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**Architecture Beyond Borders. Exploring the Relationship between Architectural Theory and Practice in Transnational Endeavors within the Belt and Road Initiative**

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**Abstract:** The paper delves into the intricate relationship between architectural critique and design practice within the realm of transnational architecture endeavors, specifically focusing on the global infrastructure development facilitated by the Belt and Road Initiative (BRI). As a monumental project spanning numerous countries and continents, the BRI has sparked a wave of architectural interventions that transcend national boundaries. These endeavors offer a unique opportunity to explore how the circulation of design ideas and practices across nations manifests in tangible architectural artefacts, which have thus far remained on the periphery of mainstream architectural discourse. By drawing upon diverse case studies from different parts of the world, where various stakeholders such as governments, investors, communities, and architectural professionals are involved, this research examines the tensions that arise between global and local architectural practices, the negotiation of cultural identities and the adaptation of design standards to accommodate diverse geographical and sociocultural contexts. Through this investigation, the contribution critically evaluates and challenges the oversimplification of global architecture through taxonomic scientific frameworks, rejecting the notion that urban architecture is a static and universally applicable knowledge object that can be studied using a singular framework. Instead, it sheds light on the complex dynamics at play in the creation of built environments within a multi-dimensional globalized context. The final aim is to promote the development of new concepts and theoretical perspectives that foster a more cosmopolitan and inclusive understanding of architecture and urbanism.

**Keywords:** Belt and Road Initiative, Transnational Architecture, Practice, Theory, Globalization, Urbanization

**1 Introduction**

The field of architectural design is undergoing a profound transformation in response to the rapid evolution of global landscapes and urban environments. This metamorphosis is being propelled at an unprecedented pace by the development of global infrastructure networks. Amid this dynamic shift, China's Belt and Road Initiative (BRI) stands as a paramount geoeconomic force catalyzing these transformations (Wiig and Silver, 2019). Nonetheless, this colossal global undertaking, often analyzed in economic and geopolitical terms, has received relatively little attention for its spatial and architectural implications. This paper embarks on a voyage that transcends traditional boundaries, venturing to explore the intricate interplay between design practices and architectural theory within the expansive realm of the Belt and Road Initiative.

The BRI, an ambitious endeavor spanning continents and nations, not only heralds a new era in global infrastructure development but also narrates a fresh tale of urban transformations in regions previously relegated to the "periphery" of the world (Nederveen Pieterse 2018). Beyond the construction of roads and bridges, the BRI has ignited a surge of architectural interventions that transcend the confines of national borders. These endeavors offer a unique opportunity to delve deeply into the dynamics between the circulation of design concepts from the East and the realization of tangible architectural endeavors in places that have long existed beyond the purview of mainstream architectural discourse.

By conducting a concise analysis of several case studies situated across diverse corners of the globe, this paper posits that the BRI encapsulates a transformative narrative encompassing the conceptual and pragmatic redefinition of the delicate equilibrium between global and local architectural practices. As a synthesis of an approach that look closer at the specificities of places, this essay endeavors to unveil this narrative by weaving together theoretical insights and real-world design and construction practices from various global regions. In this manner, the paper aspires to transcend the commonplace, the mainstream, and the established, instead seeking to reveal the extraordinary, the unknown, and the diverse. The quest is to elevate the discourse surrounding the BRI's architectural narrative beyond the mere enumeration of its colossal infrastructure developments, offering fresh perspectives on architectural discourse through the dialogues among architects, communities, and cultures that shape the forms of emerging urban landscapes.

The paper commences with an extensive survey of the BRI, delving into its objectives, significance, and impact on urbanization through the lens of global infrastructure development. Subsequently, it critically explores the transnational circulation of ideas within the architectural domain, contextualizing them within a novel geopolitical framework described by scholars as "multipolar globalization". Building upon this foundation, the primary argument embarks on an exploration of the intricate interplay between architectural critique and design

practice within the context of this global initiative. The paper delves further into the architectural practices along the BRI by referencing various case studies and evaluating them in terms of their response to local contexts, examining how architects and other stakeholders pragmatically navigate challenges and seize opportunities. Ultimately, the paper questions the oversimplification of global architecture and challenges the application of established notions and concepts makes architectural design a static, universally applicable knowledge object. It concludes by advocating for an approach that, through an investigation of the unique characteristics of architectural practices in a global context, uncovers novel concepts and theoretical perspectives that foster a cosmopolitan and inclusive understanding of architecture and urbanism.

## **2 The Belt and Road Initiative: from an infrastructural strategy to a driver of urbanization**

The Belt and Road Initiative (BRI) exemplifies China's ambitious global vision, having evolved from its inception in the early 21st century into a monumental endeavor with far-reaching impacts on the global economic and infrastructural landscape. This initiative, often referred to as the "Silk Road Economic Belt" and the "21st Century Maritime Silk Road," fundamentally aims to establish connectivity, both geographically and economically, among nations by means of an extensive network of transcontinental infrastructure projects. In the spirit of the Chinese rhetoric, at its core, it seeks to revive the spirit of the ancient Silk Road trade routes, fostering cooperation, cultural exchange, and economic development (Cai and Nolan 2019).

However, from a geopolitical standpoint, the objectives of the BRI are multifaceted, encompassing both intricate economic and geopolitical strategic dimensions. At its economic core, the initiative seeks to bolster connectivity between regions, particularly within the eastern and southern part of the world, facilitating the flow of goods, services, and capital. By doing so, it seeks to stimulate trade, fostering economic growth, and expanding the horizons of China's construction industry beyond its national borders.

Since its official launch in 2014, the BRI has already led to substantial economic investments, with its estimated total value exceeding the trillion-dollar mark. Consequently, it has emerged as a focal point of international attention, sparking debates about its implications for participating nations and the global geopolitical order (Cheung and Hong (2018).

Furthermore, the BRI aspires to promote cultural exchange and the free flow of ideas, transcending national boundaries to nurture people-to-people connections. In strategic terms, the BRI positions China to reinforce its geopolitical influence and bolster its role as a preeminent global economic player. Through strategic investments in critical infrastructure, China seeks to solidify its status as a key actor in international affairs. Consequently, the significance of the BRI in global infrastructure development cannot be overstated. Spanning across over 70 countries, it encompasses diverse regions spanning Asia, Europe, Africa, and beyond. The BRI's infrastructure projects encompass an array of constructions, including railways, highways, ports, energy pipelines, and telecommunications networks. These projects are meticulously designed to bridge geographical divides, creating an integrated network of global trade and commerce. They possess the potential to redefine global supply chains, reconfigure economic power dynamics, and catalyze unprecedented levels of urbanization (Roggeveen 2017).

In this regard, China is disseminating a distinctive model of urbanization through the construction of infrastructure that it owned in its domestic sphere, profoundly influencing diverse regions across the world. In this transformative context, a transnational movement of architectural practices and ideas has emerged, in which architects, planners, and other stakeholders grapple with the multifaceted challenges and opportunities presented by the architectural undertakings within the BRI.

## **3 Transnational influences within a multipolar globalization**

Urban scholar Davide Ponzini (2018) astutely points out that the question of transnational influences in the realm of urban development can manifest more prominently at certain junctures in history than others. In this sense, to inaugurate this exploration, it is imperative to acknowledge that the urban transformations under scrutiny, while significant, are neither entirely unprecedented nor uniquely emblematic of our present epoch. Indeed, transnational urbanization dynamics and architectural practices have previously been and are destined to undergo continuous evolution in the foreseeable future.

Historically, our perspective has predominantly framed transnational movements of architectural practices and discourses as a unilateral flow, often characterized as emanating from the West to the East or from the Global North to the Global South. This dichotomous lens has significantly influenced architectural discourse and its impact on various contexts over the world. However, contemporary scholarship in political and economic studies has recognized a novel condition of "globality," wherein nations and entities engage in competitive interactions on a global scale. This era has been likened to a "flat world," a "spiked world," or even a post-American world (Nederveen Pieterse 2018).

Intriguingly, in these circumstances, the intricacies of transnational relations and the movements of diverse forms of architectural expertise have grown considerably more complex. These interactions now extend to and emanate from countries that were once considered peripheral in the global context and that had long remained at the margins of the architectural discourse as well. Within this context, as aptly acknowledged by Nederveen Pieterse (2009), what transpires is not only a resurgence of modernity but also the staging of entirely new modernities in those parts of the world previously remained mainly overlook in the scientific literature and in the public discourse.

However, it is essential to dispel the notion that this movement is entirely new. In reality, the transnational circulation of Chinese architectural practices possesses some historical roots. Since the era of Mao, China has actively engaged in architectural practices in foreign nations as a form of architectural aid, contributing to the construction of over 1,500 structures encompassing railways, stations, factories, congress and assembly halls, theaters, stadiums, schools, hospitals, and government buildings. These projects were predominantly subsidized by the Chinese government and executed by Chinese professionals, constituting a recurring manifestation of China's exportation of its own modernity (Ding and Xue 2015). This historical precedent now finds itself at the forefront within the framework of the Belt and Road Initiative (BRI).

As Xue and Ding (2022) reminds us, BRI foreign aid projects are only the last stage of a broader process that have facilitated Chinese companies in their expansion into overseas markets, investment endeavors, job creation abroad, economic and cultural exchanges, and the establishment of mutually beneficial partnerships with foreign entities. This historical trajectory has played a pivotal role in shaping the diverse manifestations of transnational architecture, which should be acknowledged as a unique phenomenon. Serving as a symbol of a new multipolar global order, the BRI embodies a paradigm shift in the circulation of transnational architectural practices, each marked by its own characteristics and distinctive attributes. Consequently, new research tools, conceptual lenses and discourses are needed to comprehend the profound interplay between architectural critique and design practices within the complexity of our contemporary world.

#### **4 Architectural practices between global tensions and local adaptations**

Within the expansive network of the Belt and Road Initiative (BRI), the intricate relationship between global and local dynamics within the architectural realm takes center stage, constituting a compelling narrative. This narrative is distinguished by a nuanced equilibrium, where architectural practices' and construction firms' undertakings often converge, yet occasionally collide. As previously displayed, even though the discourse about the forms of globalization and architectural practices it is not new, within the framework of the BRI is taking shape with new forms of exchange and contact between architecture firms, construction companies and local governments.

China's active involvement in global infrastructure and architecture since the era of Mao has been portrayed as a manifestation of a pragmatic approach that extends beyond economic and political spheres, permeating its design and construction methodologies (Xue 2022). This pragmatic stance exhibits distinct characteristics, encompassing elements such as cost-effective construction technologies, rapid construction methods, and Chinese standardization practices. However, more significantly, it involves a refined and continuous negotiation of cultural identities. As Charleson (2005) asserts, even in architectural projects where structural or functional aspects take precedence, it remains essential to recognize that architecture extends beyond the mere erection of physical structures, while featuring an intricate interplay of cultural symbols and national identities. In this context, numerous architectural works emerging within the BRI, including the Xian Conference and Trade Exhibition Center designed by GMP, the Lianyungang Industrial Exhibition Center or the Bangladesh-China Friendship Exhibition Centre in Dhaka, exemplify the endeavors undertaken by both Chinese and foreign architects to navigate the constant redefinition of architectural language that, while questing for innovation in structural and technological solutions, it necessitates a renewed emphasis on the application of tectonic principles for symbolic purposes.



**Figure 1.** Xian Conference Center by GMP Architects, Xian, China (source: Archdaily)

However, in contrast to iconic construction endeavors within defined national boundaries, transnational practices encounter the challenge of reconciling global design standards with the complexities of multiple identities at stake. Projects such as the Sino-Italian Cultural Exchange City Reception Center in Chengdu serve as illustrations of this approach. In Chengdu, spatial elements and architectural features from both Chinese and Italian traditions intertwine, creating a rich tapestry of juxtaposition and overlap. This project's dual sections, separated by water and lush greenery, symbolize the distinct facets of Italian classical architecture and Chinese architectural heritage, respectively. The building seeks to harmoniously blend traditional elements with contemporary reinterpretations. The resulting space, facade, and landscaping are featuring the integration of two architectural styles through intentionally and thoughtfully organized spaces that convey cultural meanings (Bonino, Carota and Marri forthcoming 2024).



**Figure 2.** Sino-Italian Cultural Exchange City Reception Center by AEO, Chengdu, China (source: Dezeen)

As we delve deeper into the understanding of these architectural endeavors, the negotiation processes involving various actors in the development process emerge as transformative lenses through which we comprehend the intricate relationship between the design process and the materialization of buildings, both in terms of their physical presence and symbolic significance. For instance, in his doctoral work "Architecture for the Others," Pakistani scholar Sohrab Marri (2021) acknowledges the evolving and resolute nature of design proposals for the Gwadar Business Center in Pakistan, presented by the China Communication and Construction Company (CCCC). These proposals encountered a series of trials and tribulations as the local technical task group and other influential stakeholders scrutinized every aspect. Initially, CCCC's design manifested as a modern structure with distinct Chinese characteristics. However, the Pakistani technical task group advocated for a modification that would pay homage to Gwadar's rich architectural heritage, reflecting influences from Arabic and Persian styles that resonate with the passage of time and historical legacies.



**Figure 3.** Gwadar Free Port Business Center, Gwadar, Pakistan (source: China Pakistan Economic Corridor)

As for the CCCC, traveling Chinese real estate developers and contractors, collaborate with local counterparts, including political, economic, and cultural leaders in host nations, serving as the principal conduits for the global dissemination not only of technical protocols but also spatial imageries and local innovations. For example, the Great Stone Industrial Park on the outskirts of Minsk, Belarus, exhibits spatial characteristics typical of Chinese industrial park typology, as established by China's National Development and Reform Commission (NDRC) under the Ministry of Land and Resources. These characteristics include zoning principles that identify precise boundaries and land use within the park, a central axis around which key facilities are arranged, and both single-story and mid-rise buildings accommodating various functions. Infrastructure development standards, including electricity, roads, water supply, and telecommunications, are derived from Chinese practices and are rigorously implemented. Construction and technical standards, internalized by Chinese enterprises such as CAMC Engineering, inform structural and MEP solutions based on standard sizes and cargo requirements adopted by Chinese companies for goods transportation. These standardized structures, however, feature consideration for specific contextual needs by adapting to local regulations and governmental protocols. Thus, formal features, egress circulations, and structural dimensions may vary from logistical buildings in the Great Stone Industrial Park, a Free Zone in proximity of the Suez Canal, or an international dry port in Khorgos at the border between China and Kazakhstan. As recurrent typologies across BRI projects worldwide, these seamlessly homogenous buildings are the essence of the differences that generates through repetition of design model and practices while circulating worldwide. In this context, the tension between global aspirations and local sensibilities becomes a driving force behind innovative solutions that enhance functionality while aiming to construct hybrid identities that consider both local and global expectations.



**Figure 4.** Great Stone Industrial Park, Minsk, Belarus (source: GSIP Development Company)

### 5 Architectural theory between new practices

As elucidated earlier, the transnational practices of architects and construction firms within the BRI demonstrate a unique and pragmatic adaptability to diverse circumstances across the globe. What is particularly intriguing is that these architectural examples, which we have scrutinized, defy classification within existing architectural taxonomies or established scientific frameworks prevalent in mainstream architectural discourse. Some of the structures we have examined bear the hallmarks of modern design with local decorations, while others represent iterative building productions adapting to local regulations, and yet others delineate intricate urban dynamics. These practices operate beyond the confines of established theoretical or professional frameworks, showing a remarkable openness to novel modern ideals and a willingness to adapt to pragmatic contingencies.

However, as we scrutinize the architecture of the new millennium, the notion of architectural practice as "entrepreneurial intelligence," as posited by Professor Michael Speaks (2006), appears inadequate. As new emergencies are taking place into the practices, we have to reestablish an architectural discourse with new vocabularies and modes of understanding, which are grounded on specific places, cultures and transnational dispositions. In this regard, the theoretical understanding that we can retrieve while navigating through the practices and buildings arising within the framework of the BRI is not any kind of a priori given framework reliant on ideas, theories and concepts given in advance, while a method of intellectual and scientific action that is able to extrapolate renewed theoretical perspectives from the outcomes of the practice.

Indeed, in our complex and globalized world, one thing is evident: transnational architectural practices can no longer be adequately encapsulated by overarching grand structural ideas or Western-established theories. As Rainer de Graff (2017), a prominent critic in contemporary architecture, astutely observes, Western academia

often finds itself isolated, governed by its autonomous codes, and constrained by outdated hierarchies and value systems, and, in this manner, it struggles to recognize and address the real forces shaping the built environment. Instead, the most influential architecture practices happening along the global infrastructure, such as the BRI, are today compelled by the need to innovate, to create solutions to problems whose larger implications have not yet been formulated. In this context, I contend that the resulting buildings can only be comprehended through an approach that delves into the specificities of places, cultures, and diverse notions of modernity.

However, as the distinct characteristics of the BRI illustrate, while the prevailing discourse on globalization and internationalization no longer suffices to encapsulate such endeavors, neither does any form of regionalism, whether critical or not, offer a comprehensive solution. Although the concept of "critical regionalism" has raised valuable questions about modernity, tradition, cultural identity, and place, and has shed light on overlooked architectural activities, it hinges on a notion of critique often grounded in Western traditions of critical thought (Eggner 2002). This can pose challenges in contexts where such western traditions may be absent or hold little sway (Botz-Bornstein 2016). Moreover, as Dana Cuff has argued, in hindsight, figures like Kenneth Frampton may have underestimated the profound impact of the global economy on local architectural practices and the possibilities it also opens for innovative design practices that connect communities and intrinsically resist consolidated moral and effectual conjectures (as cited in Kirsten 2001).

Therefore, what we require is not another preconceived framework for evaluating and establishing global practices, but rather a rejuvenated understanding of architecture rooted in new perspectives and narratives of urban development. In essence, we must draw from a diverse array of scholarship to challenge established frameworks, models, and categories, thereby shifting the focal point of architectural theory and practice to broader horizons. This shift serves as a promising starting point for cultivating a more cosmopolitan and inclusive understanding of architecture and urbanism (Bonino, Carota and Marri forthcoming 2024).

## **6 Conclusions: Towards a Cosmopolitan Understanding of Architecture and Urbanism**

In conclusion, the Belt and Road Initiative has undeniably inaugurated a transformative era of transnational architectural exchange, transcending conventional paradigms and illuminating a fresh perspective on architecture and urbanism. As our exploration delved deeper into these architectural endeavors, the negotiation processes among the various actors involved in the development process emerged as a profound lens through which we comprehended the intricate relationship between architectural theory and design practices within our complex contemporary world. The adaptive strategies, the integration of global design standards with different cultural identities, and the dialogues between architects and local stakeholders all stand as vivid testaments to the dynamic and ever-evolving nature of architectural practice within the expansive BRI landscape.

Moving forward, it is imperative, within the global complexity of our contemporary world, that we continue to embrace, engage with, and explore the intricacies of transnational architectural practice. We must acknowledge that the demarcations between the global and local are not fixed but rather fluid and dynamic. Moreover, it is crucial that we account for emerging places, new modernities, and evolving practices within the critical discourse surrounding architecture and urbanism. Indeed, as we, as architects and scholars, endeavor to establish the moral and assessment principles that shape the global architectural discourse, we should heed Habermas' (1990) proposition that these principles should emerge from open, rational discourse among all the parties involved. Such discourse necessitates the recognition of the moral autonomy and dignity of each participant who comes together to engage in a critical dialogue.

In other words, a closer examination of global infrastructure developments, exemplified by the Belt and Road Initiative, should inspire us to contribute to the creation of built environments that not only consider cultural identities but also embrace diversity in a broader sense. Only these farther and closer explorations can enrich the tapestry of our global community, celebrating the uniqueness of each locale while fostering connections that transcend borders. In this sense, an exploration on those considered "peripheries of the world" (Pieterse 2018) should emerge as a catalyst for a more inclusive and cosmopolitan architectural discourse, one that reflects the richness of our interconnected world.

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