobility and mobility infrastructures. As official discourse during this period exposes, the '*dynamic calculation*' entailed a spatial configuration of simultaneity through a time—space compression. Once an outbreak emerged, the affected areas entered a temporary state of exception, wherein socio-economic normality was halted for immediate containment. At the same time, normality outside containment areas was expected to continue with subdued interruptions. By rapidly deploying containment measures, the spatial scope and temporal duration of enforcing containment could be shrivelled, while normality beyond containment areas would be maintained across the widest possible region. This mutual compression of the temporal and spatial scales of containment was envisioned as the means to the low-cost and rapid elimination of viruses, thus forming *a time—space compression in a state of exception*. Within this temporal—spatial arrangement, a *spatial configuration of simultaneity* for infrastructural intervention emerged: immobility had to be imposed within containment areas, while mobility needed to be enabled within (for supplying life-essential resources) and beyond (for preserving socio-economic normality). Both imposing immobility and making mobility required the deployment of respective infrastructures. Driven by the intention of balancing the effect of pandemic containment, i.e. achieving zero infections, and the socio-economic cost, they were collectively deployed by the state to enforce the temporal mode of COVID governance (Figure 1).

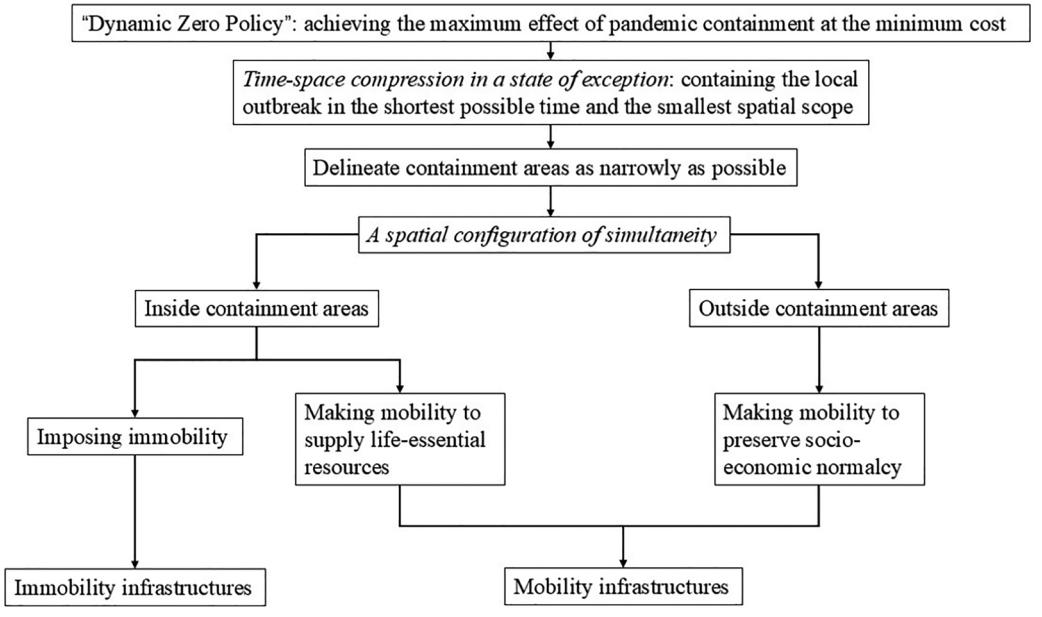

Figure 1: China's temporal mode of COVID governance and its spatialisation (Source: Author).

The immobility infrastructures: to materialise time—space compression

Like much of China, Beijing's situation worsened with the arrival of Omicron. On 22 April, three unrelated groups tested positive during routine nucleic acid testing, marking the beginning of the city's largest outbreak since 2020. Within hours, Cai Qi, Beijing's Party Secretary, and other municipal leaders issued urgent directives, demanding all levels 'prioritise speed' to 'contain the epidemic in the shortest possible time' (Caixin-2 2022), and the guiding principle 'Fast, Strict, Precise, and Practical' was repeatedly stressed for local state agents in the following weeks. Political pressure from the top quickly cascaded down the bureaucracy, triggering a full-speed mobilisation of the local party-state apparatus, which could be reflected in the militarised rhetoric that followed, frequently framing COVID governance as a 'running race'(赛跑), an 'encounter' (遭遇战), a 'total war' (总体战) and a 'battle of epidemic prevention'(疫情防控阻击战). Meanwhile, the stakes were high: failing to control outbreaks in the jurisdictions could lead to disciplinary actions, dismissals or even police investigations, as several local cadres experienced in the following weeks. Faced with mounting pressure and the threat of punishment, the local state agencies swiftly shifted from normality to a state of exception. These intense race and war rhetorics were not only circulated within the administrative apparatus to accelerate bureaucratic operations, but also disseminated to the general public through daily JM news conferences that were broadcast via television and social media platforms. In doing so, the state's obsession with speedy COVID containment was ideologically imposed upon society at large.

The initial response focused on delineating containment areas. Using online surveillance platforms Beijing Health Kit and Itinerary Code, health authorities tracked the movements of infected individuals and their contacts through their

telecom signal locations, designating the exact affected locations as containment areas for home or workplace quarantine. These online surveillance platforms also functioned as digital immobility infrastructures, enabling law enforcement to punish unauthorised movement across delineated boundaries of containment areas: at least 12 people were detained within two weeks for breaching these areas (Beijing Municipal Public Security Bureau 2022). Various types of other infrastructures were also deployed. The existing boundaries of the enclosed neighbourhoods, the most prevalent form of residential space in China (Chiu-Shee 2024), were turned into immobility infrastructures to close the residents inward. Temporary steel hoardings were erected as well to fortify the enclosure, especially around places with no existing physical boundaries. Though rarely acknowledged in state-affiliated media, international reports documented these hoardings as early as 30 April (DW-1 2022). These combined infrastructures created scattered, spatially compressed enclaves where everyday mobility was temporarily suspended.

In addition to closing people in inward containment areas, medical facilities were deployed and linked to them as immobility infrastructures for furthering time—space compression. Under NHC guidelines, to cut transmission chains and 'zero out' infections within containment areas in an even shorter time, infected cases were to be sent to designated hospitals or newly constructed field hospitals within 2 h, and close contacts were required to be collectively transferred to 'centralised isolation sites' (集中隔离点), often converted hotels, within 12 h. According to press releases, transfers often occurred even faster in practice and extended far beyond infected cases and close contacts, affecting a strikingly large segment of the population: on 20 May, 5,000 residents from one neighbourhood were transferred to 57 nearby hotels (Beijing Daily-1 2022); two days later, 1,800 were bussed overnight to seven hotels 200 kilometres away (Beijing Daily-2 2022). Backed by intensive use of transit infrastructure, these rapid, large-scale collective transfers created medical enclaves where time—space compression was deepened to accelerate the 'zeroing out' of infections.

The mobility infrastructures: to maintain socio-economic normality and compensate for immobility

Under the dynamic calculation of the DZP, constraining the spatial and temporal impacts of the containment measures aimed to minimise socio-economic disruption by restricting unnecessary interference with normality. Therefore, prior to the escalation in late May, work-from-home mandates were limited to only the hardest-hit districts, while most of the city continued to operate under regular conditions. Given that daily commuting needs remained high, various forms of public transportation, as a key mobility infrastructure, had to stay functional. Despite some metro stations near containment areas being closed, the system largely remained in full operation weeks into the outbreak (Beijing Health Commission-1 2022). Similar adjustments were made to bus and taxi services, which were rerouted to avoid affected areas. In addition, since late April, constant increases in infections triggered several waves of panic

buying across the city. In response, the authorities partnered with local stores and markets to distribute supplies mobilised from nearby provinces, aiming to stabilise the municipal-level supply chain. These stores and markets effectively functioned as logistical infrastructures.

Meanwhile, a variety of mobility infrastructures were installed to compensate for the stringent containment measures logistically. Precisely because citizens in containment areas were restricted from accessing stores, the mobility of life-essential goods and services emerged to be exceptionally vital to sustain daily lives (Xiang 2024; Zhan 2024). In Beijing, mobilising food and medicine into and within containment areas required the state's close coordination with private courier companies to increase the number of front-line workers stationed in these areas, as well as extend the hours for delivering service. In some cases, grassroots party cadres and veterans were also ideologically mobilised by the state as human logistic infrastructures to distribute resources within containment areas.

Other than mobilising goods and services into and within containment areas, transporting residents out, especially for medical care, was equally crucial. Residing in containment areas meant that those requiring treatment could not leave without approval from grassroots cadres, who coordinated with ambulance services, even for non-urgent cases. This led to a sharp rise in demand for ambulances as essential mobility infrastructures for people in need: in early April, before the outbreak, the average number of ambulance trips at the municipal scale per week was 17,690, which rose to about 20,000 in May (Beijing Health Commission 2023). One ambulance coordinator noted that after the outbreak, daily requests for ambulances surged from 3000 to 8000, with up to 70% from containment areas (Beijing Health Commission-2 2022). The rise in demand caused a shortage of ambulances; as a result, in numerous cases, police vehicles were utilised to transport people to hospitals (Beijing Municipal Public Security Bureau 2023), and the municipal government allegedly organised taxis and over 1000 buses to provide emergency services (People-2 2022). These vehicles were temporarily repurposed from their usual duties to serve as mobility infrastructure for people seeking medical care.

The impactful but ineffective COVID governance

Looking back at Beijing's COVID containment trajectory, the state's intention of balancing epidemic control and socio-economic development through time—space compression in a state of exception failed. Temporally, from the initial detection of the first infected cases on 22 April to the official declaration of control on 28 May, more than 5 weeks had elapsed, far exceeding the one-week incubation period assumed by the NHC for the Omicron variant (CCTV 2022). Spatially, during these weeks, the virus spread repeatedly, forcing the expansion of containment areas from a few neighbourhoods where the initial outbreaks were found to nearly all municipal districts by late May. The prolonged and widening COVID containment led to intensified disruptions to socio-economic normality, precisely what the policy aimed to avoid, alongside additional costs in various forms. Suffice it to say, as its temporal—spatial effects diverged from

the original intention along with the additional costs, Beijing's temporal mode of COVID governance can be described as impactful but ineffective.

A close examination of infrastructural dynamics reveals how this divergence unfolded. Time—space compression in the exceptional state of the pandemic required the imposition of immobility and facilitation of mobility through respective infrastructures, yet the material dispositions of the two proved incompatible in practice. By early May, immobility infrastructures appeared effective in carving out compressed enclaves and curbing internal movement, with a declining growth rate of infected cases and officials declaring transmission chains severed. This proved premature. In the weeks that followed, new outbreaks emerged abruptly outside the original containment areas, nearly all linked to mobility infrastructures. On 9 May, staff at an operational bank data centre tested positive. After two days, a group of metro line maintenance workers were found infected, turning several hotels and villages where they had stayed into epicentres of further rounds of outbreaks. Subsequent infections started in an express sorting centre and a bus dispatch station days later, before the most significant outbreaks occurred on 15 May at one of Beijing's biggest wholesale food markets, traced to a previously infected metro line maintenance worker, and led to a city-wide surge in cases in the following weeks.

Whilst the bank data centre, food market, express centre, and bus station, and metro lines in these cases were infrastructures intended to logistically facilitate the mobility of resources in both digital and physical spaces, they inadvertently also enabled the mobility of the virus, either through their ongoing operation or via the movement of personnel responsible for their operation. Despite the state's widespread deployment of immobility infrastructures to enforce containment measures through time—space compression, the continued operation of mobility infrastructures contributed to the broader spread of the virus beyond containment areas. This culminated in what authorities referred to as 'cross-district transmission of viruses' (Beijing News 2022). Consequently, from 21 May onward, at least five of Beijing's most populous and economically vital central districts were placed under full lockdown. This large-scale imposition of immobility proved effective, as within a week, the epidemic was declared to be contained municipal-wide. However, it also marked the failure of the earlier governance practice: the goal of controlling Omicron within a single incubation period had not been achieved through the intended coordination of mobility and immobility infrastructures aimed at temporal-spatially confined containment, but the extensive imposition of immobility on a city-wide scale.

The expansion of both the temporal duration and spatial scope of containment carried substantial additional costs. Evidence suggests that the large-scale production and maintenance of physical immobility infrastructures like field hospitals and steel hoardings entailed considerable fiscal expenditure (Ai 2022). In parallel, a vast number of grassroots cadres and workers were mobilised as human infrastructure to facilitate the circulation of essential goods. Even in official propaganda materials intended to showcase the state's political commitment to protecting public health, interviews with these frontline personnel on local television revealed frequent expressions of fatigue and anxiety caused by overwhelming workloads. Thus, the prolongation of containment in

both time and space entailed an expansion of costs that manifested as increased fiscal spending and human exhaustion.

Meanwhile, immobility infrastructures became increasingly intrusive in residents' everyday lives, to the extent that they curbed necessary mobility and thereby generated additional costs. According to data released by Beijing's Health Commission, only one individual reportedly died from COVID-related causes during these weeks, ironically, not from the virus itself, but from the containment measures. As recounted in the opening vignette, the young man resided in a containment area enclosed by immobility infrastructures. To leave these areas for medical care, residents had to present infection-related data displayed on various digital surveillance platforms for permission. But obtaining the permission was only the first step. Whereas hospitals had also been reconfigured as immobility infrastructures, many of them were reluctant or even refused to admit patients from containment areas, fearing in-hospital transmission. In this case, despite the young man suffering from agonising angina and being in urgent need of treatment, the nearest hospital initially required him to secure permission from his local neighbourhood committee, then repeatedly tried to arrange his transfer to other facilities. By the time an ambulance was finally dispatched, nearly an hour had passed in bureaucratic delays, which played a significant role in his death. Although ambulances had been deployed as mobility infrastructures during the pandemic to ensure patients' access to care, this case reveals their inability to overcome the multi-layered administrative and spatial barriers created by immobility infrastructures. The underlying problem was that mobility infrastructures could not fully compensate for the disruptions to medical access as a life-essential resource caused by the deployment of immobility infrastructures. The incompatibility between the two ultimately resulted in collateral damage, culminating, in this instance, in a fatal cost.

The coercive deprivation of mobility embedded in the rationale of time—space compression visibly obstructed the circulation of life-essential resources. Citizens were among the first to bear the brunt of this disruption, raising widespread concerns about the state's actual capacity to effectively balance epidemic control and basic livelihood. This concern crystallised into mounting frictions between the state and the society. In Beijing, such state-society frictions escalated into confrontations, particularly surrounding the installation of steel hoardings as one of the most intrusive forms of immobility infrastructure. Altercations were reported between residents and construction workers erecting these barriers around enclosed neighbourhoods, with residents openly criticising the policy (RFA 2022). On the night of 15 May, attempts by Peking University administrators to install steel hoardings on campus were met with strong resistance from students: more than 300 gathered in protest, forcing the administrators to dismantle the barriers within hours (DW-2 2022).

The most pervasive manifestation of state-society frictions, however, emerged through the circulation of rumours concerning shortages. During these weeks, official announcements of new containment areas were frequently accompanied by widespread rumours on social media regarding dwindling goods and food supplies. Even though the municipal government had repeatedly affirmed Beijing's adequate supplies in daily press conferences from the outset of the

outbreak, such rumours sparked multiple waves of panic buying, which, in some cases, resulted in actual short-term, localised shortages. According to police reports, the rumourmongers were mostly individual social media users; their posts nevertheless both resonated with as well as amplified a broader societal anxiety triggered by the anticipated abrupt intrusion of containment measures enforced through immobility infrastructures. The resulting shortages can thus be construed as a self-fulfilling prophecy: the citizens' imagined state's failure to compensate for the strict imposition of immobility induced widespread and profound public anxiety, which in turn manifested in behaviours that produced the very shortages the state was trying to avoid with mobility infrastructures. And this imagined failure was not without foundation. The death of the young man recounted earlier and the concurrent famine in locked-down Shanghai (Xiang 2024) show that public anxiety over catastrophic consequences from the state's failure in mediating immobility and mobility infrastructures was not merely speculative. These incidents not only revealed a deep-rooted public distrust in the state as a form of friction but also increased the cost of COVID governance: to appease the public panic and localised shortages, the authorities had to coordinate the mobilisation of mobility infrastructures, such as local retail networks and logistic companies, to import and distribute large volumes of food from neighbouring provinces.

Conclusion

The outbreak of COVID-19 triggered a biopolitical paradox between mobility and immobility. According to Zhao (2020), the Chinese state readapted its temporal mode of governance and responded to this paradox through the reordering of priorities. Under this governance mode, driven by the motivation to restore socio-economic normality as rapidly as possible, whilst its institutional ground and the ideological imposition of concerns for speed and efficiency remained stable, the speed of economic growth was temporarily substituted with the speed of containing virus transmissions. In this way, the paradoxical relation between mobility and immobility was rearranged in a temporal sense. Building upon this understanding, this paper further investigates how this paradox was addressed spatially under this governance mode. As outlined in official narratives surrounding the Dynamic Zero Policy, the party-state intended to strike a balance between pandemic containment and socio-economic development. Within this logic, factors such as restrictions on mobility were explicitly framed as 'costs' to be minimised. To this end, the state advocated that the imposition of immobility needed to be compressed both in terms of its temporal duration and spatial range, with the latter could further reinforce the former.

China's temporal mode of COVID governance can thus be described as a form of *time—space compression in a state of exception*. In contrast to the time—space compression carried out in normality that intends to maximise profits by accelerating capital accumulation and annihilating spatial distance through fixed capital investments (Shin, Zhao, and Koh 2020), this exceptional type intended to minimise the socio-economic costs of containment by mutually

accelerating containment with the spatial shrivelling of containment areas. In addition, shrivelling containment areas naturally entailed the expansion of their outside, forming *a spatial configuration of simultaneity*. To exercise low-cost COVID containment within this configuration, two types of infrastructures were required. Immobility infrastructures were deployed within containment areas to suppress the movement of infected or potentially virus hosts, while mobility infrastructures were simultaneously mobilised inside and outside those areas to ensure the supply of life-essential goods within and the continuity of economic activity beyond. The former category of infrastructure included digital surveillance platforms, various types of physical boundaries and medical facilities, while the latter type encompasses transportation infrastructures, local stores and markets, delivery workers and other personnel, as well as vehicles such as ambulance mobilised for transporting people seeking medical treatment. However, the incompatibilities between their material dispositions generated temporal—spatial effects that diverged from the state's intention, and incurred state-society frictions, along with massive fiscal outlays, as additional costs. In Beijing's case, the temporal mode of COVID governance can therefore be described as impactful but ineffective.

In concurrence with Zhao's (2020) observation, China's temporal mode of governance exhibited a lack of resilience. It was implemented against a backdrop of growingly intensifying socio-economic mobility since the marketisation reforms and global integration of the late 1970s, a trend that had significantly posed a great challenge to COVID containment. This challenge was further amplified by Omicron's shorter incubation period and heightened transmissibility. As a result, on the one hand, China's increasing global connectivity facilitated the constant reintroduction of the virus through ports and borders, and once entering the country, it swept across major political and economic hubs, such as Shanghai, Shenzhen, and Beijing, in mainland Chinese within just a few months; On the other hand, despite tactical adjustments within the temporal mode of governance, the Beijing case reveals the increasing difficulty of achieving the goal of containing COVID, which is political mandated as zero infection, at minimal cost. Instead, it generated serious disruptions to both economic growth and people's lives. The paradox between the high mobility of socio-economic production factors, which are both cultivated by and essential to post-reform China's economic growth, and the immobility imposed for COVID containment, was not resolved by the temporal mode of COVID governance. And with the virus continuing to mutate, China's COVID governance became increasingly untenable. The lack of resilience of China's temporal mode of governance was eventually exemplified by its catastrophic failure: as the epidemic spread more widely in 2022 and containment measures became increasingly stringent, intolerant students and citizens took to the streets, sparking sporadic protests across multiple cities, which then compelled the central state to hastily terminate DZP at the end of the year (Xiang 2024), immediately following the suit was a tsunami-like surge in infections and deaths. This paper, by taking infrastructure as an analytical lens, seeks to offer an academic explanation for this failure.

Studying the temporal mode governance over mobility and immobility through the lens of infrastructure reveals broader implications beyond the

failure of China's COVID containment. The biopolitical tension between mobility and immobility also manifests under normal conditions. As Furlong (2022) notes, in order to secure transnational mobility under the BRI, Uyghur populations in Xinjiang were faced with infrastructure-led spatial repression, including mass incarceration; Brady (2021) also finds that the deployment of transit infrastructures for promoting mobility is often accompanied by the state's sophisticated and meticulous governance techniques to impose immobility as a means of reinforcing social control. In this context, the contradiction exists between the territorial logics, which are often premised on enhancing security and sovereignty that usually entail restricting mobility, and the capitalist demand for enhancing the movement of production factors. By interrogating the specific temporal—spatial arrangements of immobility and mobility through the lens of infrastructure, tensions and frictions within governance under the normality of China's capitalist development could potentially be exposed. Moreover, this contradiction between territorial and capitalist logics is not unique to China but represents a structural condition inherent to capitalist systems more broadly (Wu et al. 2024). In this regard, the lack of resilience of state governance, in fact, is a general condition under contemporary capitalism that could be expounded on through further academic engagement.

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