Prototype nation: China and the contested promise of innovation

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Prototype nation: China and the contested promise of innovation, by Silvia M. Lindtner, Princeton, Princeton University Press, 2020, 269 pp., $24.95/£20.00 (paperback), ISBN: 978-0-691-20767-4

The notion of *shanzhai* (copycats), is a Chinese neologism, originating from knock-off cell-phones. Shanzhai products appear on the market with pirated brand names like Nokir and Samsing that are just a little different from the original. The term was primarily coined to describe the imitation of consumer electronics of equal or better quality than the original (Han & Hurd, 2017). When studying Chinese innovation, both in terms of shanzhai (copycats) or creative makers, Shenzhen should be in the spotlight. Shenzhen is the first special economic zone (SEC) in China and a pivotal center of large-scale industrial production for the entire world. In recent years, while the maker movements are actively promoted by the government as a way to encourage the public interest in STEM (Science, Technology, Engineering and Mathematics), as well as an approach for individuals to rejuvenate manufacturing, the city Shenzhen has transformed from a city of shanzhai to a pioneering home for the Chinese tech-based maker movement. In *Prototype Nation*, Silvia M. Lindtner, therefore takes this city as a laboratory to examine how national policies and interventions facilitate and sanction processes of innovation. Lindtner's (2020) book charts how – in the context of neoliberalism and global precarity – China's focus on mass manufacturing of shanzhai production is gradually shifting. Shenzhen is becoming the "new frontier" of innovation.

Drawing academically from a background in Interaction Design and Media Studies, the author provides intersectional analytical perspectives on the sociological and technical cultures of shanzhai. The use of ethnographic methods makes the book not overburdened with technical jargons. It is accessibly written and its subject and cases make it inspiring and attractive. This book draws on more than a decade of investigations in experimental workspaces such as 'makerspaces', 'startup weekends' as well as 'tech incubators'. In her fieldwork journey, Lindtner has captured how prototyping of exuberant scales first constituted shanzhai culture and then transformed it to technology innovation. Simultaneously, she sheds light on how the maker culture now functions as a promising way to intervene in entrenched structures of inequality, exploitation, as well as oppression. By examining the national strategies, the book further evaluates how the promise becomes a demand for individuals to self- economize, self- upgrade and self- enterprise in the name of happiness, but also on behalf of the nation. Lindtner further demonstrates the potential of the maker movement to interfere with socioeconomic structures and the impact of entrepreneurial life on policy, education, and social governance, normalizing persistent sexism, racism, colonialism, and labor exploitation.

The author develops the prototype as an analytical concept to understand an important contradiction, throwing light on the tension between the growing disillusionment with tech industries and the sense of empowerment within maker movement. Lindtner proposes prototyping to be the most important promise of the maker movement, based on contributing and sharing of open resources available to everyone – as such every individual can potentially prototype and intervene at scale, prototyping is no longer reserved for elites, scientists, designers or engineers. It shows that making becomes even more salient during a time when people start to reconsider the role of the tech industry in processes and structures of exploitation, racism, sexism and exclusion. The author also critically examines the violence and loss that are often concealed in processes of future making with the notion of 'the displacements of technological promise' (p. 4). It tries to unfold how this technological promise can coexist alongside the burgeoning distrust of its attainability and to show how these

displacements rearticulated around global technical industries and produced China as a *Prototype Nation*.

Methodologically, this book unpacks rich ethnographic and historical details. The research is grounded in a trans-local and multi-sited ethnography, tracking people, stories, and artifacts across regions. At the same time, it provides an archive of Shenzhen's transformations from 2008 to 2018. This book offers comprehensive macro and micro perspectives on innovation, from internal and external perspectives. I greatly appreciate that Lindtner unfolds an in-depth and in-width scene of the maker movement to the readers. From bottom-up actors to institutional top-down actors, the author not only observed and interviewed representatives from the growing number of Chinese start-ups, makerspaces and incubator projects, but also investigated urban planners, policy makers, government officials, and workers, managers and designers in Shenzhen's technological industries. From West to East, the author delved into coworking spaces, innovation hubs, hackathons, and startup weekends in China, the United States, Africa, Europe, Taiwan, and Singapore, as well as tech incubators, corporate offices, and factories. The distrust in Western models of production is captured to have travelled around after the financial crisis of 2007-8 and is seen to have steadily shaped the rise of maker movement in global terms. Simultaneously, the author also makes it explicit that the aim of this research is not to define making as 'ultimately 'good' or 'bad', as radical or thoroughly subsumed' (p. 35). Rather, the focus is on uncovering the paradoxical entrenchments and the multiplicity of efforts needed to work within neoliberal restructuring and technological promise.

More precisely, the chapters of this book do not follow a linear, temporal trajectory, but rather move between different temporal and spatial scales. The author unpacks certain technological practices such as how "grassroots" and open resource have provided forms of agency to people (Chapter 2). Xin DanWei (New Workunit, the first coworking space in China) was chosen as a persuasive case to demonstrate how the Communist Party of China (CCP) and the grassroots tinkerers of China's early hacker constituted China's homegrown innovation economy. In Chapter 3, the author delves deep into Shenzhen, chronicling that the city was set up as a laboratory "outside" of the modern innovation economy, while still being regarded as an attractive site for capital investment. The following two chapters provide a well-informed overview of how incubators train and cultivate human capital. The transformation of individuals into human capital appears inevitable within neoliberal capitalism. However instead of exploitative oriented precarious entrepreneurial life training for happiness could also be a path to be chosen. Nonetheless, the author demonstrates the slow violence remains at the heart of technological promise (Chapter 6). It reveals the fundamental purpose of the government to locate certain urban spaces as the sites of making for happiness and self- investment is to allure Chinese manufacturing workers, designers, and engineers into desiring self-upgrading.

From the perspective of coloniality, this book offers an innovative discussion and reevaluation of othering and Shenzhen's shanzhai maker culture. The excavation of how the dialectical post-colonial relationships unfold in China is groundbreaking. It unpacks China as constructed, on the basis of relational discursive discourses of "newness", but essentially still interiorized as "otherness". In this book, Shenzhen is presented as a testing ground to experiment with alternative technological promises, at the same time preserving some of the colonial rhetoric, as well as the European-central modern concepts of progress. The author argues that orientalism and colonialism endure in the discourse of contemporary technology, "the other" is used to emphasize "uniqueness". "Otherness" is now portrayed as productive and promising, promoting capital investment mechanisms. On the other hand, "uniqueness" is now made attractive for future economic growth and capital gain. The Orientalist metaphor of "otherness" is perpetuated by the substitution of technological promises: 'They live on in the refashioning of China as newly innovative, despite a coming to terms

with the broken promises of modernization' (p. 79). The shanzhai maker culture in Shenzhen emerged in the Western technological imagination as an alternative to individualistic notions of authorship, ownership, and empowerment, as copy culture being rearticulated to replace to Western- centric notions of design and innovation. Lindtner further uncovers post-colonial traces by offering rich accounts of shanzhai makers in Huaqiangbei, one of Shenzhen's notable retail areas, and one of the largest electronics markets in the world. Chinese makers, it is argued, can help redefine China's unique innovation ecosystem by opening up alternative modalities of revolution and taking advantage of the mode of shanzhai innovation. However, rather than delving into China's user-led innovation modes, the author's claim of Shenzhen's shanzhai innovation culture functioning as a colonial/ Orientalist trope of othering and backwardness which differs from that of the West is only partially sustained. A user-centric lens, which holds promise to reevaluate the practical significance of shanzhai innovation from a bottom-up perspective, could be provided for further in-depth understanding of user-driven innovation.

It is worth noting too that the author's has overlooked contributions from economic sociology that have been produced in recent China studies that offer specific insights on China's marketization which could have assisted the author in underlining its organizational and structural diversity (Lee, 2006). However, the book is carefully researched and well informed, offers an in-depth and extensive overview of how the making of Shenzhen as a new "frontier" of technological innovation was co-produced by the endurance of colonial tropes of China as "other" and "backwards" and the CCP's socialist pitch producing hopes and yearnings for alternatives and entrepreneurial agents. At the same time, Lindtner's book calls our attention to reconsider the dialectical post-colonial relationship between backwardness and innovation. In sum, this extraordinary book is highly recommended for students and researchers interested in China, development, entrepreneurship, technology, media and communication as well as postcolonial studies.

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The Internet Myth. From the Internet imaginary to network ideologies, by Paolo Bory, London, University of Westminster Press, 2020, 168 pp., £23.99, ISBN: 978-1-912656-75-2. doi:10.16997/book48.

With 'The Internet Myth' the media scholar Paolo Bory focusses not so much on the technical properties and functions of digital technologies but rather on the narratives, symbols, and meanings which are assigned to media and networking technologies.