

Digital Encounters in a Postcolonial Frame: Mnemotechnics and Mimicry in Architectural Productions

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My paper provides a theoretically situated framing of the global deployment of digital design tools vis-à-vis globalization of architectural productions in the context of rapidly transforming urban India in the 21st century. Following the economic liberalization of 1991, globalized architectural typologies such as shopping malls, residential enclaves, luxury hotels, and Information Technology (IT) hubs mushroomed throughout India's urban spaces, changing its material and visual fabric.¹ The digital revolution played a crucial role in this transformation, both through the systemic processes of global informatization and through the relatively less interrogated paradigmatic shift within architectural production techniques from analog to digital modalities.² In the last two decades, emerging scholarship on Global South's particular urbanities focused on the symptoms of these co-proliferating socio-spatial transformations, one emerging from the studies on the effects of neoliberalism and the second on informatization. Reacting to the shifting terrains of the architectural industry, design scholarship focused on the exigencies of architects acquiring advanced digital skill sets to meet market demands of efficiency, aptly captured as "innovate or perish."³ Historians and urban scholars have extensively deliberated on the chronologies of India's evolving IT landscape from the 1950s to the turn of the millennium and the digitization of urban governance and citizenship in the last decade.^{4,5} However, little theoretical deliberation exists to date on what software does to design in a postcolonial setting. Addressing this gap, I problematize the supposedly neutral front of digital design packages and argue that they reproduce the geo-architectural surroundings of their origins and aid in advancing globalized norms and techniques that homogenize architectural modus operandi. In lieu of focussing on the substantive dimensionalities of urban India's architectural transformations with its specificities, I refer to 'urban India' as a site of a critical inquiry.⁶ To this end, I weave together theoretical concepts of global mnemotechnical systems and mimicry from the works of Bernard Stiegler and Homi Bhabha that can help explicate the encounter of the global deployment

of architectural software as the industry standard in the arena of Global South's architectural productions.^{7,8}

COMPUTER-AIDED TO COMPUTER-MANDATED

Since the dawn of the Industrial Revolution in Europe, historically inseparable from the Colonial expropriation of geographies outside it, large-scale technological transformations have brought forth paradigmatic shifts in global socioeconomic systems and means of spatial production. An extensive theoretical treatment of such transformations from a Marxist framework can be found in David Harvey's seminal work 'The Condition of Postmodernity,' where he develops the concept of 'time-space compression' drawing from theories of space, time, and power in the works of French theorists such as Henri Lefebvre, Michel de Certeau, and Michel Foucault, amongst others.⁹ The Digital revolution, propelled by what is known today as Information and Communication Technology (ICT), brought forth a new wave of transformations in the techno-social enterprise of globalization processes. Theoretical introspections of the digital vis-à-vis society can be found in the groundbreaking intellectual works at the turn of the century, such as Manuel Castells' 'The Rise of Network Society,' Saskia Sassen's 'The Global City,' and Hardt and Negri's 'Empire.'^{10,11,12} For the sake of brevity in this paper, I present my arguments on the widely accepted premise that, in the context of urban societies, technological transformations change how societies produce their spaces over chronological time.

Digital design, drafting, and modeling software packages entered India's architectural industry and education in disruptive ways. Their escalating usage faced many frictions with the long-standing traditions of hand-based design, drafting, and modeling techniques that developed over generations of careful tutelage in the 20th century, with a history deeply embedded in the pedagogical exchanges with European and American schools during and after the colonial era remaining relatively undisturbed till the 1990s. However, the transition phase from hand-based to computer-aided techniques corresponding to the introduction of Computer-aided Drafting (CAD) tools in the late 90s to the early 2000s was initially an uneasy experience. In the more progressive part of the practitioner's community, emerging architects and young students found

themselves at odds with the more traditionalist architects and professors, who were associated with established firms and educated in the pre-digital era. The following transition phase, which I call the ‘computer-aided to computer-mandated’, corresponds to the replacement of CAD with Building Information Modelling (BIM) systems as industry standards from the late 2000s. During this era, efforts of resisting the digital takeover and ‘preserving the hand’ dissipated in mainstream architectural practices and pedagogies. Although the hand, both as a corporeal entity and as a metaphor for the architects’ subjectivities, was never entirely lost, it alone did not suffice anymore.

MNEMOTECHNICAL INTENSIFICATIONS

For the inquiries of this paper, firstly, I focus on Bernard Stiegler’s conceptualization of the Global Mnemotechnical System that appears in his book ‘Technics and Time III.’¹³ Stiegler develops the category of mnemotechnical systems based on his deliberation on epiphylogenesis, which he discusses at length in volume I of this book. An extended discussion of his complex oeuvre is beyond the scope of my paper. Mnemotechnical systems, according to Stiegler, are different from technical systems, as they are created in stages of societal evolution with the purpose of memory retention and transmission. For Stiegler, an example of a technical system (tool) would be a clay pot that is not made to record or transmit memory, but it may do so spontaneously to an archeologist who researches it. In contrast, technical systems of memory retention have specific purposes for recording and transmitting memory, such as writing, photographs, and cinema, and these are, in his terms, mnemotechnical systems. In other words, mnemotechnical systems have two components, as the word suggests mnemonic and technical. For architects, an example of such might be a Time-Saver’s Standard that functions as a repository (book as a tool) of standards of practice (curated memory of past architectures) or a furniture stencil used as a handy template tool to draw furniture but also serving as a mnemonic device, transmitting the memory of standardized furniture designs.

Stiegler further observes that industrial technical systems have become a global enterprise since their first appearance in England in the 18th century and notes –

“We can no longer speak of Asian, European, or American technical systems: a single global mechanism of regional specialization has arrived, organizing the industrial division of labor as a function of geographic opportunities or political contingencies defined from the perspective of investors. In large part these information and communication technologies have brought about this evolution through the possibility that they contribute to the organization of automatization, remote control of production and distribution, the internal circulation of capital in real time, and the opening up of intercontinental markets of hypermasses of consumers.”

- STIEGLER, TECHNICS AND TIME III, 132

Understandably, Stiegler’s explication echoes that of Castells, Harvey, Sassen, Hardt, and Negri, amongst others, but his pathway is distinct in the sense that it does not take a more conventionalized approach toward interrogating the circulation of global capital and histories of political power distributions. Instead, Stiegler takes a more anthropological-phenomenological route, following Husserl and Heidegger, and traces societal evolution through stages of technological transformations, being constantly committed to prioritizing the study of technics as explanatory over a more substantive approach of episteme – a distinction that he makes in the first volume of his trilogy.

However, what perhaps distinguishes Stiegler in this context and makes him crucial for this paper is the argument that follows the observation above. He argues that while on the one hand, the evolutions in society had led to consolidations of technical systems into a global enterprise, the former distinction between the technical and mnemotechnical systems (pot versus book) has flattened with the ICT revolution in the late 20th century –

“...the new global technical system has become a global mnemotechnical system in which technical and mnemotechnical systems have fused and have become, at the same time, global...What I have described as the “convergence” of informatic, audiovisual, and telecommunications technologies would thus also be that of technical systems for the transformation of both matter and technologies of memorization.”

- STIEGLER, TECHNICS AND TIME III, 133

In other words, tools and tools of memory retention are no longer independent. What constitutes the technological apparatus of the digital era also functions as the apparatus of memory. For a more straightforward illustration, one can say that in the era when the telephone and the phonebook were separate entities, they served as technical and mnemotechnical systems, one materially independent from the other. However, with the rise of cell phones, these two separate systems merged, and the convergence further intensified in smartphones. This fusion of the two then, for Stiegler, marks a departure in the phases of societal evolution and the emergence of global mnemotechnical systems as such an entity per se has both material and mnemonic consequences.

I situate the digital design software and its paraphernalia as a global mnemotechnical system in this framing. The architects’ drafting table merged with the Time Saver Standard in the digital design software interface the computer provided a unified device where one can refer to past works, copy and paste them, and engage in the work of design (re)production. CAD platforms, for example, initially acted as drafting tools, an aid to speed up and manage laborious, repetitive tasks of drawing plans, sections, elevations, etc. However, as computers became glued to the internet, CAD files started floating

around, jumping across contexts, enabling the architect to do what Chattopadhyay called plug-in and cut-and-paste in the context of 21st-century Indian urban development.¹⁴ Websites like Bibliocad, repositories of design standards, architectural blocks, templates, entourages, etc., emerged out of the encyclopedic tendencies within the digital space and aided the computer-aided techniques of drafting, a comfortable possibility of soliciting globalized architectural vocabularies, advancing their project of - "A Conception of the Universe of Design in the form of an Unlimited Library."¹⁵

Such mnemotechnical systems of software and their ready-reference libraries intensified further with the introduction of BIM, where a systemic enterprise presented the possibility of the building as a set of information to be modeled, increasingly displacing the role of an architect's situatedness in architectural design. BIM interfaces provided a normalized version, albeit customizable, of how to make architecture with walls, floors, windows, doors, staircases, and elevators homogenous typologies with an inundating repository of globalized architecture and downplayed the possibilities of thatched roofs, bamboo frames, mud walls, and earthen tiles. Everything that could be categorized in the global lexicon, the strategic langue, the Architecture with capital A was easy to find and reproduce, and all that thus fell in the 'local/vernacular,' the tactical parole, the small 'a' architecture was increasingly difficult to attain. The meteoric rise of BIM as the industry standard in global markets was enabled not only by the seemingly complete design of its interface but also by its ability to bring together the Architecture, Engineering, and Construction (AEC) industries in one unified space of software. With unprecedented speed, the architect could now work collaboratively with engineers, construction managers, clients, and urban development authorities. Design firms located in Singapore could now coordinate with clients in Mumbai to construct megastructures in Bangalore with astonishing accuracy and smoothness, something unimaginable even a few decades ago. The mnemotechnical intensification of design possibilities on the screen, then, was reciprocated by a coordinative possibility of unified digital space where an integrated system of total production was imagined. Survey-based research conducted in the last decade explored the mechanistic reasons why emerging markets like India were not adapting to BIM initially and found that BIM's full potential has not yet been explored in these contexts.^{16,17,18} However, these studies missed BIM's impact on placemaking techniques and the effective erasure of what Frampton framed as critical regionalism, which was considered seemingly good practice in the hand-based, less-globalized, less-digitized era, even a couple of decades ago.¹⁹

IN-BETWEEN THE BOX

Scholars of postcolonial urbanisms, such as Roy, argue that in the universal theories of globalization, vis-à-vis urbanization, a consideration of the unevenness of "city" as an epistemic category across the Global North/South divides remains absent.²⁰

Such arguments resonate with postcolonial criticisms of universal Historicism that takes Europe as a convenient starting point, while accounts of places such as India remain consigned in what Chakrabarty called "an imaginary waiting room of history."²¹ Stiegler, for instance, does not focus on how the industrial revolution in Europe, which he sees as an initiation point of the industrial-technical to mnemotechnical systemic transitions, is inextricably linked with colonial extraction of material and cultural resources from its formerly colonized territories. A limited number of scholarships available in the intersection of postcolonialism and architectural studies also echo similar assertions. Akcan, for example, points out that while World Trade Organization has recognized architectural services as globally tradable commodities, global architects are unprepared for the task due to "the relative lack of theoretical sophistication and historical knowledge about architecture beyond European and North American countries."²² Postcolonial theories are thus necessary, Akcan suggests, to better equip global architecture and thwart its imperial possibilities.

Practicing architects in India, on the other hand, seem hesitant to engage in the theoretical debates of postcolonialism. Some even seem to maintain distance from words such as postcolonial (but not so much the ideas behind them), as they are perhaps an inadvertent reminder of an uneasy past seemingly irrelevant in the 21st century. With the experience of hustling in the increasingly globalizing market and navigating through the exploding universe of digital design technologies, architects on the field were perhaps suspicious of the universal form ahead of critics articulating them in anglophone scholarship. Observations of the editorial committee of the recently published Manual of Architectural Practice (the first of its kind in India) by the Council of Architecture, a statutory body that regulates architectural practice and education nationwide, indicate that question of the agency of such transformations is inseparable from the forces of the market –

"The boundaries between art, architecture and technology/engineering are getting blurred from the client's perspective."

- COA, MANUAL OF ARCHITECTURAL PRACTICE, VOL. 1, 2022

Even within the overpowering global productions of architecture and the mandate of computers, some contemporary practices in India (and across the Global South) have attempted to retain the spirit of self-determination by harnessing the stylistic grammars of the critical regionalism school through fragmented bits and pieces in an increasingly flattening world. Despite the challenges of market forces and the inundating demand of global aesthetics, architects on the ground have searched for ways to appropriate the digital and keep the hand alive. In recent years, the apple pencil has started to take the place of the wood pencil, and perhaps a possibility of a new negotiation between the digital global and the local hand is

emerging in the technological interface of architectural design. While I do not discuss any particular project in this paper, a cursory glance at recent projects from India featured on popular commercial websites like archdaily would show some instances of such negotiated in-betweenness. These well-curated examples that might resemble a globalized idea of the local would not be representative of the bulk of mainstream architectural productions in the last three decades; nonetheless might still speak to the possibility of something different that cannot be ignored.

I turn to Bhabha to understand such expressions of the local within the global landscape of architectural productions, specifically focusing on his concept of the ambivalence of mimicry captured in his use of the phrase “almost-the-same-but-not-quite.”²³ Through eloquent arguments, Bhabha articulates the aspect of the dual gaze of colonial mimicry as a desire for a reformed, recognizable Other. In his words –

“...the discourse of mimicry is constructed around an ambivalence; in order to be effective, mimicry must continually produce its slippage, its excess, its difference. The authority of that mode of colonial discourse that I have called mimicry is therefore stricken by an indeterminacy: mimicry emerges as the representation of a difference that is itself a process of disavowal. Mimicry is, thus the sign of a double articulation; a complex strategy of reform, regulation and discipline, which ‘appropriates’ the Other as it visualizes power.”

- BHABHA, THE LOCATION OF CULTURE, 122.

This condition of ambivalence, I argue – opens the possibility of something in between a ‘standard global’ and ‘authentic local.’ In the case of architecture, it is an expectation of appearing different while potentially subscribing to the smoothening globalized techniques of making. The local can only appear when it is recognizable as the global’s other irrespective of whether the mechanism of its social production is altered.

The more popularized understanding of the in-betweenness of local-global is through the framing of aesthetics, or how the end product of the architectural object appears in its popularized glocal styles, where functionalities of the neoliberal demands are augmented by the localized enunciations. What if the architect can find a way to retain the “local identity” in the final appearance while harnessing the technological flexibilities of globalized digital software packages? It is in this expectation of a potential subscription to the supposed best of both worlds, the aspiration of looking local while being global, that neoliberal recuperations enter the possibilities of architectural imagination. Behind neat websites and shiny magazines, architects as social figures engage in a complex web of negotiations between divergent forces of global capitalism, digital technocracy, and the reminiscent postcolonial regimes of urban India. This under-recognized labor of constant innovation, riding

through the waves of one global trend after another, underpins the imperfect conditions of architectural practice on an everyday basis but retains the architect’s partial subjectivity within the smoothening homogeneity of universalism.

In conclusion, co-situating Bhabha’s mimicry and Stiegler’s mnemotechnics in this friction between the reminiscent postcolonial and the emerging neoliberal opens up multiple theoretical possibilities for investigating the digital encounter and possible future directions to mitigate the inundating techno-philia of rapidly urbanizing settings of the 21st century Global South. I present them within four broader categories as follows. First, the complete elimination of predigital critical regionalisms and their subsequent (re)appropriation within the glocal. Second, the inseparability of the appearance of the produced objects and the technical modalities of its production, or in other words, the partial mimicry of form, demands the partial mimicry of techniques. Third, the more optimistic retention of architects’ agency within the friction, contested as it may be, is constantly supplied by the duality of resistance to conformity and constant up-skilling for the next digital package. Fourth, the more utopian, slowly overcoming the ambivalence of agency, sailing through the doldrums of the market, and sublimating the digital within a possible return to the hand, perhaps from the computer-mandated to a computer-indifferent modality of architectural production.

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