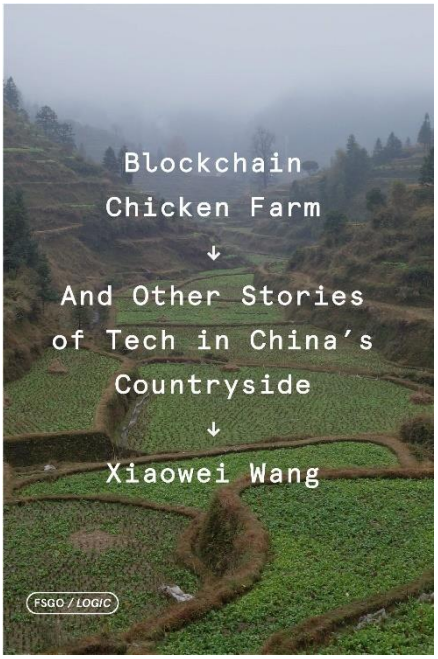

ChinaMade Review

Wang Xiaowei. 2020. *Blockchain Chicken Farm: And Other Stories of Tech in China's Countryside* (Farrar, Straus and Giroux Originals x Logic).

Tim Oakes, January 2021

The urbanization of the Chinese countryside is one of the most significant social transformations going on in the world today. In 2007, the village became an official target of urban planning when the China's Urban Planning Law was expanded to include rural areas within any city's administrative reach (Bray 2013). More recently, as part of Targeted Poverty Alleviation (精准扶贫), many rural communities have been relocated and concentrated into higher-density planned settlements. Increasing settlement densities has also been promoted by state planners in order to help maintain China's "red line" of 124 million ha of arable land while creating opportunities for non-agricultural economic activities in the countryside (Driessen 2017). These are just some of the policies that, over the past decade, have "increased state control over rural land, strengthening the regulations on land-use change and promoting development plans for the overall spatial design of rural China" (Meyer-Clement & Zeuthen 2020, 162). China's rural landscapes have been fundamentally transformed in unprecedented ways by these policies.

China's New-Type Urbanization Plan (国家新型城镇化) or NUP – rolled out as part of the 13th Five Year Plan in 2016 – designated 19 urban clusters throughout the country and called on these clusters to drive a new phase of urban-rural integration, suggesting a process whereby rural development would be tied ever more intricately to urban agglomeration itself. Making that integration possible in terms of governance would necessitate overcoming existing patterns of territorial administration which remain encased in older spatial structures and institutions that separate rural and urban societies. State-level New Areas, in which large swaths of countryside have fallen under new administrative structures developed to overcome rural-urban boundaries, have been a key spatial innovation for realizing the NUP's vision of urban-rural integration.

Much of the critical academic conversation about the infrastructural dimensions of rural urbanization have emphasized less the ways rural populations have been connected to cities and more how they've been passed by (Luo et al 2019). Within New Areas, for instance, new infrastructural grids are often laid with almost no concern for existing patterns of settlement and connection among rural communities (Oakes 2020a). Older dendritic networks of local roads and pathways are simply obliterated by new multilane avenues and boulevards oriented around industrial centers, high-end commercial housing

clusters, retail malls, and high speed rail (HSR) stations. New HSR and highway connectivities, in turn, focus on linking the officially designated urban agglomerations. These linkages can render some rural communities more remote and isolated, cut off from a world that increasingly views the countryside as a pretty view outside the train or car window, or as a setting for recreation and leisure. Such views are indicative of what Xiaowei Wang, in *Blockchain Chicken Farm*, has termed 'metronormativity', the idea that the rural is backward, conservative, intolerant, "and that the only way to live with freedom is to leave the countryside for highly connected urban oases" (p. 5).

An important feature of Wang's account, then, is its unwillingness to entertain culturalist arguments that traffic in Chinese exceptionalism, even as it insists that we understand rural China as a uniquely different world requiring grounded and nuanced understanding.

Wang's book is largely devoted to challenging this view. Through an extended travelogue packed with insightful reflections and rich engagements with a broad array of villagers from all over China, they argue that China's countryside is *already* deeply integrated not only with urban China, but with the rest of the world. Rural urbanization has, it turns out, laid the foundation for an entirely new form of infrastructural connectivity between countryside and city, one defined less by the 'hard' infrastructures of railways and highways that have indeed been passing many villages by, but by the 'soft' infrastructures of digital connectivity that have rendered much of the countryside a sort-of 'human infrastructure' of digital support services for middle class populations throughout the world. And while one might imagine this as a dystopian tale of surreal Taobao villages where everyone, even the chickens, works for Jack Ma, Wang's book is in many ways a sympathetic account of the real challenges facing rural China's development in the context of rapid urbanization, of the promise of technology in meeting these challenges, and, most importantly, of why everyone needs to better understand how things work in China before they start making unfounded assumptions about everyday life under the so-called thumb of a tech-enabled surveillance state.

An important feature of Wang's account, then, is its unwillingness to entertain culturalist arguments that traffic in Chinese exceptionalism, even as it insists that we understand rural China as a uniquely different world requiring grounded and nuanced understanding. In some ways, Wang shows us that rural China's challenges with tech are everyone's challenges. They are less the challenges of working and living under the heavy and clumsy hand of the party-state (a condition that, on the ground in rural China, is more myth than reality anyway), and more the challenge of our collective tendency to look to technology to solve problems that require more human and socially-oriented solutions. A good example is the 'blockchain chicken farm' itself. Wang's discussion of a Guizhou poultry farm where GoGoChickens (步步鸡) wear a QR-coded ankle bracelet that tracks their movement and behavior – "a chicken Fitbit of sorts" - is couched within the broader crisis of social trust in China, a crisis most clearly manifest in China's ongoing food safety problems. How do you extend trust when your consumption network is no longer contained within your local foodshed? In responding to this question, they point out that people

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have turned toward the private tech sector, instead of the government. This Wang finds ironic, given that the problems of food safety "are the result of a privatized, free market model of agriculture with global reach – where competitive market behavior drives cost cutting" (p. 46). The blockchain that prevents falsification of GoGoChicken records helps ensure that Shanghai buyers get a truly 'free-range' chicken raised in the clean mountain air of Guizhou for the RMB 300 they're willing to pay. As a technical infrastructure, blockchain is seen as better at mediating trust than the government, which is made up of fallible, sometimes corrupt, people.

But Wang – who is the creative director for *Logic Magazine* – points out that blockchain is far from a neutral technology. It merely shifts bureaucratic roles to technical ones. At some point you have to trust someone. Blockchain can even be viewed as a kind of techno-colonialism, whereby the collective institutions that maintain social trust are gradually replaced by technical platforms that require an inordinate amount of trust in the code-writers who possess a kind of knowledge completely foreign to the rest of us. Blockchain is about taking power away from central authority, which seemingly helps build social trust, but it puts that power in the hands of a select group of people who run the technical infrastructure. The code, the software, and the 'chicken Fitbit' all belong to the tech company (in this case Shanghai based Lianmao Technology); the Guizhou chicken farmer is reduced to a caretaker renting the infrastructure for a very thin slice of the profit.

Another example of how tech mediates social trust comes in the form of Alipay. Mobile payment has replaced cash throughout most of rural China. Alipay is a critical part of the rural economic infrastructure, where traditional banking has always been inconvenient. With its escrow system of holding payments until goods are delivered to the satisfaction of the buyer, Alipay solves the problem of social trust between (urban) buyer and (rural) seller. It has become the financial basis of Alibaba's signature rural development initiative, the Taobao Village. But, as one villager tells Wang, "Alibaba sucks us dry." The villager's full comment is worth quoting at length here, given its articulation of the problematic underside of 'rural-urban integration' in China:

> It sucks the blood out of us, and it will suck the blood out of this village. As sellers, all our money is kept in Alipay because that's how buyers send money. At the drop of a pin they can demand a refund, and because of the escrow service, the money gets sent back to them, even if I've shipped the order already…. The government thinks it's great and keeps doing things like building roads, putting in broadband. And Alibaba uses this infrastructure for free… (p. 200).

The digital infrastructures underlying China's urban-rural integration are enabling a form of techno-capitalism, what Zuboff (2019) has called "instrumentarian power," to spread throughout the countryside. This form of power "strips away the illusion that the networked form has some kind of

indigenous moral content, that being 'connected' is somehow intrinsically pro-social, innately inclusive, or naturally tending toward the democratization of knowledge" (Zuboff 2019, 9). Instead, digital connection merely provides a means to the commercial ends of more powerful actors. Wang calls our attention to this fact at times (calling China's rural areas "sites of extraction, conveniently located out of sight for urbanites"), but their objective is less an indictment of the countryside's digital colonization under rural urbanization than a call for a more complicated and realistic view of the situation. Two instances of this call come in their discussions of China's infamous *shanzhai* (山寨) 'knock-off' products and Huacheng Technology's "Real Population Platform" (实有人口平台).

It's not surprising that rather than viewing shanzhai as stolen intellectual property, Wang approaches it as an urgent, decolonizing force in tech. They view it as open source on hyperspeed, "an unapologetic confrontation with Western ideas of intellectual property. The designers and engineers of new shanzhai products build on each other's work, co-opting, repurposing, and remixing in a decentralized way" (p. 133). In rural China, Wang argues, shanzhai holds the promise of turning "protocols into practices that bind us together rather than centralize authority." Extending the idea of shanzhai from tech production to villager efforts to create their own smaller-scale 'knock-off' version tech-enabled agribusiness, Wang calls the Rice Harmony Cooperative in rural Guangdong a shanzhai community, where 'Frankenstein machines" are fashioned from the pieces of other equipment and where "people, not technology stand firmly at the helm of decision-making" (p.137).

In Guiyang, Wang confronts the Chinese surveillance state head-on with their interrogation of the "Real Population Platform" (RPP) being used by police to monitor crime in the fast-growing city's urban villages. But far from matching our dystopian images of an all-encompassing infrastructure of total surveillance facilitated by ubiquitous CCTV cameras, facial-recognition software, and behavior-predicting algorithms, the RPP requires a great deal of human effort to ground-truth the data, suffers from data incompatibility across multiple digital platforms, and faces problems with data sharing across organizations. They visit Face++, where the office's "generic geography" reminds them of any Silicon Valley start-up. Face++ "allays my apprehensions about a Chinese surveillance state," and yet Wang's relief that the heavy-handed state is less the monster it is made out to be is "overshadowed by worry over the making of a global surveillance industry, by people who stand to profit heavily from it" (p. 155). This observation comes amid the sobering reminder that the goal of China's SkyNet surveillance program is to *catch up* to the US in terms of number of cameras per capita.

None of this should discount the very real problems that rural China faces as a new frontier for the infrastructures of surveillance capitalism. But *Blockchain Chicken Farm* serves as an important corrective of assumptions that those problems are unique to rural China. This is not to suggest that surveillance capitalism is everywhere the same. In China, digital infrastructures are aimed at increasing production and security, while in the US they track online behavior for the primary purposes of enhancing consumption and profitability. Wang tells us that "rather than seeing the way technology has shifted or produced new livelihoods in rural China, I have been humbled to see the ways rural China fuels the technology we use every day, around the world" (p. 5). This shifts our perspective away from the rural-urban binary and toward the "not urban yet, no longer rural" in-betweenness of China's new infrastructure spaces (Oakes 2020b). These are now the everyday spaces of people's lives in the Chinese countryside, where rural urbanization is more fundamentally based on digital infrastructures, rather than the more visible highways, rail lines, and newly urbanized (or even suburban) settlements that grab most of the attention.

The spectacle of these 'hard' infrastructures distracts us from the mundane qualities of what Susan Leigh Star (1999) called "boring infrastructures," the circuits, cables, modems, switches, and codes of digital connectivity. But it is perhaps here that the most important story of rural China's unprecedented transformation is being told.

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