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Abstract

The territorial and technological geographies of the planet are being rapidly and profoundly transformed and restructured in the 21st century. A massive surge of plans, visions, and investments is materializing through new connectivity infrastructure and operations of vast, extended transportation and logistical networks, with the Chinese Belt and Road Initiative serving as a prominent example. To scrutinize this context, in this article, we advocate for a shift from infrastructure-led development to infrastructure-led urbanization, emphasizing the urban as the key analytical terrain. We argue that the urban perspective reveals conceptual, geoeconomic, and geopolitical dimensions that are at the core of the transformations brought about by the implementation of global infrastructure. By mobilizing the authors' urban research experience spanning Africa, Asia, Europe, and Latin America, and by stressing the vital value of on-the-ground and comparative research, we illustrate the complexities and specificities inherent in these projects. In doing so, we propose a collective dialogue that explores and reorients conceptual and methodological possibilities to capture the complex interplay of geoeconomic and geopolitical forces within what we term 'global infrastructure-led urbanization'.

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An era of global infrastructure

A massive surge of plans, visions, and investments is being materialized through new connectivity infrastructure and the subsequent operations of vast, extended transportation and logistical networks. These global infrastructures are often incorporated into world-spanning, state-driven projects, primarily attached in the last decade to the $1 trillion Chinese-led Belt and Road Initiative (BRI) (Hillman, 2020). The BRI has also given rise to rival schemes, such as the European Union's €300-billion Global Gateway, or the U.S.-led G7 program, the $600 billion Partnership for Global Infrastructure and Investment or the India–Middle East–Europe Economic Corridor announced in 2023. Such initiatives have emerged in large-part due to the aftershocks of the global economic crisis of 2008 and the pursuit of new accumulation frontiers. These material investments serve as spatial fixes (Apostolopoulou, 2021a; Harvey, 2016; Sum, 2019; Summers, 2016; Zhang, 2017) for surplus capital, in tandem with emerging geopolitical moves aimed at controlling the material networks of the global economy. A diverse array of new and established actors is involved, encompassing often complex webs of state-owned enterprises, multinational financial institutions, sovereign wealth funds, and regional development banks as well as private equity groups, shadow banking intermediaries, technology firms, construction contractors, engineering design companies, and maintenance, repair, and operation service providers.

While the primary economic driver of these actors and the surging investments in the deployment of global infrastructure is to accelerate capital circulation, the emphasis on connectivity, global trade, and logistical flows also serves to highlight a number of geopolitical aspirations. There are, in this sense, historical continuities with older logics of 'Development' (Hart, 2010), a 'veritable industry' (Cooper and Packard, 1997: 1) engaged in the promotion of capitalist growth and poverty alleviation in 'developing' regions of the world (Mawdsley and Taggart, 2022). Central to the project of development was, indeed, the promise of infrastructure (Ferguson, 1994). Supported by a diverse range of economic ideologies, from modernization theory to Keynesian development economics, a remarkably expansive political consensus has long prescribed infrastructure as synonymous with progress and as a crucial component of economic growth agendas under contemporary capitalism. In the current conjuncture, these histories of models, ideas, and practices are converging into what geographic scholarship has characterized as an infrastructure-led development regime (Gillespie and Schindler, 2022; Jepson, 2022; Lim and Limbach, 2023). This represents a 'new', or, at the very least, reformulated push to promote development through infrastructure visions and projects. While the supposed causal relationship between infrastructure and economic growth is longstanding, this development/connectivity nexus is increasingly called on to operate on a planetary scale involving both countries located in the minority-world/global-north and majority-world/global-south. Often with the ambition of tackling global issues like climate change, statements such as the 2015 World Bank's 'From Billions to Trillions' document, and programs like the 2021 European Union's Recovery Plan attest to the centrality of large infrastructure financing in the attainment of the Sustainable Development Goals (Mawdsley, 2018) and climate-neutral targets within the broader logics of economic development.

Scholars and analysts have identified the 'global integration of China' (Klinger and Muldavin, 2019; Lee, 2017) and the launch of the BRI as pivotal moments in the emergence of this somewhat remarkable consensus on global infrastructure (Chan, 2018; Chen et al., 2021; Shin et al., 2022). While many aspects of this consensus remain

largely on paper, responses from G7 countries and other key players, including Russia, Turkey, and South Korea, have also veered toward a heightened focus on infrastructure. This latter juncture has been captured by those writing on the 'global infrastructure turn' (Dodson, 2017; Graham and Marvin, 2022), the 'infrastructure rush' (Tooze, 2018), the era of 'extreme infrastructure' (Hildyard and Sol, 2017), the 'reenchantment' with big infrastructure (Nugent, 2018), the rise of 'global infrastructure markets' (Torrance, 2009), the 'infrastructure state' (Schindler et al., 2022), and the increasingly competitive 'infrastructure scramble' (Kanai and Schindler, 2019) between different geopolitical players. All these geographic accounts foreground the centrality of global infrastructure in the restructuring of the economic and urban geographies of the contemporary world economy, questioning its role across multiple scales (Zheng et al., 2021).

As a collective of urban geographers, we have been actively engaged with the emerging discourses on infrastructure-led development and undertaken our own dialogue at three meetings we have organized in September 2022, March 2023, and June 2024 in Malmö, Barcelona, and Turin respectively. Our focus has been attuned to the implications of these global transformations for cities and urban space (Apostolopoulou, 2021a, 2021b, 2024; Governa and Sampieri, 2022; Pollio, 2024; Safina et al., 2024; Silver, 2021; Vegliò, 2020, 2021). As we propose in this article, shifting the attention from infrastructure-led development to *infrastructure-led urbanization* represents more than a mere change of lexicon (albeit important). It signifies an important conceptual twist. This approach does not reject the significant contributions of infrastructure-led development research to current debates, nor does it seek to supersede its main claims. Instead, what this article suggests is a different entry point for the geographical analysis of global infrastructure – one that, in our view, uncovers underexplored dimensions within these studies, adding new layers of examination and inquiry. This reorientation enables us to consider global infrastructure not only as a catalyst for urban restructuring and transformation but, more importantly for our concerns, as a vantage point for examining the broader, emerging urban geographies that shape the early decades of the 21st century.

Importantly, in our work we do not conceptualize the urban as confined within clearly circumscribed areas or categorizations. Both more structural and more relational scholarship on urbanization agree that urbanism cannot be reduced to spatial agglomeration (Brenner and Schmid, 2015; Lancione and McFarlane, 2021). In fact, while there are distinct ways in which urbanization processes manifest, from the amplification of land uses to the concentration of metabolic flows, the epistemological power of the *urban* rests on foregrounding relations and processes that are as specific as they are 'polymorphic' (Brenner and Schmid, 2015: 175). It is the 'undecidability' of the urban (Roy, 2015: 810) that demands an effort not just to 'discern' but to expand a 'dialogue' on global forms (Lancione and McFarlane, 2021: 5). In other words, *urbanization* is both an analytical entry point and an orientation, a way of seeing in dialogue, that can be a terrain for holding different perspectives and conceptual grammars side by side. Amidst the profound and wide-ranging factors producing the global infrastructure era, we find common utility in adopting the 'urban as a way of seeing' (Angelo, 2017). Yet, we refrain from seeking any overarching narrative to encapsulate the totality of processes linking global infrastructure with the production of the urban. Even though most of the processes described above are indications of an increasingly planetary form of urbanization (Brenner and Schmid, 2015), we align with the methodological suggestions of a critical topography (Katz, 2021) that, in a comparative orientation (Robinson, 2022), involves identifying emerging urban patterns but also delving into the concrete and the particular to trace its effects as they are etched on specific grounds.

In the following sections, we focus on five different conceptual strategies that correspond to different entry points for advancing a comparative dialogue on how we can *generatively* (Robinson, 2022) examine global infrastructure-led urbanization. We aim to demonstrate that by following these diverse pathways across varied geographical contexts such as Asia, Latin America, Southern Europe, and

Africa, and drawing on aggregate-level analyses and grounded empirical work, the urban becomes a way to engage in 'creative experiments in mobility' (Robinson 2022: 201). Central to our argument is the recognition that we do not need a singular, all-encompassing urban theory capable of elucidating all the complexities of global infrastructure-led urbanization. By developing a critical geography that arises from our own work on different and often distant empirical and theoretical locations, we rather suggest the epistemological value of a 'relational' dialogue aimed at finding connections and distinctions among the various sites, processes, political potentials, and engagements (Katz, 2021). We contend that it is through this comparative dialogue among a set of perspectives and 'spatiohistorical specificities' (Hart 2018: 373) that we can collectively identify a more comprehensive understanding of the intricate dynamics shaping an increasingly globalized and *infrastructured* urban world.

Silk Road urbanization

The nexus between infrastructure and urbanization lies at the core of China's BRI with the initiative rapidly becoming a global catalyst for urban transformation. This is not surprising if we consider the primary objective of BRI's infrastructure corridors and nodes: the forging of new transnational relationships; the expansion of trade networks; the promotion of interconnectivity among urban centers; the elevation of existing cities into pivotal hubs for trade, finance, and tourism; and the initiation of entirely new cities.

The BRI's vision document includes several illustrative examples highlighting the importance of establishing infrastructure networks within key urban nodes, such as port development in coastal cities, international airport hubs in metropolises like Shanghai and Guangzhou, and substantial investments in inland cities (Apostolopoulou, 2021a). In line with classical capitalist ideas about urbanization and development, cities and towns are expected to capitalize on their strategic positioning by evolving into key gateways within the network of BRI's corridors, as exemplified by Zhengzhou, Xian, and Lanzhou (Derudder et al., 2018). This transcends China's borders, with cities along BRI's global corridors strategically positioned to maximize benefits from new infrastructural connections, at least theoretically. This is evident across Central Asia (e.g. Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan), a region historically integral to the ancient Silk Road and serving as the starting point of the New Silk Road Economic Belt outside of China. As we will see in the next sections, this dynamic extends to urban centers across Europe, Africa, and, more recently, Latin America (see also Apostolopoulou, 2021b) with a surge in urbanization across evolving BRI spatial configurations (Wei et al., 2023).

But is there a discernible pattern of urban development that correlates with the BRI's infrastructure networks, and how does it distinguish itself from broader capitalist urbanization? To address this question and shift the focus from infrastructure-led development to global infrastructure-led urbanization, we propose the concept of 'Silk Road urbanization'. We argue that this concept can demonstrate that, while the BRI embodies the prevailing dominance of infrastructure-led development on a global scale, it is intricately linked to China's distinctive approach to both infrastructure and urban development. Additionally, and importantly, Silk Road urbanization theorizes the BRI as a materially grounded field of practice (Oakes, 2021) and adopts a project-based analysis of BRI's effects to capture and articulate how urban transformation driven by BRI's infrastructures is reshaping the landscape of urban inequality, impacting the lives of urban dwellers worldwide. In conjunction with Corridor urbanism, Silk Road urbanization can redirect scholarly attention toward understanding how infrastructure-led development intersects with patterns of urban growth and the restructuring of urban-regional space, profoundly transforming how the urban is conceptualized, made, experienced, and contested in diverse places across the globe.

A key aspect of Silk Road urbanization includes prioritizing urbanization as the principal avenue for modernization and employing infrastructure as a transformative medium in city formation. This is

evident in initiatives like the New Urbanization Plan launched in 2014, urging the evolution of villages into towns and towns into cities (Oakes, 2020; see also Roy, 2015 for the 'urban' as a governmental category). BRI projects often involve extensive land acquisition to drive accelerated urbanization, akin to China's experience (Hsing, 2010), accompanied by extensive displacements. Importantly, amid the buzz surrounding BRI infrastructure projects, a synchronized assemblage of distinct urban spatial components emerges, combining novel combinations of large-scale infrastructure and industrial projects with massive investments in the urban built environment. These integrated projects span railways, airports, ports, industrial parks, optical-fiber networks, special economic zones (SEZs), smart cities, greenfield investments, hydropower, real estate, and commercial projects (Apostolopoulou et al., 2024), giving rise to novel urban development pathways. Some of these integrated projects, as we will see, shed light on the geopolitics of digital technology through the lens of urbanization.

This integration of SEZs and industrial parks, coupled with the inception of new urban business districts, real estate developments, urban regeneration projects, and the prominent role of state-owned enterprises, constitute integral facets of China's urban development model 'exported' to several countries along the New Silk Road (see also Guma et al., 2023 on 'plug-in urbanism'). A prime example is the development of port cities globally, like Chancay in Peru, Colombo in Sri Lanka, and Piraeus in Greece, where we have previously conducted empirical research (Apostolopoulou 2021a, 2024; Apostolopoulou and Pizarro, 2025). These developments are intricately linked to the establishment of logistics–industrial complexes and critical transport infrastructure connections to hinterlands, representing an effort to emulate the 'port-park-city' model. Collectively, these factors have ushered in a profound reconfiguration of urban space and the social geography of cities *through infrastructure* at a scale and pace previously unparalleled in many regions echoing Chien and Woodworth's (2018) concept of the 'Chinese urban speed machine'.

BRI-driven urban transformation is, therefore, distinct partly because it reflects an intention to transplant China's urban development model into diverse global settings. This is an outcome of capital accumulation dynamics on a global scale and highlights China's growing hegemonic role, positioning infrastructure as a hallmark of its 'inclusive' globalization model and a catalyst for urban expansion and growth. However, this is just one aspect of Silk Road urbanization. As illustrated in the next sections, the latter also encapsulates the macrospatial and macroeconomic contexts within which the BRI operates, alongside a *postcolonial*, *relational*, and *grounded* analysis of its unfolding in specific cities. Grounded in an extroverted understanding of place (Brenner et al., 2010; Massey, 1994), this analytical approach explores how China's strategic endeavors converge with diverse transnational, national, and local interests, both private and state driven. It underscores the amplified roles of multilateral agencies, corporate elites, transnational capital, and infrastructure developers (Mayer and Zhang, 2020) and their complex interactions, realigning diverse interests under the shared objective of exerting influence over national and regional urban planning (Hildyard and Sol, 2017; Schindler and Kanai, 2021).

Silk Road urbanization, therefore, manifests itself within diverse urban landscapes, engendering homogeneity, unevenness, and heterogeneity (Lefebvre, 1974). As emphasized below, this calls for transcending the confines of Chinese exceptionalism (Zhang, 2013) to encompass the interplay of global historical–geographical conditions with national and local contexts, which together forge *distinctive pathways of infrastructure-driven urban development*. It necessitates shifting research focus toward a nuanced exploration of unique phenomena arising from the dynamics and historically and geographically specific conditions of Silk Road urbanization. Examples include the expansion of hyperurbanization within Chinese cities and the emergence of amorphous and exclusionary infrastructural cities characterized by the domination of infrastructure over space in a totalitarian manner, eradicating prior functions, and marginalizing local grievances to facilitate the creation of privatized enclaves. These potentially historically novel processes of city- and place-making underscore

the necessity to theorize urbanization as a relational process, capable of engendering unprecedented outcomes that surpass the boundaries of conventional urbanism, profoundly transforming the geographies of everyday urban lives (Lefebvre, 1968).

The case of Nepal offers key insights into the multifaceted complexities discussed above. While Nepal illustrates the significance of BRI/infrastructure-driven urban development trajectories and China's burgeoning influence, it also shows that the realization of most BRI projects, despite official endorsements from both the Nepalese and Chinese governments, has been intricately entangled in and impacted by geopolitical rivalries, notably among Nepal, China, and India, ceaseless negotiations, the volatility of local alliances (Mayer and Zhang, 2020), and escalating societal disputes. In Nepal, deeply entrenched national myths have acquired new meanings within the context of an emerging BRI narrative, promising an imminent urban transformation coupled with long-overdue essential infrastructures that would end poverty and lead to a Naya (new) urban Nepal (see Apostolopoulou and Pant, 2022). In the context of Naya urban Nepal, the trajectory of Silk Road urbanization signifies a long-awaited transition from rural to urban life that has been closely intertwined with infrastructural violence and precariousness as well as shaped by people's struggles against social, economic, and environmental injustices.

Contrary to the promises of inclusive development, and the hegemonic rhetoric that claims to bring prosperous and enriched urban lives, the exclusionary character of several projects, the absence of meaningful consultation and participation, widespread land acquisitions and displacements of marginalized social groups, and violations of workers' rights in areas where BRI projects materialize (Beazley and Lassoie, 2017), have led to significant conflicts fueling community resistance. This reaffirms that urban infrastructures increasingly serve as arenas of intense contestation and violence (Zheng et al., 2021) and that spatial visions, territorial plans, and infrastructural myths when primarily oriented toward facilitating territorial integration into global production and trade networks, are likely to prioritize the creation of infrastructural hubs and industrial zones failing to address the needs of communities and Indigenous peoples (Enns and Bersaglio, 2020), ultimately creating and intensifying uneven vulnerabilities.

Overall, the Silk Road urbanization approach can be seen as a novel comparative method that, similarly to the other approaches described in the next sections, aims to respond to postcolonial calls to shift the focus of urban theory-making beyond the West (Robinson, 2022; Roy, 2016) by enabling a relational comparison of emerging, diverse urbanization trajectories. Moreover, and importantly, by framing social struggle as an intrinsic element in the formation of infrastructure and spatial fixes, it also attempts to shift the focus to urban struggles to understand the factors that shape and differentiate resistance to infrastructure-led urbanization. Emphasizing contestation and conflict goes beyond generic theorizations of urbanization, offering a grounded, real-world analysis of its material impacts on urban space, socionatures, and livelihoods. It means recognizing cities as focal points of conflicts about their past, present, and future, and highlighting the pivotal role of people's struggles in shaping the urban. This perspective, often absent in BRI scholarship, unveils the transformative power of social and environmental movements in contesting global infrastructure and building local–global alliances that could shape radically different urban futures.

Corridor urbanism

How does urban inhabitation proceed alongside, in, and through global infrastructure? What kind of geographies are constituted and (dis)assembled in the planned and securitized zones in and around large-scale infrastructure investments that are generating new patterns of urbanization? What remains *beyond* the logics, rationalities, and operations of capital and the state that are imposed across the topographies and terrains of urban space? The notion of 'corridor urbanism' (see Silver, 2021) pushes for a recognition of the always contingent, in-the-making nature of grand plans for restructuring the planet through emergent strategies of global accumulation (Schindler and Kanai, 2021) and (extra)statecraft

(Easterling, 2014). The concept emphasizes an analytical orientation that focuses on textured understandings within the broader regime of global infrastructure-led urbanization, complementing and overlapping with the notion of *Digital Silk Road (DSR) Urbanism 2* explored below. It incorporates but exceeds the BRI to focus rather on the technological and territorial configuration of the infrastructure corridor – that is, the extended, multimodal systems that constitute perhaps the key material geography through which global infrastructure is being assembled. Corridor urbanism attunes research to the everyday, heterogeneous, and situated ways in which urban infrastructural life is constituted (Graham and McFarlane, 2014; Lesutis, 2022; Valz-Gris, 2023) within the broader urbanization regimes at work. This proceeds through, alongside, or sometimes in spite of these networked transformations as interactions unfold between massive impositions, multiple types and forms of economy, and the people and populations that surround and suffuse these systems.

Corridor urbanism invites us to think how these global infrastructural spaces are also inhabited with multiple encounters with everyday urban life that emphasize contingency, multiplicity, and contradiction (Simone, 2023). In some ways similar to the orientation offered by the concept of Silk Road urbanization, it is a grounded and situated vantage point that evokes an understanding of global infrastructure vis-à-vis the spaces of the corridor not simply as an abstracted material geography of global capitalism but as an encounter with particular places, spaces, and peoples. It positions global infrastructure-led urbanization as more than a logistical arrangement of flows and circulations for the global economy producing urban spaces but also as sites of resistance and contestation against the power, inequalities, and violence that come along with these deployments as well as the ambivalences – mundane and ordinary – and potentialities that always emerge around them. An approach that recognizes the constant capacities, strategies, and navigations of people and communities to shift and transform, reconfigure, retreat, and recompose social and material conditions must necessarily be anchored in the density of urban lives that intersect with global infrastructure. It posits that the spaces generated vis-à-vis global infrastructure-led urbanization are actively shaped by these encounters as well as the agency and power(lessness) of people as they seek to find ways to compliment or ignore, stop or start, build or escape, flow through or block off. Corridor urbanism can be constituted as both an urban theory and a methodological strategy that attempts to follow the sometime dramatic, often mundane intersections between people and the planning, construction, and operation of new ports, zones, residential enclaves, digital hubs, power generations, and connective lines that constitute new patterns of urbanization through global infrastructure. It is at its simplest to follow Lefebvre's suggestion in *The Production of Space* (1974) to move beyond the abstract space of new and rehabilitated logistical and production spaces of the global economy into its lived (urban) space.

There are a plethora of theoretical approaches used across geography and associated disciplines that have long engaged with everyday urban life (Goonewardena et al., 2008). However, the scale of global infrastructure both within and beyond city boundaries generates new considerations about the choices at play – and the limitations that come with established repertoires of research and investigation. Recognition of the limits to any specific mode of thinking through infrastructural inhabitations amid such massive material restructuring of the planet does not mean turning toward a unitary, totalizing logic. If the mapping of new extended infrastructural arrangements or political economic analysis of the BRI are vital scaffolds to thinking about corridor urbanism, these approaches also point toward the imperative to go further in our analysis. Corridor urbanism and the focus on everyday urban worlds amid massive transformation can be considered in one way as a viable attempt to piece together the *fragments* that constitute the *whole* of a new infrastructure corridor or mega project. McFarlane (2021: 4) writes on the fragment that, '[i]t is a multiple and diverse process where bits and pieces of material things and forms of knowledge are caught up in all kinds of social and political relations, often oppressive and exploitative, sometimes progressive and generative'.

Corridor urbanism then asks us to place together these fragments, perhaps most productively in conversation with some of the approaches outlined in this article that demonstrate broader urbanization patterns, logistical arrangements, and networked geographies. It is an approach to urban theory that attempts to place into productive tension different instances, repetitions, moments, flows, and situations that might constitute a viable anchor to claim-making. Thinking through corridor urbanism via ongoing work on the Northern Corridor in East Africa demonstrates a number of potential pathways for geographic scholarship to pursue in ways that also demonstrate the potential of the notion of corridor urbanism. This is a global infrastructure that stretches from Mombasa on the Indian Ocean deep into the hinterlands of Uganda and extending to South Sudan and the Democratic Republic of Congo (Mkutu et al., 2021). It is made up of both historic and contemporary infrastructure, the new investments such as the Chinese-funded Naivasha Dry Dock and the Standard Gauge Railway, the older inscriptions or 'imperial ruins' (Stoler, 2008), of trade routes and logistical flows such as the so-called 'Lunatic Express' or historic entrepôt of Mombasa Port. Goods and people as circulation and flow are in a constant state of switching between the different modalities of road- and rail-based transportation that carry cargo, people, information, and finance between the Indian Ocean and East Africa hinterland.

Take the Naivasha Dry Dock. It is a securitized zone replete with train-cargo facilities, customs points, container storage, heavy lifting equipment, tracking technologies, and new data-driven monitoring equipment. Despite being fenced off from its surrounding and immediate environment and some distance from the nearest town, Mai Mahiu also opens to various types of urban inhabitation. This is the peopled character of this standardized zone which is both apparent and long-lasting. Whether truck drivers coming in from surrounding countries, to the former 'squatters' who claimed this land in the planning process and now in town trying to make ends meet, to the customs officials sent from the coast to help set up operations, to the *boda boda* riders delivering lunch, to the local pastoralists watching from nearby hills and the land speculators trading small plots around the zone and Mai Mahiu. As this example alludes to, what corridor urbanism facilitates analytically is thinking about this constellation of people that inhabit, navigate, and experience these global infrastructures in profoundly different ways. Another pathway to think about this is through the everyday ways through which these global infrastructures are maintained and repaired (Ramakrishnan et al., 2021). On the main highway of the Northern Corridor in Kenya, a series of petrol stations are populated by mechanics that come and go depending on demand. Cars and lorries break down and crawl or are carried into these spaces, new parts are delivered by taxis from suppliers up the road, drivers wander off to a local cafe to wait it out, local children learn how to take a wheel off under careful supervision, attendants catch up on news from the coast. Fragments of everyday urban life are constituted but never fully subsumed into a 'whole' (the Northern Corridor). To start with, a corridor urbanism perspective means to incorporate but also move beyond this whole because a top-down narrative can never tell the whole story of global infrastructure-led urbanization. It is also an approach that may work in tandem with *dependent* and *Silk Road urbanization*, and *DSR urbanism.*

Collectively, these different moments briefly outlined bring together and are constituted by both the whole (i.e. the corridor) and the fragment (i.e. the moments, infrastructural spaces, and peoples that make, operate, live, and work along the hundreds of kilometers of its route). The everyday urban lives of the Northern Corridor help to elucidate the outlines of corridor urbanism. These are inhabitations along extended infrastructures that position these systems not just in an abstract and standardized space of plans, efficiencies, and seamless flow but also as intensely lived and densely heterogeneous space of circulation, actors, and materialities. Global infrastructure-led urbanization as seen from a corridor urbanism perspective itself is never a completed thing but rather in a constant state of making and remaking. It is a process that requires detailed empirical examination and a dispensation to geographic scholarship that is situated,

open, and methodologically attuned to following a myriad of intersections, pathways, and relations. Corridor urbanism then operates as a theoretical orientation that complements a broader dialogue with what might be characterized as structural approaches to global infrastructure-led urbanization – both in the sense of opening up new questions and lines of inquiry on the urbanisms that spin out of these broader processes and being reliant on political-economic and regional analysis that acts as a comparative framing for this kind of research.

Dependent urbanization?

Concepts like Silk Road urbanization and corridor urbanism orient us to precise although open-ended methodological possibilities to analyze the manifold processes of infrastructure-led urbanization. These orientations also imply a collective commitment to continuously bend theories and concepts as we navigate the multiple locations in which global infrastructures become urban, within the adoption of a comparative strategy that, together with the other examples that will follow, aims to be generative in the study of urbanization (Robinson, 2022). In light of this approach, what happens, for instance, if we shift the gaze to Latin America? Without adopting any sort of spatial essentialism – or, in other words, avoiding any area studies approach – the region can represent an(other) important source of analysis, certainly in empirical but also in theoretical terms (Roy, 2016; Vegliò, 2021), a connection that can establish a dialogue with, but that also largely exceeds, the urbanizing spaces of the BRI.

Not differently from other regions of the world, Latin American states have participated in the implementation of mega-infrastructure projects as a development strategy. Whether in the form of an attempt to coordinate a regional infrastructure plan such as in the case of COSIPLAN, the South American Council of Infrastructure and Planning (e.g. IIRSA, the Initiative for the Integration of the Regional Infrastructure of South created in 2000), or by establishing bilateral partnerships to finance projects of infrastructure construction and renovation – a case in which China has played a central role over the past two decades – these operations have been considered as central to increase the 'integration of the region' and thus enhance 'social, economic and environmental development' (COSIPLAN, n.d.). Nonetheless, regardless of the origin of these kinds of investments, their primary function as facilitators for exports is apparent. For instance, Kanai (2016: 160) notes that IIRSA's strategy worked mainly as a device for 'neoliberal territorial design', serving both the needs of the heavily export-oriented market (and thus the elites profiting from it) and reinforcing the '(global-)city-centric territorial development'.

Such a reiteration of Latin America's role as a global exporter of primary sources has signified a process of 'reprimarization' of the region's national economies (Svampa, 2015), a context that, having China as a new main commercial partner, has been defined by the installation of a 'neo-extractive' architecture (Gago and Mezzadra, 2017; Gudynas, 2021). Such a condition of 'commodity consensus' (Svampa, 2015) that has marked the first two decades of the new century, and that has also critically been labeled as the 'Beijing consensus' to highlight the shift in the region from U.S. hegemony to China's rapid growth (Svampa and Slipak, 2015), has brought scholars and observers to question the nature of the geoeconomic and geopolitical relations, indicating the instauration of new 'dependency' relationships (Slipak, 2014; see also Arboleda, 2020). In more general terms, there has been a noticeable reawakening of dependency theory as an attempt to understand the increasing gaps in the international political economy, focused on evaluating the extent to which new economic and political centers such as China are establishing unequal relations with Latin American countries (Chilcote and Salém Vasconcelos, 2022; Martins, 2022; Stallings, 2020). Within this context, scholars are seeking to understand the ways in which the 'new forms of dependency' are today articulated through political, technological, economic, and financial practices (Treacy, 2022). Leaving aside here an examination of the renewed nature of China–Latin America relationships, our question is: what are the urban manifestations of dependency? To answer this question, one needs to proceed in two directions: on the one hand,

briefly retracing a genealogy of the concept of *dependent urbanization*; on the other, linking the concept with concrete episodes of infrastructure-led urbanization, shedding light on sociospatial resemblances and overlappings with the other concepts and methods that are suggested in this article.

Dependency theorists saw a strict relation between urbanization, sociospatial marginalization, and dependency; they explored the explosive growth of Latin American cities as a result of a long historical process marked by colonial and imperial dominations (Hardoy, 1975; Schteingart, 1973; Quijano, 1977). Castells (1973) theorizes such a specific kind of urban formation under the label of 'dependent urbanization'. *Dependentistas* saw urban poverty and urban marginalization as *signs* of dependent urbanization; according to them, Latin America's specific urban fabric was a symptom of dependency (Hardoy, 1975) – that is, the dark side of (Euro-American) development – thus energetically reacting against hegemonic modernization theories that prescribed urbanization as an inevitable stage of development. Urbanization becomes, as a result, a strategic lens to analyze wider socioeconomic processes that are historically constructed in a manner that makes Latin America's urban processes are understandable *only* by considering the region's role within the world market. While conceptualizing dependent urbanization, Castells stresses that 'interurban segregation' and vast areas of urban marginality are its most evident traits (1973: 15); he also notes how some of its main drivers are areas exclusively devoted to the exportation of raw materials and agricultural products, a situation led by the power of international companies that act with the economic and political complicity of national elites. In brief, we can argue that this approach aims to uncover the specificities of Latin America's production of space (Lefebvre, 1974) in a way in which, instead of adopting an all-encompassing and undifferentiated analytical approach, mobilizes the distinguishing geographical and historical scenarios (Hart, 2018) where urban processes take shape (Vegliò, 2020).

Empirical research in Argentina, for example, reveals these specific aspects of dependent urbanization, especially in Buenos Aires's Dock Sud, an area characterized by the simultaneous presence of a commercial port of regional importance as well as Argentina's biggest petrochemical compound. Both infrastructures are imbued with global capital: the port's container terminal (the largest in Argentina) is exclusively managed by the international company EXOLGAN; the compound is made of more than 44 companies, the vast majority of which has foreign ownership (the largest one is Raizén, e.g. Shell). The urban landscape that surrounds Dock Sud's infrastructures is marked by a deep-rooted geography of urban informality and marginality, which has been accompanied by extreme levels of pollution that have severely affected the life of the residents and the environment (a seminal study of this latter aspect is Auyero and Swistun, 2009). To give another example, if we move up through the so-called Paraná-Paraguay waterway – a 3400 km corridor crossing five countries (Brazil, Argentina, Bolivia, Uruguay, and Paraguay) going from Caceres in Brazil to Nueva Palmira in Uruguay – we encounter the crucial port node of Gran Rosario. Here, we find the presence of the biggest agri-business international companies (the *ABCD* companies that are hegemonic in the sector at a global level, plus China's COFCO which has reached the leadership in the area) that, within about 60 km of river coast, control 31 private port terminals and 21 plants for cereal processing and storage, making Gran Rosario one of the biggest agro-industrial hubs of the world, especially for what concerns soybeans and derivatives. While observing the city of Rosario, the characteristic elements of dependent urbanization seem to be significantly noticeable: large areas of spatial marginalization and displacement, an inconsistent planning that chaotically mixes investments in high-rises and informal settlements, in addition to a rapidly increasing presence of narcotrafficking that propagates violence across the urban fabric. The contribution offered in the previous section is of particular resonance here: a specific spatial arrangement such as that of corridor urbanism seems to come into light through such a specific organization and production of territory; moreover, some of the sociospatial elements defining

Silk Road urbanization, such as the deterministic promise of development contrasted by radical 'moments' of sociospatial marginalization, appear to be largely at play. Our question is: can we consider these kinds of infrastructure operations, rather similar to the others mentioned in the paper, as *specific instigators* of dependent urbanization?

Of course, the use of dependent urbanization requires further elaboration in order to fully capture today's urban processes (a recent overview of the topic is provided by Tonin, 2022).

But there are three aspects that are already relevant to the notions discussed in this article throughout. The first is the *geoeconomic*, which means that dependent urbanization allows us to continuously take into account the relations between the asymmetries of the global political economy and the making of urban space, analyzing how the center–periphery relationship, so important for dependency theorists, explodes in a multiplicity of directions and scales. The second is the *genealogical*, whereby the use of dependent urbanization activates the long colonial and postcolonial histories–within and beyond the Global South, which is to say that it makes it possible to observe the reiteration of 'old' geographies in the reconfiguration of sociospatial practices that have historically contributed to producing urban space across the planet. The third and final aspect is the *epistemological*, where the use of dependent urbanization signifies mobilizing concepts and categories that emerged *from* Latin America, and it thus represents a contribution to the collective effort to deprovincialize urban theory by reorienting the locations of its theoretical rubrics. We therefore propose that the conceptual toolbox of dependent urbanization is worth rearticulating and modeling not only for matters exclusively concerning the Latin American space, but, most significantly, it should be tested for a more integral comprehension of extended urban processes related to the BRI and its variegated territorialization (perhaps also thinking of the digital expressions of dependent urbanization?) as well as the formation of corridor spaces in and across several global regions, in order to contribute to revealing and exposing the radical tensions and intimate connections between global infrastructure and urbanization.

DSR urbanisms

Returning, for a moment, to the BRI and the question that lies at the core of Silk Road urbanization – whether there is a discernible pattern of urban development that correlates with BRI's infrastructure networks – it would be a mistake to overlook what cities along the new Silk Road tell us about an increasingly central concern of this infrastructure-led regime: the mass deployment of digital infrastructure stacks. Under the umbrella of the DSR, another strategically 'fuzzy' program (Narins and Agnew, 2020), large investments have been poured into the going-out strategies of China's internet industry. Launched in 2015 as a BRI program, the DSR's original white paper referred to an 'Information Silk Road', and exclusively mentioned undersea cables and cross-border connectivity. But, in fact, the efforts of Chinese technocapital along the BRI have been much broader in their breadth. While many initiatives are not reported under this banner, and the overseas activities of China's digital champions even precede the BRI (Tugendhat and Voo, 2021), the DSR has manifested across a plurality of geopolitical interplays (Qiu et al., 2022). It has involved the push – though not necessarily successful – for an alternative model of internet governance and standards at the International Communication Union (Negro, 2020) and at the nation-state level (Gagliardone, 2019). This has featured the diverse activities of China's largest digital companies, from Alibaba to Tencent, in their global markets (Negro, 2018; Shen, 2018; Tang, 2020). It has also included an attempt at self-narration, through digital means, of China's 'geocultural' past and present (Winter, 2022). Finally, the DSR has been punctuated by many individual entrepreneurs who traveled on the back of other BRI programs and saw entrepreneurial opportunities across China's going-out geographies to build digital platform services in support of these infrastructural value chains (Huang and Pollio, 2023).

In this context, and specifically in those places that have received the majority of BRI investments, mostly African and South East Asian nations, looking at the urbanization of the DSR opens an important research agenda concerning the diverse geographies of global digital infrastructure, which

are too often treated as placeless and immaterial (Furlong, 2021). Building on Amoore's (2018) distinction between 'Cloud Geographies 1' and '2', where the former refers to the actual physical locations of digital infrastructure systems and the latter captures the relational spatialities that underpin computing systems, it is possible to foreground two forms of *DSR urbanism*. These two dimensions are obviously not separable but usefully chart different aspects of how digital infrastructure-led development becomes urbanized along the new Silk Road, adding important new elements to both corridor urbanism and Silk Road urbanization.

DSR Urbanism 1, on the one hand, maps onto the sites and the tangible materialities of digital infrastructure in the cities that function as nodes of the BRI. This includes the actual physical locations of hardwired and wireless connectivity, data centers and Internet exchanges, submarine cables, and cross-border digital corridors. For historical reasons in the Global South, including colonial infrastructural legacies, the bulk of these investments have taken place in cities, where albeit partial availability of other networks – water, energy, and the like – supports digital systems. In Africa, for example, coastal cities such as Mombasa, Djibouti, Accra, and Lagos have emerged as regional entry points of the global internet thanks to an increasing density of deep-sea cables that are in part funded by China and in large measure contracted to Chinese hardware companies. Similarly, and despite widespread narratives about data being hosted in far removed locations, it is in large cities that the current data hosting capacity (i.e. data centers) is located, if anything, because the demand for low-latency data is largely generated by urban fixtures, such as universities, stock exchanges, incubators, crowdwork farms, and business-process offshoring facilities.

Overall, therefore, *DSR Urbanism 1* sheds light on the tradeoffs and contradictions of access to data and connectivity. For instance, where service delivery is partial and fragmented, especially when it comes to sanitation and electricity, digital infrastructure requires energy- and water-hungry facilities that put further pressure on a city's capacity to service its dwellers (despite the often highly privatized nature of these systems). Further, *DSR Urbanism 1* also manifests in the construction of greenfield and brownfield 'smart cities', where the engagement with China's BRI is often both financial and ideological (as argued above). Examples, such as New Yangon in Myanmar and Konza Technopolis in Kenya showcase the role of digital technology capital in the making of entirely new urban formations that are predicated on technodevelopmental ambitions and the attractions of foreign investments. At a smaller scale, Alibaba's 'city brain', Huawei's smart city platform, or Hikvision's smart city surveillance products are specimens of tangible, proprietary infrastructures (dashboards, control centers, CCTV cameras, smart sensors) that have used the BRI as a bridgehead to find new urban markets.

DSR Urbanism 2, on the other hand, captures the topological relations (Katz, 2021) in which the DSR, however ill-defined, is inscribed. Cities, both with capital C (metropolitan authorities, city councils, etc.) and small c (cities as locations), are the champions and sites of digital innovation in the software industry (Zukin, 2021). Therefore, in its linkages to China's going-out initiatives, the 'urban state' (Cirolia, 2022) is not a mere receiver but an active promoter and planner of digital transformation strategies and of digital-entrepreneurial activities. In this context, institutional and material relations of statecraft shape and are shaped by the landing of technology capital through the channels of the DSR, and more broadly of the BRI. This is especially relevant as with the NIC framework, new BRI projects are policy-required to incorporate financial and technological innovations. A good example is Nairobi's new expressway (Guma et al., 2023), where the Chinese construction company will operate the infrastructure, within a build-operate transfer agreement, through a provider that is, ultimately, an 'urban data' company.

DSR Urbanism 2 also encompasses the ways in which informal and popular economies become digitized along the BRI. In this sense, the rise of digital platforms in China (Zhang, 2023) constitutes a historical model for other DSR geographies, particularly in the Global South. Here, urban economies, such as informal transport,

person-to-person banking, retail, and task-based work, are increasingly targeted by platform companies, both big technology corporations and small startups, which operate along the value chains of other BRI projects. Although China constitutes a phenomenal example of the platformization of many facets of urban life (Caprotti and Liu, 2020; Chen and Qiu, 2019; Zhang, 2023), and is often used as a reference for projects that seek to export these business model and technologies to other cities along the BRI, these projects are in fact experimental and contested, requiring differential infrastructure that articulates unique value propositions and algorithmic adaptations.

Finally, *DSR Urbanism 2* showcases the ways in which BRI cities are also testbeds of a shift toward East in the geopolitics of digital technology. New digital standards, whether for payment technologies or the operating systems of affordable smartphones, are indeed trialed, experimented, and manipulated in the major cities that constitute possible markets for China's digital expansion (Pollio, 2024). This is a crucial aspect of DSR urbanism in the context of increasing bifurcation between the United States and China. *DSR Urbanism 2*, in this sense, sheds light on the lived realities of geopolitical transitions in the sphere of a multipolar and disputed technological order.

Overall, therefore, both *DSR Urbanism 1* and *2,* similar to all the other sections, emphasize the importance of not limiting our focus to China when addressing digital-global infrastructure-led development. Singling out China runs the risk of essentializing the country's participation in a planetary-scale system of connectivity and computation (Bratton, 2016), or empirically missing the fact that it is often hard to tease out Chinese digital capitalism from its global articulations (Franceschini and Loubere, 2022). For example, the foray of big tech companies from China into global markets was often supported by western venture capital (Shen, 2021; Tang, 2019). On the ground, can one really think of the ubiquity of affordable Chinese smartphones without recognizing the hitherto dominance of U.S.-made Android standards? Then again, even Chinese finance for information and communication technology infrastructure blends with domestic capital and with the development assistance of other geopolitical players. The abovementioned Konza project is a case in point: while China funded the digital infrastructure of the Kenyan greenfield smart city, Italy conceded a loan for the road network, and South Korea provided both technical and monetary support for the development of the university that will anchor the new city to its digital ambitions, exporting a South Korean model of 'entrepreneurial urbanism' (Miao et al., 2023). In sum, DSR urbanisms illustrate how Chinese tech finance and companies urbanize within the broader frame of transnational digital capitalism, often in ways that cannot be separated from the broader project of infrastructure-led development, but always contested, partial, and contingent. The urban as a way of seeing, in this sense, offers us a corrective to hawkish claims about an emerging digital cold war, and recentres a dialogical ambivalence in the study of the spatiality of infrastructure stacks (think of generative AI) that claim linear trajectories of expansion and progress.

Questioning the urban of and through the BRI

Silk Road urbanization, corridor urbanism, dependent urbanization, and DSR urbanism(s) help us ground massive global infrastructure systems, from the BRI to regional logistics networks, into the urban forms and topologies through which they are enacted and made possible. These concepts dovetail with a growing body of research that collectively calls for situated perspectives to focus on how global flows, economic forces, development policies, and social expectations conveyed by global infrastructure have a significant impact on the places where they settle (Oakes, 2021; Oliveira et al., 2020). Although these claims are increasingly accepted to explore the urban manifestations of the BRI, 'especially regarding its impacts on the (re) imaginings and manifestations of urban futures – within and beyond China' (Shin et al., 2022: 1457), they raise questions that are still open. In general terms, as the BRI becomes urban through projects that have their footprint in cities (however defined), it can either be viewed as a specific case

of the ways through which global capitalism becomes territorially, technologically, and jurisdictionally materialized in the urban fabric (Wiig and Silver, 2019). Or it can be observed through the disruptive urban effects of global infrastructure (and every mega-project), as it creates, facilitates, or exacerbates spatial fragmentations, social inequalities, and environmental and labor-related issues (Graham and Marvin, 2022). Or, finally, it can be part of the urban becoming at various spatial scales in a condition of perpetual incompleteness of sociotechnical and political relations highlighting the unfolding of concentration, dispersion, and the transition from an infrastructural node to an extended logistical explosion (Brenner and Katsikis, 2020).

'Urbanizing global infrastructure', and in particular questioning the relationship between the BRI and the urban, both as an analytical and as an empirical strategy, establishes a relationship between two ambiguous, unclear, uncertain, and contested 'entities'. Focusing mainly on how global infrastructure takes shape, and building on empirical research in both urban China and southern European cities (Governa and Sampieri, 2020; 2022; Safina et al., 2024), we can observe how the urban dimensions of the BRI, within and outside China, unfold along different trajectories that question universal meanings of both urbanization and global infrastructure. Emphasizing these differences and acknowledging the variegation and hybridity of both also reflects an attempt and a commitment to question the alleged 'Chinese otherness' (Franceschini and Loubere, 2022) and recognize the variety of urban processes beyond the inherited Euro-American-centrism of urban studies (Edensor and Jayne, 2012; Roy, 2016), something which also lies at the core of the concept of Silk Road urbanization. By tracing the material and discursive practices through which the relationships between the BRI and the urban are realized within and beyond China may also outline some possibilities for using the 'BRI as urban' to open a dialogue between China and other places (Shin et al., 2022) and fuel comparative urban studies (Bunnell, 2021, 2022).

Within China, the BRI is boosting and orienting urbanization processes or, as Smith maintains (2022: 1546), 'the extension of infrastructural networks across Eurasia and beyond both continues the production of and also is produced by China's state-led model of urbanization'. According to Summers (2016: 1634), 'two-thirds of Chinese provinces have cited the BRI as a development priority … with provinces aiming to justify Silk-Road-related projects, or to attract more investment to their areas'. As also mentioned above, BRI-led initiatives appear to be a continuation of long-standing national strategies such as the 2014–2020 'New Urbanization Plan' designed to address issues such as migration, sustainability, and social problems associated with earlier rapid urbanization, the 2000 'Go West' policies to face disparities between Coastal and Western regions, or the 1999 'Go Out' policies to encourage Chinese outward investment. These policies adopted tried and tested measures to transform any site into a 'fixer' for grounding domestic and global investments (Oliveira et al., 2020). Furthermore, most of these projects occurred in spaces that were already the objects of urban transformations (Chen et al., 2021; Summers, 2016). In this way, the BRI consolidates current transformations, as in Chongqing (Smith, 2022), provides a boost to development, as in Zhengzhou, and where the pace of urbanization has slowed down, as in Lanzhou, it is a means to rebrand existing projects and attract new investment (Safina et al., 2024). The 14th five years Plan (2021–2025) reinforces the Go West policy to reduce territorial and social inequalities by facilitating migration from the countryside to the cities and maintains the BRI as China's major foreign policy pillar. However, the current geopolitical situation and the slowdown of the Chinese economy (especially the crisis of the building sector and real estate that boosted the previous period of urban growth as a specific form of 'late urbanization'; see Fox and Goodfellow, 2022) open the question of the near future clearly exposing the link between the global role of China and its urban dynamics. What happens to urban China, and to the BRI as the source and effect of the economic development that fueled the previous decades of Chinese urbanization, since China is experiencing a new phase of development that is both searched by the Party and the result of unexpected events, such as the COVID-19 pandemic and the rise of a so-called 'second cold war' (Schindler et al., 2022)? In such a situation, can the

BRI maintain its role 'of "spatial fix" that both speeds up the circulation of capital and encourages its accumulation within Chinese territory' (Smith, 2022: 1547)?

When approached from Southern Europe, and especially from the ports of Trieste (Italy) and Piraeus (Greece), the urbanization of the BRI is more nuanced, problematic, and controversial. According to EU policy documents, both ports are part of the so-called Adriatic Corridor (Governa and Sampieri, 2022). However, as evidenced by the concept of corridor urbanism, it is not a homogeneous space ready to be crossed by trade flows and exchanges, but rather a temporary and varied assemblage of urban fragments constituting different urban processes. Indeed, the urban that emerges in the Port of Trieste is a kind of 'technical urbanism' and results amid large technical systems that enable and delimit historical and new patterns of urbanization as well as old and new economic relations at both regional and supranational scale (Ramondetti, 2024). As a major infrastructural node of the BRI, the Port of Piraeus and its logistical hinterland display the unfolding of conflicts, transformations, investments, economies, and social issues (Apostolopoulou, 2021a, 2024), as well as the variegated and discrete logistical forms of global infrastructure and the plethora of new urban spaces and unprecedented socioeconomic conditions that exist beyond the Port's operational boundaries but within its extensions (Safina, 2025; Valz-Gris, 2022).

'From the ground', the urbanization of the BRI is dynamic, reshaped by its varying entanglement with local forces, more or less visible and explicitly presented and articulated by its varying influence on material landscape, sociopolitical restructuring, and geopolitical dynamics. The BRI is also a label useful to trigger infrastructure projects and development and is used by several actors for different purposes. At the same time, it is a problematic label, as demonstrated by the case of Trieste as well as other Italian ports, such as Vado Ligure, Venice, and Genoa. Here, the presence of Chinese investments (and of the BRI) is alternatively evident or concealed in relation to political pressures, both international and domestic (especially the role of the United States, the changing orientation toward China of the various Italian prime ministers, and now the 'new' geopolitical scenario).

When observed from Southern European cities (and ports), the BRI clearly shows its vagueness: it is not a clearly defined plan nor a coherent strategy, but a general idea, an offer, a sort of platform that changes in relation to different agendas, ambitions, moments, and places (at various spatial scales). The BRI is not a single initiative, but a plurality of routes, processes, and projects, both material and digital, that are varyingly complex depending on the many contexts in which they are implemented. Nevertheless, this variety and diversification is neither a chance or unintentional, nor does it derive exclusively from the encounter/collision with the ground. As emphasized by Murton (2021: 274), the BRI is visualized by 'an array of maps depicting a usefully approximate but inexact network of roads, rails, sea lanes and other infrastructures'. Within this array of maps, the issue at stake is both the role of the maps and the political 'silence' of the maps as well as the variety of meanings of the BRI as a unitary project. At the same time, the BRI involves certain specific places, even though they are impossible to map and identify before something 'takes place' in them. As Narins and Agnew (2020) maintains, the lack of an official map of the BRI is a 'useful fuzziness'. This uncertainty and malleability of the BRI seems to be its strong point: the BRI yields, hides, reemerges, and reveals processes which would otherwise be more implicit. It is a sort of 'deductive project' that does not exist beforehand, but it can be materially (as well as theoretically) pinpointed only when and where it takes place, perhaps even when there is no explicit reference to the BRI, but there was in the past, or vice versa. While the imagery and material manifestations of the BRI can be studied per se, they also involve urban processes that exceed and precede it (Bunnell, 2021).

Conclusion

Global infrastructure encompasses a multitude of processes, which become particularly discernible when viewed through an urban perspective – a

lens that can complement and extend conventional analytical frames, such as state-centric and development-oriented approaches. While this perspective does not undermine the role of states or the economic ambitions of other global actors, we argue that several conceptual, geoeconomic, and geopolitical aspects come to the fore when exploring the already-urban/urbanizing/yet-to-urbanize spaces emerging from the multifaceted landscapes of global infrastructure. At the same time, we do not contend that our approach should be seen as an alternative to established bodies of literature, such as infrastructure-led development scholarship, which examines the implementation of mega-infrastructure projects within the context of developmental statecraft, along with its entrenched ambiguities and tensions. Instead, our grounded, situated approaches redirect scholars' attention to the study of global infrastructure through an urban lens, specifically exploring and analyzing urbanization processes and their related material geographies. In doing so, we hope to facilitate a dialogue between the diverse urban spaces involved in these broader processes, building novel comparisons across the Global South and North, blurring clear-cut area distinctions, and contributing to a more global urban imagination.

To begin this dialogue, we discussed empirical and theoretical examples associated with the BRI, delving into the specifics of Silk Road urbanization and exploring the intensification of urbanization processes within China and beyond. At the same time, we emphasized the pervasive ambiguities and uncertainties encapsulated within costly global infrastructure projects. We elucidated these aspects by questioning the diverse ontologies of the urban involved in global infrastructure, providing examples of their material and discursive manifestations where global economic forces and social expectations conveyed by global infrastructure change and redefine in relation to the unfolding of urban becoming. Additionally, we examined how technocapital dynamically transforms the informal and grassroots economies it encounters and, simultaneously, shifts the geopolitical arena to urban space. Going beyond an exclusive focus on the state, we also set out the notion of corridor urbanism, scrutinizing the various facets of urban inhabitation, planning, and securitization that materialize in the wake of large-scale transnational infrastructure investments and how these spaces are inhabited and peopled from below. Moreover, by adding theoretical and empirical perspectives from the Latin American experience, we proposed the concept of dependent urbanization, recuperating a Marxist analysis of spatial unevenness initially formulated from what we would today refer to as the global periphery.

To open up and extend this dialogue, we are eager to be in conversation with other scholars who can deepen and challenge our interpretative proposal from various standpoints. A thorough discussion on infrastructure-led urbanization needs to be tested and enriched by those who have specifically explored the global infrastructure regime (Schindler et al., 2022) as well as by those working on urbanization processes in the context of global urbanism (Brenner and Schmid, 2015; Lancione and McFarlane, 2021). Further, a critical engagement with urban comparative (Robinson, 2022) and relational (Hart, 2018) approaches could deepen the options we have mobilized in this contribution. We are also keen to expand and deepen the ongoing discussion with other scholars in our collective who have recently analyzed the logistic re-articulations of the BRI within and beyond China as well as with those who, from different global regions, have examined the complex links between infrastructure, logistics, and urbanization by focusing on contradictory developmental tactics (Gambino, 2019; Valz-Gris, 2023) and ambiguous state and sovereignty transformations (Terrefe and Verhoeven, 2024). Illuminating the multifarious aspects and processes defining infrastructure-led urbanization means delving into diverse spatialities, historical–geographical specificities, material organizations, sociopolitical complexities, resistances, and the inherent unevenness of capitalist development. Such a research agenda allows us to comprehend the intricate interplay of the geopolitical and geoeconomic forces shaping our contemporary urbanized world, transcending traditional disciplinary boundaries and providing a more nuanced understanding of the evolving urban landscape in the era of global infrastructure-led

urbanization. This approach has the potential to elicit unexpected connections among disparate places encouraging the empirical and conceptual experimentation necessary to understand, theorize, and effectively challenge 21st-century urbanization processes.

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