

Assembling Alibaba

The Infrastructuralization of Digital Platforms in China

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“Platform studies” have emerged in the past decade in response to the rapid expansion of various “platforms” (e.g., Facebook, Amazon, YouTube, Google; and Uber) to theorize the dynamic interactions between technological affordances and human agency.¹ More recently, the increasing domination of platforms in our social, economic, and cultural life, especially regarding the controversies surrounding the roles of social media platforms like Facebook and Twitter in the 2016 US presidential election, has prompted both fear about their monopoly and debates on government regulation or even nationalization.² Responding to these trends, a new line of research has emerged, looking at existing internet companies as hybrid entities of platforms and infrastructures, or “infrastructuralized platforms.”³ This shift speaks to scholarly efforts to situate discussions about monopolizing digital platforms in culturally and historically specific contexts, seeking to explore what happens when digital platforms’ technical properties and profit imperatives converge or clash with the public service responsibilities associated with their now infrastructural scale and function?

Building on this “infrastructuralized platforms” perspective, I take an “assemblage” approach to platforms and their infrastructuralization in order to highlight the culturally/nationally specific experiences of technological transformations,

albeit without essentializing culture or falling into the techno-determinist trap.⁴ Empirically, I will use the Chinese e-commerce giant Alibaba as a case study. In doing so, I echo the call of Poell et al. for a “more relational approach” to Chinese social media studies that pays attention to the intertwining of technical and non-technical features and their reconfiguration through complex associations.⁵ I argue that scholarly discussions of digital platforms can benefit from treating platformization and infrastructuralization not as static concepts but as a constantly transforming assemblage of heterogeneous forces, actors, traditions, and institutions. These assemblages include aspects that are both human and nonhuman, that are both historical and emerging, and that have impacts on both global networks and local communities.

As the world's largest e-commerce company and retailer, Alibaba has garnered enormous media attention, especially after its high-profile NYSE IPO in 2014.⁶ While the English-language media had been obsessed with the company's legendary CEO Jack Ma and its stock market performance, the majority of academic literatures published in English on Alibaba or Chinese e-commerce in general are in business management or economics.⁷ Scant attention has been devoted to unpacking Alibaba's enormous and growing social, cultural, and political impacts. This is an unfortunate oversight in our collective scholarly effort, for since its emergence in 1999, Alibaba has evolved from a start-up founded in Jack Ma's apartment in Hangzhou to a public-listed, multi-platform, e-commerce corporation of immense size. Especially in the past decade, following the 2008 global crisis, the corporation has achieved and consolidated its monopoly in China. By 2018, Alibaba, with nearly 550 million active mobile users per month, dominated the “iron-triangle” sectors of e-commerce, digital finance/payment, and logistics in China. With a rapidly expanding “eco-system” of subcontractors, affiliated companies, and invested high-tech firms, the corporation is making fierce inroads into new growth areas like cloud computing, digital mapping and navigation, online-offline hybrid stores, and entertainment industries. Alibaba is also trying to promote its overseas presence in regions like Southeast Asia and Australia. Meanwhile, the corporation enjoys immense support from both the central and local governments of various levels in China as governments rely on the company to spearhead the on-going economic restructuring and ease unemployment pressure. In short, Alibaba has evolved into a startling new form of international capitalism: it is part independent corporate entity and part quasi-official infrastructure taking up public service functions in collaboration

with the state, part an online social-media monopoly yet also an on-the-ground seller of goods and services.

Given Alibaba's platform-to-infrastructure evolution in the past two decades, I ask how is this process similar and different from those experienced by its Western counterparts? What are the social and political implications of Alibaba's infrastructuralization? What are the sites of tensions? And how does an assemblage approach to the Chinese experiences of platformization and infrastructuralization help us reconceptualize platform studies? Weaving together materials about Alibaba and Chinese e-commerce collected between 2009 and 2017 through ethnographic fieldwork, interviews, and industry analyses, I argue that the historical evolution of Alibaba resembles the "platformization-to-infrastructuralization" trajectory taken by its Silicon Valley counterparts, like Facebook and Google, as documented by Plantin and his colleagues.⁸ However, what this veneer of sameness conceals is the culturally and historically specific "assembling" of heterogeneous forces that constituted the two-phase transformation of Alibaba. Specifically, during the early years of its platformization, between the 1990s and mid-2000s, Alibaba positioned itself *against* state infrastructures as an alternative form of capitalism, while managing the tensions between its public services and profit motive. In the years following the 2008 global crisis, however, when Alibaba acquired infrastructural scale and significance, its earlier alternative positioning against the state gradually gave way to a more *symbiotic* relationship with the state. Meanwhile, tensions intensified as Alibaba's profit imperatives began to override its quasi-governmental service provision, as was captured by the two "Anti-Taobao" campaigns (to which I turn below). Small and medium-sized sellers, feeling betrayed and marginalized by Alibaba's prioritization of established and branded businesses, deployed networked technical means to momentarily disrupt the smooth running of the platforms in order to voice their discontents, demand government and public intervention, and hold Alibaba accountable to its infrastructural role:

The expansion of Alibaba from an alternative platform to government-dominated infrastructure had indeed opened up many opportunities for small entrepreneurs during its more public-oriented years when it was relatively marginalized by the state and aspired to infrastructural scale. Ironically, its public service role became compromised in the past decade as Alibaba grew more discriminating against small and medium-sized sellers after it had achieved infrastructural importance and established closer ties with the state. This tracing of the historical evolution of Alibaba from an assemblage perspective problematizes dichotomous

constructions of state vs. corporation, profit-driven platform vs. public-oriented infrastructure, and China as recipient/appropriator of Western technologies vs. the West as innovator and creator. Instead, I argue for a dynamic model of technological and cultural transformations that treats platformization and infrastructuralization as historically and culturally specific processes and relations constituted by constantly shifting and interacting heterogeneous forces.

Platforms, Infrastructures, and Assemblages

Platform studies emerged in the latter half of the 2000s as part a rising tide of scholarly voices critical of web 2.0 media corporations' profit-driven logic of encouraging social media interactivity. Crucially, platform studies drew attention to the increasingly significant role that "nonhuman" algorithmic agents were playing in mediating the interactions and negotiations between corporations and users. Equally important is their emphasis on the performative and relational dimensions of platform-mediated power. For instance, Gillespie analyzed how social media companies like YouTube deploy the discourse of "platform" to negotiate and conceal tensions between their populist image and their business and marketing appeal. Van Dijck portrayed platforms as a "set of relations that constantly needs to be performed" to maintain a delicate balance between the commercial, creative/expressive, and legal demands of various agents.⁹ A more recent development in the field of platform studies underlined the convergence between platforms and infrastructures.¹⁰ According to these scholars, digital platforms, relying on technical properties of platformization such as participation, programmability, and datafication, have evolved to reach a scale and social utility typical of infrastructures traditionally operated by government or quasi-governmental corporations. Like Facebook or Amazon in America, Alibaba too has evolved from being an online social media and consumer-services business to something more like a quasi-governmental entity, providing a wide range of services not embedded in other state institutions yet reaching hundreds of millions of daily users.

The convergence of platform studies and infrastructural studies therefore reflects two main concerns within and beyond platform studies. First, continuing from platform studies' sensitivity to technology-mediated power relationships, these scholars explore the shifting power dynamics facilitated by the infrastructuralization of platforms. That is, what does the privatization and deregulation of

public service-oriented infrastructures and the subjectification of infrastructures to the logics of corporate-run and profit-driven monopoly digital platforms mean for society? For instance, using Google Maps as an example of new cartographic infrastructure, Plantin argued that while the early platformization of maps in the mid-2000s decentralized mapping capacities, the recent infrastructuralization of Google Maps amounted to a “recentralization around private interests.”¹¹ Second, the growing interest in infrastructuralized platforms coincides with the global expansion of Western digital platforms and the rise and global ambition of monopoly digital platforms in non-Western regions like China. These trends have prompted scholars to situate digital platforms historically while becoming more sensitive to platforms’ interaction with different cultural and national contexts. These trends have led scholars to ask how do tensions generated by the convergence between platforms and infrastructures play out in historically and culturally specific ways as they intersect with different economic systems, labor traditions, business-state relations, and user habits?

Of these two trends, the former is represented by Nick Srnicek’s *Platform Capitalism*, which situates the contemporary proliferation of different types of platforms within the history of capitalism, and hence as an evolution in dynamics of labor extraction, market creation, and profit motivation. According to him, while platform capitalism deepened the post-1970s trend toward neoliberalization, it is also distinguished from pre-existing formations of capitalism by the centrality of data in the valorization process.¹² The latter trend intersects with another emerging set of literature that attempts to bring postcolonial studies into dialogue with platform, software, and media studies.¹³ One representative work in this area is Thomas Lamarre’s recent article on platformivity, where he describes the “infra-individual intra-actions between platform and human, and individual and collective,” arguing that new modes of power are generated as a result of the operation of media infrastructures “alongside and through national and regional forms.”¹⁴ From this perspective, the histories of platformization loosely mirror the course of colonialism and postcolonialism, thus mapping onto long struggles for national independence.

The current chapter builds on this merging of platformization and infrastructuralization, and deploys the theoretical and methodological lens of assemblage to analyze the case of Alibaba. While inspired by both Deleuze and Guattari and actor-network theory (ANT),¹⁵ I find Bucher’s approach to assemblage most relevant. Following her, I use assemblage as “an overall heuristic that allows for thinking more

broadly about the co-functioning and productiveness of heterogeneous elements.¹⁶ The perspective of assemblage, I argue, offers a productive site to draw on both platform studies' analytical focus on the interactions between algorithm and human agency, and the postcolonial sensitivity to historical and cultural specificities as emphasized by the recent attention to the infrastructuralization of platforms. This assemblage approach theorizes platforms and their infrastructuralization without essentializing culture or reifying technologies. I mean to trace, analyze, and depict the *process* of how heterogeneous agents—a web of global and local, human and nonhuman, historical and emerging entities—work together, in harmony or cacophony, in shaping specific experiences and formations. As McFarlane argues, “assemblage thinking is concerned with how different spatio-temporal processes are historically drawn together at a particular conjuncture.”¹⁷ This focus on the process of assembling offers a dynamic model of both technological change and cultural/national transformation. That is, assemblage thinking problematizes not only the binaries of Western technology/theory vs. non-Western culture/case, but also the very idea of culturally homogeneous nation/region.

This assemblage methodology enabled me to ask what platformization and its infrastructuralization mean for China, and what China means for our thinking (and rethinking) about the convergence between platforms and infrastructures? Instead of thinking about China as a passive recipient or appropriator of Western technology and capitalism, I see China as an active participant/actor in shaping platform capitalism, including its technical, economic, legal, and cultural properties.¹⁸ In the following section, I will take the assemblage approach to address Alibaba's rise and evolution, hence depicting the Chinese experiences of platformization and infrastructuralization. I then discuss the sociopolitical implications of the convergence of platformization and infrastructuralization in China.

(Dis)Assembling Alibaba: When Platformization Meets Infrastructuralization

From Alibaba to Taobao

The first phase in the genealogy of the Alibaba empire was bookended by the genesis of its business-to-business (B2B) e-commerce platform, Alibaba.com in 1999, and the market domination achieved by its consumer-to-consumer (C2C)

platform, Taobao.com, in the mid-2000s. While Silicon Valley platforms emerged and expanded with the “splintering” of the “modern infrastructural ideal” in the West since the late 1980s,¹⁹ Chinese digital platforms like Alibaba unfolded in the same period of time in parallel to the expansion of state-led capitalism.²⁰ In these early days, Alibaba took on a quasi-infrastructural role by positioning itself against state infrastructures as a more participatory, accessible, and efficient alternative to government-operated trading channels. This quasi-governmental “alternative” positioning was achieved partially by leveraging platform properties like participation, interactivity, programmability, and multiplication, which foster user labor, with the process financed by the global expansion of venture capital following the bust of the dot-com bubble. However, despite its alternative positioning against the state, Alibaba also reaped the fruit of state-led, export-oriented capitalism while riding on the development of state infrastructures like telecommunication and transportation. Prioritizing market expansion and user growth in the early days, Alibaba was able to manage the tensions between its profit incentive and its public-serving ambition by targeting small and marginalized business owners. This blurring between profits and public service came to define Alibaba's brand and corporate image and gave the company—likes its counterparts in America—the appearance of being both pragmatically useful for users and somewhat rebellious.

The broader force at play here was the development of state-led capitalism since the 1980s, resulting in the expansion of an export-oriented and manufacturing-based economy. This model, after all, was a post-socialist reinvention and revival of China's centuries-old “petty capitalist” tradition, in which small family-based commodity producers prospered but were prevented from expanding into full-blown capitalism by the extractive and paternalistic power of the state.²¹ At the turn of the new millennium, when Alibaba kicked off its e-commerce sites targeting small and medium-sized enterprises (SMEs), the tensions between petty entrepreneurs and different levels of government remained true, if not more complicated. Two decades after the initiation of China's post-socialist reform, the expansion of an export-oriented regime had fostered a vast and growing base of SMEs, serving as subcontractors and engaging in labor-intensive manufacturing for foreign corporations. Many were concentrated in the southern and southeastern coastal regions. While some started out as state-owned township and village enterprises (TVEs) in the late 1970s and 1980s, most became privatized in the 1990s as more private-owned businesses emerged in the decade of growing foreign direct investment (FDI) and export.²² Alibaba's rise thus coincides with the epic transformation of China from a

Mao-style command economy into a hybrid, post-socialist economy led by capitalist corporations with varying connections to the state.

Under this transformation, different levels of governments became active participants, not just in regulating but also in running the economy via practices like operating state-owned enterprises, leasing out land, and forming patronage relationships with business people.²³ As a result, the relationships between governments and small businesses were often ambiguous: while governments invested in building basic infrastructures like transportation and telecommunication networks, and promoted small businesses to create employment and boost GDP growth, they also curbed their expansion when SMEs threatened governmental economic monopoly and political control. Jack Ma, having grown up in one of the most entrepreneurial Chinese provinces as a small business owner with a humble family background, knew only too well the government's dilemma and the needs of those small businesses. Small businesses had limited means to secure export deals and expand production—they often lacked the scale and connections to be able to trade through state-owned export middlemen and found it costly and inconvenient to travel to trade shows like the Canton Fair.²⁴ Governments, bogged down in bureaucratic intricacies and conflicting logics, are inefficient in creating alternative trading channels. Therefore, Jack Ma positioned Alibaba.com as a private-owned trading platform for Chinese SMEs to bypass state-owned middlemen by directly finding overseas outlets for their products. Exploiting tensions within state-business relations in post-socialist China, Alibaba rode on the state-commanded export-oriented economy and governmental investment in infrastructures while trumpeting the platform's quasi-infrastructural role as a more democratic, accessible, and participatory alternative to state infrastructures.

Alibaba's quasi-infrastructural ambition in the early days was apparent from the numerous speeches that Jack Ma delivered. At one occasion, he said, "If you divide enterprises into rich people and poor people, the Internet is a realm for poor people... the price for a web page is basically the same. I want to enable poor people to use this tool to rise in a kind of revolution."²⁵ Evoking techno-utopian discourse, particularly referencing the participatory property of the platform as offering market opportunities with low-threshold entry costs, Jack Ma positioned his platform as an alternative infrastructure for the poor. On another occasion, he reiterated Alibaba's quasi-infrastructural ambition by invoking the metaphor of grains of sand united by the platform to rival big stones, highlighting the platform's

technical feature of multiplication, where small businesses were empowered by networking effect:

Small and medium-sized enterprises are like grains of sand on a beach. The Internet can glue them together. It can make them into an invincible force that is able to go up against the big stones. The virtue of the Internet is that it uses small to compete with big, it uses fast to compete with slow.²⁶

While emphasizing Alibaba's public service function, Jack Ma was intentionally vague about its profit motive. If anything, he shunned talking about profits when he commented in an interview with China Central Television (CCTV) that "no matter what you are doing, material gain should not be your main motivation."²⁷ What he also downplayed in all these public remarks was the fact that the platform's accessibility to SMEs was made possible by a series of inflow of venture capital money that Alibaba had secured from global venture investors like Goldman Sachs and Softbank between 1999 and 2001, before the company became profitable for the first time in December 2001. The assembling of a set of intersecting forces—such as the platform's technical properties, the small entrepreneurs' participation and labor, China's petty capitalist residuals revived by the state-commanded export-production regime, and the expanding global venture capitalist regime—constituted Alibaba's quasi-infrastructural positioning in the early days.

This quasi-infrastructural role was only strengthened with the emergence of its C2C/B2C platform, Taobao.com. Launched in May 2003, Taobao.com expanded Alibaba's quasi-infrastructural function by drawing more people to set up e-shops on its platforms and creating an alternative online shopping channel with more diverse choices and lower cost, and thus boosting domestic consumption. This expansion, on the one hand, intersected with the Chinese government's post-World Trade Organization policy shift to boost domestic consumption and digital and cultural industries.²⁸ The local Hangzhou municipal government and the Zhejiang provincial government, in particular, having realized Alibaba's potential in tax contribution and driving their local economies, grew increasingly supportive of its expansion. It also coincided, on the other hand, with global venture capitalists' post-dot-com-bubble enthusiasm about the Chinese internet industry. Since the early 2000s, the Chinese IT industry turned out to be a more exciting new site for global venture capital in the aftermath of the high-tech boom and bust in the 1990s.²⁹ This optimism about the Chinese market and industry was translated into

a constant inflow of venture capital investment into Chinese tech companies. Both trends facilitated Taobao's technical and business innovation strategies, which strengthened Alibaba's quasi-infrastructure role.

One central technical innovation that Taobao implemented to stimulate and channel seller and consumer participation and free labor is AliWangWang—the embedded IM system that allowed shoppers and shop owners to virtually replicate the bazaar-style haggle and banter familiar to Chinese people. The informal bargaining and chatting are reminiscent of the face-to-face communication between sellers and shoppers at local food markets, bazaars, and night markets occupied by small-business owners. In an informal market with no fixed price and formal product quality guarantee mechanism, the sellers and shoppers communicated with each other via instant messaging to quickly establish trust, negotiate a fair price, and sometimes form lasting friendships. While virtual chatting compromised the immediacy and transparency of face-to-face contact, AliWangWang created a set of expressive built-in emoticons to partially make up for this loss. This technical innovation not only helped establish “swift trust” in an unfamiliar virtual market perceived by many Chinese at that time as risky, it also functioned to improve the platform's “stickiness” and enhance users' sense of community.³⁰

Another winning strategy that Taobao adopted to set itself apart from other competing platforms, especially its biggest rival, eBay China, was to play the “non-fee” card. In 2003, when Taobao initially launched the website, it was free for sellers to register, list products, and sell online. In contrast, eBay China pushed for eBay's global “formula” with “insertion fees, final-value fees, and features fees, though at a lower level.”³¹ eBay's senior vice president for international business, William C. Cobb, justified the company's implementation of this standard fee structure in the Chinese market as a way to “train the community in how they can have the most vibrant marketplace possible.”³² This fee-based model of platform economy prevailed in the United States and other Western developed regions following the bust of the dot-com bubble in the early 2000s when venture capital money shrank, and the tech-scene was dominated by the few monopoly players who had survived the crisis. However, the situation on the ground in China was different than in the West. Taobao's free model turned out to be an irresistible attraction to Chinese petty sellers who usually had little, if any, start-up investment to begin with. Many of the early Taobao sellers, as I encountered during my fieldwork, were young people from ordinary, if not disadvantaged, family backgrounds, whose lack of personal connection and/or educational credentials made them less competitive in the

formal white-collar job market. It was typical for an entrepreneurial young couple or two college friends to get started by moonlighting on Taobao in addition to their day-time job or college education, sourcing commodities from local wholesale markets during the weekend and dropping off delivery packages on their way to work in the morning. As business expanded and became steadier, some sellers might quit their formal job to become full-time small-business owners. Thanks to global venture capital firms' optimism about the Chinese market, Taobao was able to sustain its "no fee" strategy for a prolonged period of time in its battle with eBay.³³ Taobao triumphed over eBay China by the end of 2005 with a market share of 67 percent vs. eBay's 29 percent. By 2006, Taobao had achieved domination of China's e-commerce market by virtually driving eBay out of China.³⁴

What's ironic here was how inter-platform competition backed by venture capital helped sustain, if not strengthen, Alibaba's quasi-infrastructurel role and public service-oriented corporate image—a phenomenon frequently replicated in the following years as start-up digital platforms pursued the "growth-before-profit" model. If anything, Taobao.com's success had only rendered Jack Ma more assertive in publicizing Alibaba's social values and infrastructurel ambition. Speaking at a 2005 economic forum in Shanghai, Ma justified Taobao's free model saying that his purpose of doing business was not to "win the competition," but to "create social value."³⁵ He was quoted in a 2008 speech explaining why Taobao stuck to its no-fee model, saying Alibaba's "mission" was not to "make some money," but to "create one million job opportunities and change the fate of numerous people."³⁶

Taobao Village and Post-2008 Rural Expansion

Situations started to shift gradually when the Alibaba ecosystem/platforms reached an infrastructurel scale and criticality around 2008, converting millions of more people into its army of e-commerce entrepreneurs. Entering its second phase of expansion, the Alibaba empire witnessed exponential growth between 2008 and 2014 and saw its annual revenue skyrocket from around 0.29 billion USD in 2007 to 8.05 billion USD in 2014, leading up to its high-profile IPO in 2014 at the New York Stock Exchange.³⁷ While numbers matter, Alibaba's increasingly important role in China's state-championed economic restructuring, which was itself a primary component of the post-crisis global recovery, appears to be crucial to the consolidation of its status as an infrastructurelized platform. Two new characteristics

distinguished this new phase of development. A deepened mutual penetration between Alibaba and the various levels of governments in China led to a more symbiotic and collaborative corporate-state relationship, which departed from Alibaba's prior alternative positioning. In comparison to its growing affinity to the Chinese state, its relationship with sellers, especially the small and medium-sized sellers that Alibaba had claimed as its primary consumers, became strained as the tensions between the platform's profit and social service orientations grew with its size.

Following the 2008 global financial crisis, a sudden contraction in overseas demand for made-in-China commodities forced export-oriented businesses to look inward toward China's own rapidly expanding domestic consumer market to ease the pressure of over-production. And so the Chinese state ramped up its new millennial ambition to restructure the export-oriented developmental model. Technological innovation, creativity, and entrepreneurship emerged as the new visions through which the nation reimagined itself in the post-2008 global world.³⁸ Despite its efforts, the central government found it hard to overcome the inertia of an old economic model built on export and fixed asset investment. As the pressure of unemployment and underemployment ran high, Alibaba became one of the biggest beneficiaries of the crisis. Not only did it serve as a bridge between factories seeking new outlets for their products and a growing number of domestic e-commerce consumers, it also helped generate employment and self-employment opportunities to absorb surplus labor from traditional industries.

The group that was hit hardest by the crisis was migrant workers who had been shuffling between cities and their rural homes for temporary work opportunities. Many had no choice but to return to their home villages due to factory labor cuts or shutdowns. However, once back home, they were often confronted with rural China's dire reality of lack of economic opportunities. As it did with the export-oriented small businesses in 1999 and the growing number of eager small-business owners and online shoppers in 2003, Alibaba seized the 2008 global crisis as an opportunity to expand its business empire into rural China and to recruit migrant workers and farmers onto its platform as both laborers and consumers.

A changing set of forces constituted the new terrain on which the post-2008 infrastructuralization of digital platforms has played out. Alibaba's growing capacity in the extraction, analysis, and monetization of its increasingly rich platform-based user data—and its pre-IPO imperative to expand user base and market—aligned with the central and local governments' eagerness to revitalize rural economies, ease

unemployment pressures, and facilitate economic restructuring. These technical and policy shifts also intersected with Chinese peasants' desire for village-based entrepreneurial economic opportunities that would allow them to earn a decent living while staying rooted in the countryside.

Platform-based datafication and participation worked together with non-technical forces of governments, media, academia, and entrepreneurs in shaping the assemblage of infrastructuralized platforms in this new phase of state-led capitalist restructuring, wherein corporate, governmental, and entrepreneurial ambitions converged. Departing from Alibaba's earlier alternative positioning, its infrastructuralized platforms bespeak the changing regime of technology-mediated governance and state-business relations in China, where governments and monopoly digital firms become increasingly symbiotic and mutually penetrating with the convergence of platforms and infrastructures. In particular, Aliresearch, the e-commerce research institute directly serving the interests of the Alibaba Group, played an instrumental role in weaving together a web of media, scholars, governmental agencies, and peasant entrepreneurs to create the so-called "Taobao village" phenomenon.

The concept of the "Taobao village" was initially coined by Aliresearch in late 2010 to describe three villages where e-commerce self-employment had become a dominant profession among villagers. The attention-grabbing stories of Chinese peasants on computers were soon picked up and widely circulated by media. In September 2010, Alibaba Group crowned the most well-known of the first three Taobao Villages, Shaji village,³⁹ with the title of "Best Cradle for E-commerce." Not coincidentally, in December of the same year, a research team from the state-owned Center for Information Study (CIS) visited Shaji and released a report on Aliresearch's website.⁴⁰ Titled "Shaji Model and Its Significance," the report compared Shaji to Xiaogang village, which is widely known as the "birth place of post-socialist reform." It also eulogized rural e-commerce as the triumph of information technology and market forces—a grassroots-initiated "bottom-up" path of informationalization.⁴¹ On December 18, immediately following the release of the report by Aliresearch, a group of "high level experts" (Gaoceng Zhuanjia) from governmental and academic agencies, such as the Development Research Centre of the State Council, the Ministry of Agriculture, and the Ministry of Industry and Information Technology, convened in Shaji to "discuss the significance of the Shaji model" as "a new path for rural development."⁴²

In a more detailed report released in 2014, the same team from CIS celebrated

"Taobao village" as a solution to China's "rural problem" and an alternative path of urbanization.⁴³ It was said that the internet had made it possible for small household-based production to directly reach the global market without the intermediary of big companies. Compared to TVEs in the 1980s, e-commerce was more effective in absorbing rural surplus labor, driving the modernization of rural China and democratizing opportunities to participate in economic activities, and thus had helped restructure rural economies to make rural society more just and "harmonious."⁴⁴ Taobao village was thus endowed with the same significance that TVEs enjoyed two decades ago when the post-socialist market reforms were initiated in rural China. Thus, in contrast to the United States, where e-commerce tended to facilitate opportunities in major urban areas, Alibaba managed to deploy e-commerce for the advantage of rural users.

At the village level, Alibaba cultivated representative villages and individual entrepreneurs through a combination of data and media management. Alibaba's big-data team generated visualization of e-commerce businesses on its platform by tracking shop owner's IP addresses. Once they identified a heavy concentration of businesses in one rural area, they would dispatch a team of Alibaba employees to cultivate relations with the local government and peasant shop owners. To bring visibility to the selected village, the company would invite journalists from various media outlets to carry reports on the village and peasant entrepreneurs. To attract more peasants into e-commerce, Alibaba would sometimes pick one representative peasant inside the village to create a "success story." One way to do so was by channeling more advertising traffic to the selected peasant entrepreneur's business. This was often achieved through technical means such as bumping up their product listing ranks and offering them more opportunities to participate in the various promotional activities that the platform hosted periodically. As one of the peasant entrepreneur interviewees that I met during my fieldwork in Shandong explained to me: "They will let this person get rich quickly, get a car, and buy a new house. Then villagers will follow his footsteps in the hope of replicating his success story. It's all the same trick if you observe the adjacent villages in this area."⁴⁵ This algorithmic promotional cherry-picking strategy was usually supplemented with media publicity of the entrepreneur, hence spreading his/her success stories for others to emulate. While I conducted my fieldwork in the same Taobao village in rural Shandong, I spent a couple of weeks at the family shop of a local "model entrepreneur." I quickly noticed that his schedule was filled with either receiving visitors accompanied by local cadres who had come to "learn from his success," or

interviews by media outlets from across the country and occasionally from overseas media as well. In this way, Alibaba's e-commerce strategies were deeply indebted to its aggressive marketing.

Between 2010 and 2015, as the concept of "Taobao village" was gaining traction through media coverage and expert endorsement, rural e-commerce began to garner support from different levels of government. In 2012, Alibaba proposed a new "Suichang model" of Taobao villages based on its collaborating experience with the Suichang County government (Zhejiang Province). Emphasizing the functional role of local government, this move hinted at a stronger tie between the e-commerce giant in search of new markets and local governments eager to boost economic growth and earn political cache. This merging of the corporate goal of market expansion with local governmental interests through media publicity and academic endorsement is at heart of the making of the Taobao village phenomenon. The mechanism came into maturity in late 2013 at the "First Taobao Village Summit"—a ritualistic ceremony that I attended during my fieldwork in China. Cohosted by Aliresearch and a municipal government in Zhejiang, and attended by journalists, scholars, and peasant representatives from fourteen Taobao villages, the event was nothing short of a staging of the different forces that had cocreated the Taobao village phenomenon.

At the central level, Alibaba's lobbying efforts had materialized into proposals conceived by various parliamentary representatives calling on the Chinese state to spearhead rural e-commerce at annual parliamentary sessions. Pressured by a slowdown in economic growth, the Chinese state had issued a series of documents to encourage peasant digital entrepreneurship. In November 2014, the Chinese Premier Li Keqiang visited Qingyanliu, the so-called "No. 1 Taobao village" in Zhejiang before giving a speech at the World Internet Conference. It turned out that he was just sending out political signals for his major policy initiatives of "Internet Plus" (*Hulianwang Jia*) and "Mass Entrepreneurship and Innovation" (*Wanzhong chuangye*). Released in his March 2015 government work report, both were designed to restructure the Chinese economy, with the former emphasizing the informationalization of existing manufacturing and agricultural industries and the latter aiming at rendering the current economic system more participatory and less centralized. These new governmental initiatives aligned perfectly with Alibaba's stress on peasant internet entrepreneurship and the digitalization of traditional rural industries and agriculture. Meanwhile, Alibaba increased its counting of the number of Taobao villages to 212 following its NYSE IPO at the "Second Taobao

Village Summit" in late 2014. Faced with competition from other Chinese e-commerce corporations like the JD Group, Alibaba was making further inroads into rural China by supplementing its Taobao village project with a new "A Thousands Counties and Ten Thousand Villages" (*Qianxian Wancun*) campaign. Launched in October 2014, the campaign intended to collaborate with local governments to build rural e-commerce infrastructure, such as village-based package delivery stations and an e-commerce "innovation park." Thus leading the post-crisis restructuring of Chinese capitalism, Alibaba turned the crisis into a new site of business expansion.

As Alibaba had reached infrastructural scale and significance, we witnessed a more collaborative and mutually penetrative relationship between the state and digital platforms. Departing from Alibaba's earlier quasi-infrastructural positioning as a more efficient, accessible, and participatory alternative to governmental infrastructures, we witnessed a convergence of corporate and governmental forces in shaping infrastructuralized platforms. Alibaba effectively leveraged its economic and political power to cultivate intimate ties with both the central and local governments in China, which had cleared the decks for its further expansion. The rapidly expanding group of e-commerce businesses, some of which had grown into big firms, with hundreds or even thousands of employees over the years, but most of which stayed small, constituted a new entrepreneurial class in China with shared interests, aspirations, and concerns. However, within this new entrepreneurial class, new hierarchies began to form. As Alibaba became increasingly discriminating against small and medium-sized sellers, after it had achieved monopoly status in China, it's not surprising that disadvantaged and disgruntled sellers rose in protest to hold Jack Ma accountable for Alibaba's now-broken public-serving promises. The two "Anti-Taobao Campaigns" launched by some discontented small and medium-sized shop owners on Taobao in 2011 and 2013 respectively, as I will show, represented two such moments of disruption. In each case, disaffected actors hijacked Alibaba's own algorithmic machines to "disassemble" Alibaba, disrupting the smooth running of the platform to get their voices heard.

Tensions and Disruptions

While Taobao's "free model" was crucial to its rapid market expansion in the early days, especially in its battle with eBay in the mid-2000s, it became a liability after the corporation had secured about 90 percent of China's C2C e-commerce market

share following the 2008 crisis. On the one hand, a large number of low-quality commodities sold by small sellers were knockoffs of branded products, posing both quality control and legal challenges for Alibaba. On the other hand, the fact that Taobao was not generating sufficient profit for Alibaba, despite its high volume of transactions, discouraged the company's investors and employees—both were anxiously waiting to cash in on its long overdue IPO. In response to mounting pressure, Jack Ma's first move was to launch a fee-based B2C site, Tmall.com, which was linked with the original Taobao.com, and encouraged bigger businesses on Taobao to migrate to Tmall. As an incentive, Tmall shops received preferential treatment, which ranged from better customer service to more advertising traffic. This move rendered the Taobao/Tmall platform immediately profitable in 2009, yet it also sowed the seeds of dissatisfaction among the small and medium-sized shops on Taobao.

Apart from the launch of the new fee-based B2C site, Alibaba also created new embedded advertising and marketing applications on Taobao to boost revenue. One of the most profitable but notorious apps, known among shop owners as the “blood-sucking” Zhitongche, is a paid search ranking system that charges shop owners based on the number of user clicks. Another advertising mechanism, Taobaoke, consists of a network of freelancing social media marketers who are paid by commission fee in direct proportion to the number of transactions generated for businesses on Taobao. These new applications and other subtler changes in the platform's algorithmic design tilted the website toward big sellers with more start-up funds and financial backing, while making it increasingly costly for small shops to generate profit. Adding fuel to the fire, Alibaba decided to push the monetization process even harder in October 2011 by announcing two new changes. First, the company increased Tmall's annual technology and service fee from 6,000 RMB to two new levels of 30,000 and 60,000 RMB. Second, it bumped the one-time security deposit charge up to three new levels of 50,000 RMB, 100,000 RMB, and 150,000 RMB respectively. This announcement immediately caused an uproar among the small and medium-sized shop owners who had long felt marginalized and unfairly treated by the platform's profit-driven transformations. In short, Alibaba had adopted more traditionally corporate, profit-driven practices—and its users were soon in rebellion.

Following the release of the policy, disaffected shop owners immediately gathered together for discussion, using the group chat function of Taobao's embedded IM tool AliWangWang while posting comments on Taobao's internal forum

to express their anger. When the night fell, a small group gathered in a virtual chatroom on YY—a popular Chinese video-based social networking platform—to avoid being monitored by Alibaba. In the following day, anger escalated as the size of the group quickly ballooned from a few dozens to more than fifty thousand people. Meanwhile, the name of the virtual chatroom switched from “Meeting to Discuss Tmall’s New Policy” to “Anti-Taobao Price Increase Coalition,” and then to “E-commerce Businesses’ Rights-Defending Channel.” Participants queued up in the chatroom to vent their frustration, some broke into tears while recollecting how hard they and their families had worked to make a living on Taobao, and others called on the participants to launch virtual attacks at big sellers on Taobao.⁴⁶ One of the protestors argued:

Why don't we just leave Taobao? Putting aside personal feelings, consumer base and traffic are the key. Our small and medium-sized sellers have spent seven to eight years, selling high-quality products, working day and night, investing hard labor, and even sacrificing our health. It is us who have toiled to help Taobao accumulate such a huge consumer base and volume of traffic, sending Taobao to its monopoly position today. Why do we have to leave now? Who would compensate for our loss if we move to another platform?⁴⁷

Another protestor had just moved from Taobao to Tmall but was intimidated by the impending fee hike. He protested:

Why don't we want to return to Taobao? If we could still maintain a decent living, as they told us to “realize our dream” on Taobao, then who wants to make a fuss by moving to Tmall? The answer is simple. Businesses on Tmall are like children of the first wife's who are always spoiled no matter what they do. In comparison, those on Taobao are treated like adopted children. Alibaba neglects us and leaves us with little traffic and customer attention.⁴⁸

The night following the release of the new policy, protestors from the YY chatroom began to launch organized attacks at big Tmall shops. They swarmed into the online stores of a few targeted big sellers, placed a large number of orders, left negative ratings and comments, but refused to finalize the payment process. They gamed the platform's algorithm to paralyze the operation of the targeted big sellers. By October 17, one week after the announcement of the new policy, 112 big Tmall

shops were attacked, 5,599 people participated in the attack, and 7,230 null orders were placed, causing a damage of 94.55 million RMB.⁴⁹ In the evening of October 21, under the slogan of “ants eat up the elephant,” a wordplay with Taobao’s brand mascot “Taotao the ant,” a new round of virtual attack was launched targeting Alibaba’s payment system, Alipay. They called on dissatisfied sellers to empty their Alipay account by transferring the money out into their bank accounts.

In parallel to the online protest and virtual attack, some sellers organized offline campaigns to protest in front of Alibaba’s Hangzhou headquarters. The YY-based coalition also donated money to send a group of representatives to protest in Hong Kong’s Time Square. During the protest, a theatrical moment struck when the protesters set up a “mourning hall” for the very-much alive Jack Ma to express their disappointment in this cultural icon of grassroots IT entrepreneurship. The 2011 Anti-Taobao campaign went so belligerent that the Chinese Ministry of Commerce had to step in as an arbitrator between Alibaba and the protesting businesses. In the end, Jack Ma was forced to make a concession with the protestors. He spent 1.8 billion RMB to subsidize qualified small businesses on Tmall and help smooth the migration from Taobao to Tmall.⁵⁰

Two years later, in December 2013, the “anti-Taobao” coalition launched another protest when Alibaba suddenly went on a campaign to penalize the much-tolerated practices of faking transactions and ratings, intentionally targeting small and medium-sized shops while turning a blind eye to big businesses engaged in the same practices. By 2013, competition grew so fierce on Taobao and Tmall that faking transactions had become a commonly practiced trick among businesses of all sizes to improve shop ratings and artificially drive up product page rankings. If anything, a new underground industry of third-party businesses had emerged in China to cater to Taobao shops’ growing demand for faking transactions and customer comments and ratings. It was generally known that Alibaba had tolerated such practices because they helped boost the platform’s transaction volume. So when the company suddenly decided to get tough on selected businesses, it was widely believed among Taobao shop owners to be a coordinated effort to crack down on unwanted small businesses so as to clear the way for its upcoming global IPO.

This time, the small business owners on Taobao organized under the slogan of “Anti-Monopoly.” They appealed to Alibaba with eight clearly-stated demands, asking for a more democratic and fair online trading environment that respected the rights of the small players. To make their campaign more effective, the coalition again resorted to technical means. This time, they decided to hijack the much-hated

“blood-sucking” advertising application Zhitongche. The strategy was to keep clicking on the targeted big businesses’ product listing pages without placing an order, causing them tons of wasted advertising money while lowering their “click-to-purchase conversion rate” (Zhuanhuanlv)—a key algorithmic criterion by which the platform calculates shops’ reputation scores.⁵¹ Offline protests were again staged in front of Alibaba’s Hangzhou headquarters but met stronger confrontation from the local Hangzhou municipal police, who were acting on behalf of their biggest taxpayer to muffle resistance against its monopoly. Compared to the 2011 anti-Taobao campaign, the 2013 protest subsided more quickly without much compromise from Alibaba, which could partially be explained by the corporation’s stronger ties with both the central state and the Hangzhou provincial government. The transformation is therefore remarkable: from standing as a rebellious and user-friendly alternative to the state in its early days, Alibaba was now relying upon the police to break up protests while paying off its critics.

Conclusion: “Alibaba Neglects Us” and the Evolution of Platforms

Alibaba’s expansion in the past two decades has opened up new economic opportunities for small-business owners in China who had been marginalized by state-operated infrastructures. Its success rendered it an indispensable technological and social infrastructure in China, straddling the corporate and public realms. This assemblage approach to the history of Alibaba represents my modest attempt at seeking an alternative theoretical and methodological route to both the techno-determinist and cultural essentialist accounts of Chinese internet studies. I hope that I have demonstrated how we could approach technological changes and national/cultural transformations, here captured through the lenses of platformization and infrastructuralization, as intertwining processes constituted by heterogeneous forces that could be technological or cultural, global or local, historical or emerging.

The evolution of Alibaba since the late 1990s from an e-commerce startup to a multi-platform ecosystem of infrastructural scale and significance resembled the process of platformization and infrastructuralization as experienced by digital platforms in the West. However, while the Western story of platformization and its infrastructuralization unfolded with the splintering of the “modern infrastructural ideal” and the retreat of government from the digital economy, a closer examination

of Alibaba's history using the assemblage approach reveals a more ambivalent relationship with the state, characterized by its quasi-infrastructural positioning *against* the state until the mid-2000s, when Alibaba shifted into a more symbiotic relationship with the state following the 2008 global crisis.⁵²

Ironically, as a quasi-infrastructural platform in the early days, Alibaba fared better at managing the tension between its profit imperative and its public service ambition of providing nondiscriminatory service. Despite the deepening mutual penetration between Alibaba and various levels of government in China, the tension intensified after the corporation reached a monopoly scale and infrastructural significance in the late 2000s, resulting in growing discontents coming from its small and medium-sized sellers and a series of seller-initiated protests and attacks on the platform. This story about Alibaba's evolution challenges dichotomous conceptualization of public vs. private, governmental infrastructure vs. corporate platform, local culture vs. global technologies. However, we are just beginning to grasp the profound but also constantly shifting implications of the convergence and blurring of these forces.

A 2014 *New York Times* article, quoting Duncan Clark, the chairman of the Beijing-based consulting firm BDA China, humorously referred to this "Taobao Empire" as a "constituency" with Alibaba's CEO Jack Ma as its captain: "a politician with a small 'p'" who "effectively represents millions of people who now depend on Alibaba for their livelihood."⁵³ In an interview with *60 Minutes* correspondent Lara Logan on September 28, 2014, when asked about Alibaba's relationship with the Chinese government, Jack Ma stated that "they [Chinese politicians] care that I can stabilize the country. I told the government, 'if people have no jobs, you are in trouble—the government will be in trouble.' My job is to help more people have jobs."⁵⁴

By this time, Ma sounded less like a tech-driven rebel than the unofficial minister of finance. However, it would be important to ask what kinds of jobs the e-commerce platforms are creating now that they have become infrastructuralized, absorbing labor from traditional industries and governmental sectors—as a result of, but also further facilitating, the shrinking of those sectors with the deepening of China's economic restructuring. If platform-based flexible "employment" and self-employment are going to be normalized, how can we ensure that the workers'/entrepreneurs' rights are protected? These questions are beyond the scope of this paper, but it's certainly both ironic and alarming to see the increasingly unequal profit-driven and algorithm-mediated distribution of resources on Alibaba's

platforms, particularly as they become infrastructuralized and are thus more and more entwined in daily life in China.

The resistance staged and disruptions generated by technically equipped small and medium-sized sellers give us some hope about collective bargaining. However, the deployment of user data and the manipulation of platform ranking systems to serve corporate expansion appear particularly disturbing given the direct or indirect roles that governments and state-owned media and academic institutions play in promoting the expansion of the platform-based regime of accumulation in post-2008 China. Looking ahead, it's likely that small and medium-sized sellers will find it increasingly difficult to survive on Alibaba's platforms given policies and algorithms favoring big players and established brands. It's urgent that we call for a "reassembling" of the different forces that constitute infrastructuralized platforms—governmental and grassroots, technological and social, domestic and abroad—to reorient the platformization and its infrastructuralization to a more sustainable and socially responsible direction.

NOTES

1. For representative works on platform studies, refer to Tarleton Gillespie, "The Politics of Platforms," *New Media & Society* 12, no. 3 (2010): 347–64; Ganaele Langlois and Greg Elmer, "The Research Politics of Social Media Platforms," *Culture Machine* 14 (2013): 1–17; José Van Dijck and Thomas Poell, "Understanding Social Media Logic," *Media and Communication* 1, no. 1 (2013): 2–14.
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5. Thomas Poell, Jeroen de Kloet, and Guohua Zeng, "Will the Real Weibo Please Stand Up? Chinese Online Contention and Actor-Network Theory," *Chinese Journal of Communication* 7, no. 1 (2014): 1–18.
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7. A few recent exceptions of works about Alibaba published outside of economics and management include: Linliang Qian, "The 'Inferior' Talk Back: Suzhi (Human Quality), Social Mobility, and E-commerce Economy in China," *Journal of Contemporary China* 27, no. 114 (2018): 887–901; Michael Keane and Haiqing Yu "Communication, Culture, and Governance in Asia: A Digital Empire in the Making; China's Outbound Digital Platforms," *International Journal of Communication* 13 (2019): 18.
8. Plantin, "Mapping Platforms."
9. José Van Dijck and Thomas Poell, "Understanding Social Media Logic," *Media and Communication* 1, no. 1 (2013): 2–14.
10. Lamarre, "Platformativity"; Maitra and Chow, "Asiascape"; Plantin et. al., "Infrastructure Studies Meet Platform Studies"; Srnicek, *Platform Capitalism*.
11. Plantin, "Mapping Platforms," 501.
12. Srnicek, *Platform Capitalism*.
13. Lilly Irani, Janet Vertesi, Paul Dourish, Kavita Philip, and Rebecca E. Grinter, "Postcolonial Computing: A Lens on Design and Development," in *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (ACM: 2010), 1311–20.
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15. See Manuel DeLanda, *Assemblage Theory* (Edinburgh University Press, 2016), and Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford University Press, 2007), for more information about assemblage and ANT.

16. Bucher, "The Friendship Assemblage," 481.
17. Colin McFarlane, "Assemblage and Critical Urbanism," *City* 15, no. 2 (2011): 209.
18. Michael Keith, Scott Lash, Jakob Arnoldi, and Tyler Rooker, *China Constructing Capitalism: Economic Life and Urban Change* (London: Routledge, 2013).
19. Steve Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (London: Routledge, 2002).
20. See Yuezhi Zhao, "China's Pursuits of Indigenous Innovations in Information Technology Developments: Hopes, Follies and Uncertainties," *Chinese Journal of Communication* 3, no. 3 (2010): 266–89. Since the 1980s until the mid-2000s, the Chinese state had followed a path of gradual and partial privatization, setting the nation on the developmental track of an export-driven accumulation regime, embracing foreign direct investment (FDI) while maintaining control of commanding heights sectors like telecommunication infrastructures.
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31. "Online Extra: eBay's Patient Bid on China," *Bloomberg Businessweek*, March 15, 2004, <https://www.bloomberg.com/news/articles/2004-03-14/online-extra-ebays-patient-bid-on-china>.

32. "Online Extra: eBay's Patient Bid on China."
33. While in 2003 eBay claimed 90 percent of the Chinese C2C market share, Taobao was able to grab 9 percent of the market by early 2004 when SoftBank replenished its investment. In October 2005, emboldened by a new round of venture capital injected by Yahoo!, Taobao announced an extension of its no-fee plan for three additional years, following which it received a mass migration of customers from eBay China.
34. Shiyang Liu, *Shui Renshi Mayun 2*.
35. Cuodao Jin, *Mayun Guanli Riji* [Jack Ma's management diary] (Zhejiang, China: Zhejiang University Press, 2013).
36. Alibaba, *Mayun Neibu Jianghua*.
37. Darryl Date-Shappard, "Alibaba Can Supply Huge China Consumer Demand with U.S. Businesses on Tmall, Taobao," *Seeking Alpha*, June 11, 2015, <https://seekingalpha.com/article/3252045-alibaba-can-supply-huge-china-consumer-demand-with-u-s-businesses-on-tmall-taobao>.
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48. Personal Interview, 2014.
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