

Operations of Platforms. A Global Process in a Multipolar World



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The outbreak of the Covid-19 pandemic has engendered a crisis of mobility whose multiple dimensions have affected the movement of people and “stuff,” border regimes and logistical supply chains, the daily life of people in many parts of the world and the organization of labor (Mezzadra & Neilson, 2022). In such a conjuncture, digital platforms have emerged as key devices to manage the crisis, in such diverse fields as communication, food delivery, and e-commerce. The booming profits and stock exchange value of companies operating in such fields have been defining features of the economic implications of the pandemic conjuncture, while platforms have become increasingly visible in public discourse. Accordingly, digital platforms have come to figure prominently among those “systems underpinning social and economic life” whose maintenance and reproduction played a key role in defining “essential labor” during lockdowns in different parts of the world (Lakoff, 2020). The connection between platforms and mobility management has been apparent in the pandemic conjuncture, while new forms of risk and new hierarchies emerged between people who were often compelled to risk contagion to provide services and people who were allowed to work from home and could do that also due to those services. Working at the intersection between the domains of circulation and social reproduction, the operations of platforms prompt significant mutations of capital and labor, which deserve a detailed investigation.

At the same time, there is a need to note that the pandemic conjuncture was characterized by the proliferation of discourses lamenting or celebrating the end

We expand on some of the topics addressed in this chapter in our book *The Rest and the West*, forthcoming from Verso.

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of globalization, which was even more the case in the wake of Russia's invasion of Ukraine on February 24, 2022. We have always been wary of the prevailing rhetoric of globalization, which emerged in the 1990s to sustain a specific project of globalization of capitalism under US leadership, and we have always privileged in our work a focus on what we call "actually existing global processes" (see Mezzadra & Neilson, 2013). While globalization conjures up the image of a smoothly working and tightly integrated system, global processes are not necessarily easy to combine and frictions, tensions, even conflicts among them are the rule rather than the exception. They may be homogeneous in their logic and operative "rationality," but when they "hit the ground" they may produce a huge deal of heterogeneity (see Mezzadra & Neilson, 2019). From this angle, what characterizes the current conjuncture is not that much the end of globalization, but rather a violent scramble to control the spaces within which global processes are played out. With Adam Tooze (2021, 294), we are convinced that we are living in a world that at least since the financial crisis of 2007/8 is shaped by a "centrifugal multipolarity" that builds the background of current conflicts. It is in this framework that in this chapter we analyze the operations of digital platforms, or maybe more precisely processes of platformization of capital and labor. Such processes are definitely global, they reshape economy, governance, and society across diverse geographical scales, while their impact is characterized by different degrees of heterogeneity. We start by fleshing out what we call the platform model, and by analyzing some of its implications for capital and labor. Then, following the call to "de-Westernize platform studies" (Davis & Xiao, 2021), we discuss the challenges it raises, and we conclude with an analysis of the processes of platformization in China.

1 The Platform Model

In what sense is it possible to talk of platforms in terms of a model? Digital platforms have a pronounced peculiarity, but a quick look to the past is helpful to answer this question. Besides its political meanings, referring to a program or a plan of action, in the twentieth century the word platform has been used in the economic domain mainly with respect to extraction, and in particular oil extraction ("oil platform," "offshore platform," and the like). This is an effective reminder of the extractive dimension of the operations of platforms that we will discuss later and that figures prominently in the platform model. To start our investigation, there is in any case a need to flesh out the peculiarity of digital platforms and of the abstract rationality underlying their operations. Platforms, Benjamin J. Bratton (2015, 44) writes in *The Stack*, "are generative mechanisms – engines that set the terms of participation according to fixed protocols (e.g., technical, discursive, formal protocols). They gain size and strength by mediating unplanned and even unplannable interactions." Interactions are the core business of digital platforms. Not only do these platforms aim to organize interactions but they also provide an infrastructure that allows the conversion of what appears unplanned, or even unplannable, into the elusive order of a plan.

Intermediation lies therefore at the heart of the working of digital platforms, while the generation of participative settings and the control of their governing protocols describe some of their most crucial operations. Once they are defined in this way, it is easy to see that platforms are characterized by a specific politics (see PLUS, 2022, 181–183) or, to follow Bratton (44), that they instantiate a “third institutional form, along with states and market.” Organizing interactions impinges on individual and collective behaviors, or “conducts” to put in the terms of Michel Foucault. And it facilitates their government, understood as a “conduct of conducts” (Foucault, 1994, 237). This is for us an important point considering the relevance of the platform model in shaping digital spaces and operations of capital across the globe today. The rationality of intermediation that builds the abstract connection among deeply heterogeneous platforms has a genealogy that needs to be stressed. While it is clear that platforms operating in the fields of transport and delivery are engaged in the execution of logistical tasks, the very rationality of intermediation itself has a logistical origin and imprint. Even from a technical point of view, issues of interoperability (the ability of different systems or devices to connect and communicate in coordinated ways) and intermodalism (the organization of transportation across more than one mode) can be mentioned as logistical antecedents of the rationality of intermediation implemented by digital platforms (see Cowen, 2014, 44).

It is important to stress the logistical genealogy of digital platforms, which can be traced back to processes of standardization and abstraction enabling the containerization of global transport. As an art of connection, logistics has developed at least since the 1970s a whole system of protocols and junctures that allow the infrastructural “intermediation” of the movement of multifarious resources, adapting to any kind of contingency and “bottlenecks” (see Grappi, 2016, 121). In doing so, logistics deploys a specific form of power, that includes the management of global space and time but also the governance of territories and populations (see Neilson, 2012). Precisely because of their logistical genealogy, digital platforms need to be investigated also from the angle of the power effects and logic encapsulated in the very technical core of their working. Moreover, seen in terms of the labor it employs and exploits, logistics has been over the last decades a crucial site of experimentation with systems of labor management. The use of “key performance indicators” (KPIs) to monitor and shape the labor of individuals and workforces, for instance, has anticipated the algorithmic management that is usually associated with the operations of digital platforms (Altenried, 2022). Once the latter are considered in a line of continuity with developments in logistics, the rationality of intermediation that characterizes them appears far from neutral and the issue of labor emerges as a key stake in their working.

It is with these aspects in mind that we speak of a platform model, even though we remain aware that this model finds a panoply of radically different instantiations in the real world. This variety derives not simply from the multifarious fields in which platforms operate, but also from the rationality and logic of their use. There is in fact no shortage of experiments with “platform cooperativism” (Scholz, 2016), while more generally labels like “gig” and “sharing economy” signal an emphasis on participation, sharing practices, and encounters that is indeed a key element of the

rhetoric employed by platforms and may well correspond to the motivations and even to the ethics of many “users.” Nevertheless, such emphasis has been rapidly obscured by the steady development of corporate platforms, which are clearly driven by the logic of valorization and accumulation of capital. A specific “platform capitalism” has taken shape over the last years (Cuppini et al., 2022). As Nick Srnicek (2017, 3) writes, corporate platforms are constantly seeking out “new avenues for profit, new markets, new commodities, and new means of exploitation.” In so doing, platforms have forged a new type of firm that proliferates across economic sectors, while the rationality of intermediation that sustains their operations has become the ground of a new expansion of the frontiers of capital within territories not yet open to the logics of valorization and accumulation.

To get an effective image of the ways in which platforms facilitate processes of capital valorization and accumulation, and are indeed structurally germane to them, one has only to add “value” to “size and strength” in the quote from Bratton that we discussed earlier, in which he writes that platforms “gain size and strength by mediating unplanned and even unplannable interactions.” Platform capitalism is driven in all its forms, from food delivery apps to huge infrastructural platforms like Google or Amazon, by a bulimic will to capture the widest possible spectrum of interactions, which become an eminent ground for processes of valorization of capital. Data extractivism and techniques of data mining are the main tools used in this endeavor, which aims to transform interactions into sources of value. Platforms rework the so-called “network effect,” a basic economic notion according to which the value of a product or service depends on the number of buyers or users (Srnicek, 2017, 46–47). In the case of platforms, this effect generates a powerful expansive and even monopolizing push, which leads some scholars to connect platform capitalism to the principle of “antimarket” that for the French historian Fernand Braudel runs through the whole history of modern capitalism (see Peck & Phillips, 2021).

2 Platformization

In the West platform capitalism emerged in the wake of the financial crisis of 2007/8, when the generalized low-interest rate environment built by central banks reduced the rate of return on a wide range of financial assets and prompted investors, so-called “venture capitalists,” to “turn to increasingly risky assets” (Srnicek, 2017, 30). In this environment, platforms emerged as a new business model, designed on the principle of intermediation between different user groups and on the infrastructural development that allows capturing and governing an expanding set of interactions for the sake of profit. The platform model, however, was far from remaining restricted to the West or from being simply “exported” by Western actors across countries and regions. In many parts of the world, including China, Russia, and Latin America, local companies played important roles in developing their own variants of the model, making their own contribution to a general process of platformization of economies and societies.

The concept of platformization is important here, since it allows us to grasp the expansive tendencies of the operations of digital platforms as well as the spillover effects of the platform model, its constitutive tendency to reshape economies, societies, and systems of governance beyond any sectoral divide (see Casilli & Posada, 2019). Speaking of platform capitalism implies acknowledging the relevance of this tendency, which blurs the boundaries between economy and other spheres of social and political life and indeed transforms those boundaries into crucial sites of capital's operations. Both the business model and the techniques of labor management instantiated by platforms rapidly expand beyond the realm of platform economy, while the political dimensions of the rationality of intermediation spur the emergence of new, data-driven forms of governance in many parts of the world. From this point of view, we can say that platformization is a global process both *intensively*, since it tends to reshape societies and economies, and *extensively*, since it is operative across boundaries and geographical scales.

The pace of this extensive spread of platformization as a global process is amazing. If one considers the momentous implications of the platform model for the organization of labor, to which we will return in a moment, it is striking to compare the decades long process of international transfer of such an important technical innovation as Frederick Taylor's "scientific management of labor" with the few years that it took for the platformization of labor, economy, and society to spread across regions and continents. This says something about the nature of global space and contemporary capitalism, which is shaped and driven by processes whose circulatory speed seems to annihilate borders. It also reflects the intersection of platformization with financialization, since many platform companies have tended to operate on low or even negative profit margins, preferring to invest revenues in expansion and growth, before publicly floating on financial markets, or, if already listed, seeking to increase share values. Although platforms have a homogenous core, what we have described as the platform model, as we anticipated the ways in which the model is implemented are profoundly heterogeneous and require analytical attention.

We already mentioned the huge variety of platforms operating even within a relatively homogenous space, the differences in size, sector, and working mode that create frictions and hierarchies among them. At the pinnacle of the Western platform world (that is far from united, considering the differences between the US and the European Union in the regulation of the digital realm) are the "Big Five," Alphabet-Google, Apple, Facebook (now Meta), Amazon, and Microsoft. These corporations are often defined as "infrastructural platforms," since they "form the heart of the ecosystem upon which many other platforms and apps can be built" (van Dijck et al., 2018, 13). While the peculiar position of these platforms is apparent in their position as gatekeepers of a wide variety of infrastructural services, ranging from search engines to data centers, the reference to infrastructures grasps an important although differentially implemented aspect of *all* digital platforms. It is another aspect of the platform model that demonstrates its entanglement with logics of power, with what Keller Easterling (2014) calls with respect to infrastructures "extrastatecraft."

Digital space today is increasingly traversed by infrastructural avenues designed and controlled by platforms. As in the case of the highway famously discussed

by Gilles Deleuze (2006, 322), such infrastructural avenues enable and intensify connectivity while at the same time multiplying “the means of control.” This allows us to qualify the meaning of intermediation in the operations of digital platforms. Far from being simply related to existing interactions, intermediation appears here to be structurally linked to the creation of new infrastructural avenues aimed at enhancing connectivity and creating new networks, although always following prescribed control protocols. As a mode of connection, an infrastructure (be it physical, digital, or connected to “care”) plays key roles in intermediation, and digital platforms become more and more powerful insofar as they become indispensable to specific forms of interaction, monopolizing the infrastructural conditions that enable it.

Connectivity, which also means social cooperation, emerges thus as a privileged terrain for the valorization of capital today (see Borghi, 2021), although this process is far from being smooth. The rationality of intermediation characteristic of platforms deploys its effects on the one hand by increasing connectivity, in a way that is consistent with its logistical genealogy. On the other hand, once it is appropriated by capitalist actors, intermediation “codes” that connectivity in a way that it transforms it into a source of value. But this appropriation is never fully accomplished, since it confronts multifarious frictions, tensions, and resistances. At the same time in which it corresponds to an entrenchment of capitalism, the spread of the platform model across diverse societal domains, including health, education, care, and labor brokerage, transforms the management of connectivity into a crucial field of struggle. In many parts of the world, profit-seeking corporate platforms confront processes of mobilization and experiments of self-management that aim to rework platforms in order to reinvent public policies (see for instance Huws, 2020).

As the Into the Black Box collective (2021, 699) writes, platforms are indeed battlefields, “in which trends of development unfold and with respect to which possible forms of alternative that do not bow to capitalism can take shape.” Platform workers have organized and struggled in many parts of the world in recent years, testing the limits of established unionism and inventing new forms of mobilization that work the boundary between circulation and reproduction (see for instance Woodcock, 2021 and Pirone, 2023). Grassroots unions have tested and expanded established forms of labor struggle and organizing, connecting with social and urban movements. While these struggles are vitally important, there is a need to stress that the operations of platforms do not regard only the toil and life of people working for them. If one considers the infrastructural aspects of those operations, it becomes clear that they aim to shape society in its entirety, reorganizing it according to their rationality and logic. As a “battlefield,” the operations of platforms and processes of platformization need therefore to be investigated at this societal level to map the multifarious forms of resistance they encounter.

This is why it makes sense to speak of a “platform society” (van Dijck et al., 2018), provided that we remain aware of the fact that such platformization is on the one hand a process that confronts a panoply of resistances and frictions, and on the other hand it constitutes a project of specific capitalist actors. Digital platforms produce their own operative spaces, which respond to the peculiarity of specific contexts while at the

same time being coordinated and synchronized at the level of the cloud upon which the existence of those spaces is predicated. Urban spaces in particular are recorded, reorganized, and in a way “doubled” by digital platforms, with implications that stretch far beyond the paradigmatic existence of single “smart cities” and transform the urban experience as such, while digital platforms themselves undergo a process of urbanization (see Cuppini, in this volume).

“Platform urbanism” is a label that attempts to grasp the impact of digital platforms at the urban scale, describing the multifarious ways in which the “collective intelligence generated by millions of daily interactions with global digital platforms” spurs and transforms the design, experience, and governance of cities (Barns, 2020, 13; see also Moertenboeck & Mooshammer, 2021). The web of encounters and circulatory practices that makes up a city is increasingly and selectively intermediated by platforms that come to play prominent roles in the very production of urban spaces, while the latter tend to stretch beyond any administrative definition of a “city.” The giant accumulation of data engendered by digital platforms enables forms of urban planning that take the form of a “reverse engineering” of the multifarious vectors that traverse the city. The spaces of platform urbanism are primarily spaces of circulation, striated by technological and social vectors that regulate the access to commodities and services. But they are also spaces in which social reproduction is increasingly entangled with processes of circulation and platform labor, as feminist scholars like Carlotta Benvegñù and Kambouri (2021) demonstrate by looking both at the increasing platformization of sectors like cleaning, domestic, and care work and at the composition of platform labor.

3 Platform Labor

Labor provides a crucial angle for the analysis of the global process of platformization. It is worth dwelling in detail on this topic considering that the mutations of labor connected to operations of platforms display a set of common characteristics that are translated in different ways onto different regional landscapes, always cutting across the life of huge segments of populations. The ways in which the platform model (and the working of specific platforms) have affected labor must be understood within the wider analytical framework of the societal dimensions of that model that we have outlined. This means that even beyond its growing statistical relevance platform labor does not regard only the condition of platform workers. It rather provides a lens for the analysis of a set of transformations that are reshaping labor relations writ large as well as the boundaries between labor and life, production and reproduction. Labor buyers as well as workers are complicit in and affected by these transformations, not least because their access to certain qualities and quantities of labor power can be pinned down or monopolized by platforms. This means that the labor relation itself is an interaction being changed by platformization positions the labor-buyer (whether the consumer who buys a meal on a food delivery platform or a firm who hires in a freelancer on a platform like Upwork) differently to the classical capitalist

who extracts surplus value through exploitation (Mckenzie, 2022). While this subject is definitely involved in labor exploitation, there is another second-order capitalist, the platform capitalist, who not only controls the terms of this exploitation but also frequently extracts a fee from the labor-buyer, in effect commodifying the labor relation. Additionally, the platform capitalist extracts data from the user activities of the labor-buyer as much as those of the labor-seller, and, in this respect, the labor-buyer is also a kind of platform worker.

It is important to stress that platform labor is not something that suddenly emerged out of the blue. Among its antecedents, Ursula Huws (2017) mentions the global stretching of “value chains” and related mutations of logistical labor, the dynamics of “freelance” labor markets, the growth of telework, and the development of ever more sophisticated processes of standardization and monitoring systems of labor performance. More generally, platform labor is usually considered a variant of “digital labor,” which is understood in extensive terms as the totality of the working activities related to and enabling processes of digitalization (see Fuchs, 2014) or in narrow terms as the aggregate of the figures whose work is controlled by digital technologies and among whose tasks data manipulation figures at least in part (see Casilli, 2020).

While we do not forget the first definition of “digital labor,” which importantly emphasizes the material conditions of the digital world (including the extraction of coltan, rare earths, and other “critical minerals” necessary to produce miniaturized digital devices), a definition of platform labor is necessarily predicated upon its narrower meaning. Simply put, platform labor refers to the multifarious working activities and tasks mediated by a digital platform. And although its composition is radically heterogeneous, research in different parts of the world have highlighted similar effects of the spread of the platform model in the field of labor, including the further erosion of traditional employment models and established labor rights, the prevalence of piece wage, the blurring of the boundary between formal and informal economy, processes of feminization and racialization, high turnover rates and participation of migrant labor (see Mezzadra, 2021; on the Italian case, see Pirone, 2023).

Although at a general level, the notion of a multiplication of labor (Mezzadra & Neilson, 2013) nicely captures the dynamics connected to the spread of platform labor across diverse geographical scales. Such multiplication encompasses, as Moritz Altenried (2022, 9) writes, “a specific heterogenization of labor geographies and labor mobility, a reconfiguration of the gendered division of labor, and the proliferation of flexible contractual forms such as short-term, subcontracted, freelance, and other forms of irregular employment.” The notion of a *Uberization* of labor is employed also in research on different figures of platform labor, for instance on riders working for Rappi in Mexico and Argentina. In his work, Federico de Stavola focuses attention on the temporality of labor relations in the experience of those riders, on the structure of the working day as well as on the pace and shifting schedules of the calls they receive. He concludes that the platform organizes “the supply of labor power according to the principles of *just-in-time* and *to-the-point* that encapsulate a logic of flows management and logistical accuracy” (De Stavola, 2022, 255).

Digital platforms clearly have different relations to labor, as it should be clear comparing a food delivery app with Airbnb, but also two big infrastructural platforms like Facebook (Meta) and Amazon. Nevertheless, the operations of platforms are all supported by the working of algorithms, which play differentiated but equally relevant roles in the management of labor (see again Altenried, 2022). There are lively debates on the relation of continuity or discontinuity between the algorithmic management of labor and Taylorism. Although we stress the pressures on working time and the standardization of tasks connected with the working of algorithms and related “flow charts,” we doubt that the reference to Taylorism enables an adequate political analysis of the peculiarity of techniques of control of cooperation in platform labor. The open environment in which such cooperation often takes place, the high degree of turnover of workers, and the unstable schedule of working tasks figure among the relevant factors in this regard (see Vecchi, 2017, 43–51). However, what matters more to us is that the algorithmic management of labor is not only a feature that characterizes platform labor but also increasingly reshapes labor relations beyond any specific sector, within the framework of wider processes of platformization. Simply put, algorithmic management does not simply regard one component of contemporary living labor.

Moreover, speaking of algorithmic management of labor is important to us also because it allows harking back to the question of data extractivism, upon which it is predicated. Algorithms have indeed important roles to play also in technologies of data mining that sustain the generation of value in platform capitalism. Indeed, looking at processes of valorization of platform capital data extractivism and the related forms of dispossession stand out as a key source of value besides the exploitation of labor. The extraction and processing of data correspond to a continuous activity of prospecting, scrutinizing, and coding social relations. Data, which encompass both the most intimate sphere of the individual (his or her health, for instance) and the totality of his or her social relations, become the basis of any platform operation, aiming at controlling workers or at making a profit. As Katherina Pistor (2020, 105) writes, “the worth of data does not lie in their exchange value but in the power they confer on data controllers.” Because this is a one-sided and even manipulative power, it poses fundamental challenges to the supposed formal equality of market participants. The value of data derives from processes of aggregation, scaling, and analysis, meaning that data harvesters extract value not by reselling data at a higher price but by selling their predictive power, which is at once a source of wealth and a means of governance.

While data stand out as a key source of value for platform capital, labor continues to provide another unescapable source. The composition of platform labor, as we already mentioned, is highly heterogeneous, often working the boundary between formal and informal economy, as well as between living and toiling beyond the so-called “standard labor relation” (see Mezzadra, 2021). Nonetheless, and this is no contradiction, it is a highly cooperative labor, although the cooperation is organized and appropriated by algorithms. The whole set of questions famously analyzed by Marx with respect to cooperation in the factory, including the “despotic” character of capital’s command on the collective power and productive force of workers (see

Marx, 1977, 450), reemerge here in an even intensified form in the face of the social stretching of labor. What we need to add is that platform labor does not refer to a fixed stock of workers employed by platforms, but rather to a floating multitude of potential workers whose availability shapes the management calculation of platforms (see De Stavola, 2022, 98; Mezzadra, 2023). We can again pick up a concept from Marx here and say that what he famously describes as the “industrial reserve army” (Marx, 1977, 784) becomes *internal* to the operations of digital platforms, insofar as they are structurally predicated on the availability of a number of workers in excess over the ones actually working for them (Vecchi, 2017, 42).

Summing up, the spread of platform labor spurs a process of generalization of labor relations beyond any standard regulation and in particular the proliferation of “grey zones” between wage labor and self-employment (Casilli, 2020, 86–89). The multiplication of contractual arrangements runs parallel to a diversification of labor tasks, that in many cases importantly also include a good deal of emotional and affective labor required to negotiate with customers the evaluation that nurtures platforms’ worker ranking systems. Platform labor is a radically heterogeneous multitude as far as its composition is concerned, and it is traversed by the imperative of productivity that aims at synchronizing different working tasks and forms of life for the sake of profit. The logistical rationality of *just-in-time* and *to-the-point* that shapes the supply of labor power fractures temporality and tends to explode the unity of the working day, blurring the boundary between production and reproduction, as feminist research underscores (Andrijasevic & Gregg, 2019; Benvegnù & Kambouri, 2021). These are effects that stretch well beyond platform labor in the narrow sense and rather spread across economies and societies through processes of platformization. Although they are connected to the platform model, their manifestations differ with respect to the heterogeneous conditions within which such processes of platformization are deployed. It is to this question that we now turn, focusing our analysis on China.

4 Platforming China

Although the impact of platforms on labor displays some similar aspects across world regions and continents, their institutional settings, technical workings, and societal positionings vary significantly. The call to “de-Westernize” platform studies importantly reflects this variegation of political, social, and even technological landscapes (Davis & Xiao, 2021). From China to India, Korea to Russia, Mexico to Brazil, we have been witnessing in recent years a spread of the platform model and a rapid growth of home-based online platforms that challenge the very possibility to take US or Western instances as a norm. In China, in particular, platforms like the ones generated by Alibaba, Baidu, and WeChat—even before the recent tightening of state control—had to negotiate their operations with “a plethora regulatory bodies, interventionist policies, compliance regimes, loan schemes, tax incentives, and censorship measures that helps steer the development of Chinese media” (107).

Over the last years, the rift between China and the West, which means above all the US, has become even deeper, with a surge of tensions and conflicts on such fields as trade, technology transfer, and even territorial disputes as the one concerning Taiwan. The multipolarity we discuss at the beginning of this chapter has become even more “centrifugal,” while territorial logics of confrontation and militarized struggle have been entrenched in the wake of Russia’s invasion of Ukraine. Such dynamics and conflicts have momentous implications also for the digital world and the infrastructures that enable its operations, as was for instance clear in 2020 when the US decided to stop for national security reasons the ambitious project of the Pacific Light Cable Network (PLCN), a 12.971 km undersea cable originally planned to connect California and Hong Kong and involving Facebook and Google in its design (de Seta, 2021, 2669–2671). These developments raise multiple challenges for recent approaches to digital governance, including the model of “the Stack,” as it was proposed by Benjamin H. Bratton in a book we mentioned at the beginning of this chapter. What Bratton stressed were in fact the radically transformative effects of “planetary-scale computation” on “the logics of political geography,” including sovereignty and territoriality (Bratton, 2015, 375).

The model of a unitary structure of the Stack appears even more problematic in a world where “centrifugal multipolarity” is ridden by conflicts and wars. While Bratton (2018) has responded to such a challenge by introducing the notion of “hemispheric Stacks,” the case of China is particularly interesting since the powerful processes of platformization that are ongoing in the country are predicated upon a complex web of infrastructural arrangements that effectively negotiate the tensions between territoriality and digitalization. The peculiarity of Chinese digital platforms depends to a great extent on the peculiarity of what Gabriele de Seta describes as “the Chinese Stack.” While he stresses that China’s digital space cannot be neatly superimposed on its national borders, because the moment of “stretching” beyond such borders is constitutive of the Chinese Stack, he is also keen to note that the state “incorporates features of the Stack as much as the Stack incorporates features of a state” (de Seta, 2021, 2685).

It is important to keep in mind the infrastructural arrangements described by de Seta to understand the fact that the platformization of Chinese labor and China’s economy has proceeded in rapid and powerful ways over the last years, reshaping working activities and modes of life. Kevin Lin and Pun Ngai (2021, 648) provide a detailed analysis of how “new platform-based companies have been taking over traditional economic activities, including logistics, and restructuring labor relations and the labor process.” They focus, against the background of a truck drivers’ strike, conducted mainly by internal and rural migrants across China in June 2018, on the emergence of mega apps like Yun Man Man. This app matches millions of truck drivers, mostly independent contractors, with shippers in ways that have profoundly transformed the transportation industry in the country. It is easy to imagine the implication of such a process of platformization for working lives, the related pressures on the boundaries between work and life, and consequently on regimes of social reproduction.

Importantly, Lin and Pun understand the 2018 strike as a key instance of new labor struggle within and against the process that in the wake of the Great Recession of 2007/8 has led China to become “the empire of logistics” (650). Such process is key both to the Communist Party’s new theory of “dual circulation,” which aims at boosting domestic consumption, and to the stretching of the economic space of China, which means to the global projection of its economic power through ambitious projects as the ones encapsulated in the Belt and Road Initiative. The notion of “infrastructural capitalism,” proposed by Lin and Ngai to grasp the present socio-economic formation in China, underscores “the production and expansion of intersecting physical and digital infrastructures” (651) which disrupt and transforms existing spatial arrangements and spurs rapid processes of platformization. The proliferation of infrastructural and operative spaces facilitates the operations of digital platforms across multiple economic and societal domains, while it also consolidates in China specific forms of infrastructural power.

While the example provided by Lin and Ngai regards the direct take-over of vast sections of logistics and related labor by platform-based companies, the effects on economy and labor of processes of platformization are much more diversified also in China and they are apparent even beyond the country’s metropolitan centers. Lulu Fan (2021) has for instance studied the impact of the growth of the market size of e-commerce sales on the garment industry. Focusing her research on the garment manufacturing and sales centers in the Zhejiang, Guangdong, and Jiangsu provinces, she details the profound transformations that have led to a “e-platform-driven flexible specialization” within an established and in a way historical industrial sector (34). A downsizing of productive activities has been met by a flexibilization and an informalization of employment relations, which has opened new opportunities for some skilled workers although in an atomized and volatile way. At the same time, Lulu Fan writes, two extremely informal employment arrangements have emerged as direct consequence of e-commerce. On the one hand, she refers to “the husband-and-wife workshops completing the processing of online clothing shop orders,” on the other hand to “the daily-wage workers participating in the production of factories or workshops as they adapt to the variability of orders” (36). This nexus between processes of platformization and informalization is an important aspect of the ways in which operations of platforms are transforming labor and economy in China, even beyond the garment industry.

As Lin and Pun argue, the financial crisis of 2007/8 was a key threshold for processes of platformization in China. It is well known that in response to the outside shock posed by the market falls in the West, China was able to muster great resources and energies, which allowed it not only to overcome the collapse of global trade in 2008 but also to start a process of economic reorganization and to renegotiate its interdependence with the US. In the aftermath of the crisis, Chinese ruling elites and the public became aware of the need to go beyond the export-oriented economic model that had characterized the development of the country in the previous two decades. The “factory of the world,” tested by powerful workers’ (which means again mainly internal migrants) struggles since the early 2000s, was not to be dismantled but rather reorganized and downsized in its strategic relevance according to the theory of “dual

circulation” that we mentioned earlier. An emphasis on innovation became ubiquitous in party rhetoric and state policies, while the weight of the state and family networks within the Chinese mixed economy was calibrated anew (Zhang & Lan, 2023). This was even more the case under the leadership of Xi Jinping, who became President of the PRC in 2013. In a recent book, Lin Zhang (2023) analyzes the effects of a campaign launched in 2014 by Premier Li Keqiang to advance “mass entrepreneurship and innovation,” speaking of a “massive nationwide surge in platform-based, VC-backed entrepreneurship” (12).

Focusing her analysis on Zhongguancun, “China’s Silicon Valley” in the northwest of Beijing, Lin Zhang maps the proliferation in the following years of IT companies and “grassroots” entrepreneurs within a vibrant laboratory of collective creativity within which the boundary between “entrepreneur” and “labor” is blurred—while the one between winners and losers remains firm. While the platform model drives many of the processes analyzed by Lin Zhang, Zhongguancun has also been the incubator of many digital platforms. However, what matters more to our investigation here is the continuity established between such metropolitan developments and how platformization has expanded into the Chinese countryside, reshaping rural economies, and creating new channels of communication with the cities. As anticipated in the case of the garment industry, e-commerce plays a key role here, instantiated by Alibaba’s Taobao platform. There is a huge amount of labor, Lin Zhang argues, sustaining and enabling the penetration of such digital platforms within rural economies. And it may be defined as platform labor, be it in the case of “*platform-based* labor” or in the case of “*platform-mediated* labor performed by those who manufacture, package, and deliver e-commerce goods” (105).

There is a double movement steering the spread of platform labor in rural settings in China, and Lin Zhang speaks of a convergence between “capitalism from above (digital platform expansion into rural areas) and capitalism from below (village and family-based e-commerce production)” (105). While there is no doubt that platformization is linked to the further entrenchment of capitalism in China as elsewhere in the world, the peculiarity of the Chinese “mixed economy” shapes also the operations of digital platforms. Lin Zhang makes an important, although by now widely acknowledged point when she writes that “although it formed a partial alliance with neoliberal forces, China’s state-led gradual integration into the global capitalist system and its entrenched rural/urban dual economic system” cannot be equated to the accomplishment of neoliberalization (234). The role of family networks is no less relevant than the one of the state, which is itself transformed and platformized but continues to play a relevant role also with respect to digital platforms—a role that oscillates between embeddedness, authoritarian control, and distortion of market mechanisms.

5 Conclusion

Although differences are important, the spread of platformization across China deploys many effects that are close to the ones we discussed with respect to the implementation of the platform model in the West. Nonetheless, differences are also palpable. It would be easy to make sense of such differences opposing to the ideal type of Western liberal market capitalism the authoritarian model of Chinese “state capitalism,” a concept that is experiencing a renaissance in the current conjuncture “as a marker of distortion and deviation from an ideal type” (Weber, 2023, 2). This is not the place to provide a full-fledged critical discussion of state capitalism, that, as Isabella Weber writes, shares many features (and many limits) with the equally “amorphous” concept of neoliberalism (1). Suffice it to say that digital platforms are characterized in the West by monopolizing tendencies that are difficult to combine with the model of market capitalism. Moreover, their operations deploy political effects (firstly in terms of government of conducts, as we discussed earlier in the chapter) that are more aptly grasped by such a concept like political capitalism, once it is theoretically reframed beyond its Weberian imprint that casts it once again as a deviation from an ideal type (see Holcombe, 2015).

With respect to China, what the literature working with the concept of state capitalism does not register is the panoply of processes of financialization and platformization that have profoundly transformed the Chinese state. Working with a different theoretical approach, encapsulated by the notion of the “new whole state system,” Lin Zhang and Tu Lan (2023) engage with technological innovation initiatives pursued by Tsinghua University, situating state-led financialization, platformization, and public–private fusions not only as ways of confronting domestic economic problems but also as responses to conjunctural challenges and geopolitical pressures. In this regard, they observe that many policy tools that have contributed to the financialization of the Chinese state, including university spinoffs, local government-funded high-tech zones, and state-led venture capital, have correlates across industrialized countries and developing states. Moreover, they suggest that because China’s economic strategies are, in part, driven by security concerns, “its innovation strategy resembles more that of the United States more than the strategies of East Asian developmental states such as South Korea” (217). This is a striking observation, that lends credence to the concept of political capitalism we just mentioned (in a different perspective, see also Aresu, 2020).

It is from this point of view that processes of platformization and operations of digital platforms in China must be investigated. What Gabriele de Seta calls the “Chinese Stack” provides an important viewpoint on the peculiarity of those processes and operations, which at the same time, it is worth repeating, resonate in important regards with analogous developments in the West and elsewhere in the world. Platformization builds a clear instance of the global processes that crisscross and spur present conditions of multipolarity. And it is important to remember that, as de Seta notes in the case of China, the state “incorporates features of the Stack as much as the Stack incorporates features of a state” (de Seta, 2021, 2685). This has

far-reaching implications for the very relation between territorialism and capitalism, which are instantiated by the stretching of the operative scope of the “Chinese Stack” well beyond the country’s boundaries. If one looks for instance at the “Digital Silk Road” project, part of the wider Belt and Road Initiative, it is easy to see that for instance the comprehensive agreement signed by Kazakhstan to spur the modernization and digitalization of the economy through access to inexpensive Chinese software and hardware includes processes of platformization in that country framed by the “Chinese Stack” (see Sukhankin, 2022).

Our focus on the “Chinese Stack” in this chapter does not aim to nurture a bipolar scenario, a kind of digital side of the “New Cold War” rhetoric that necessarily pits China against the US and the “West.” Nor is our mention of the Ukraine war meant to imply that we see Russia, the US, and China as the only countries worth discussing in the contemporary world. The opposite is the case. Facing current “centrifugal multipolarity,” we take seriously the possibility of a proliferation of infrastructural arrangements to sustain processes and spurts of platformization in different parts of the world. It is definitely possible to imagine a pluralization of digital governance, with the emergence, say, of an Indian Stack, a Brazilian (or even Latin American) Stack, and so forth. In each instantiation, digital governance would replicate the dialectic of homogenization and heterogenization that is constitutive of global processes and that we described with respect to China. It would also deploy forms of infrastructural power and complicate the relations (and the very nature) of territorialism to capitalism. But while such a scenario appears as realistic for the near future, the problem of establishing “global junctures” between different “Stacks” would remain open, and we can think through this problem according to the informatic and logistical model of interoperability that we mentioned above when discussing the genealogy of platforms. Whether or not such junctures will be established, and which form they will take, are open questions in the current conjuncture of war and proliferating regimes of war.

References

- Altenried, M. (2022). *The digital factory. The human labor of automation*. University of Chicago Press.
- Andrijasevic, R., & Gregg, M. (2019). Virtually absent. The gendered histories and economies of digital labour. *Feminist Review*, 123, 1–7.
- Aresu, A. (2020). *Le potenze del capitalismo politico. Stati Uniti e Cina*. La nave di Teseo.
- Barns, S. (2020). *Platform urbanism. Negotiating platform ecosystems in connected cities*. Palgrave Macmillan.
- Benvegnù, C., & Kambouri, B. (2021). Platformization beyond the point of production. Reproductive labor and gender roles in the ride-hailing and food-delivery services. *South Atlantic Quarterly*, 120(4), 733–747.
- Borghi, V. (2021). Capitalismo delle infrastrutture e connettività. Proposte per una sociologia critica del mondo a domicilio. *Rassegna italiana di sociologia*, 62(3), 671–699.
- Bratton, B. J. (2015). *The stack. On software and sovereignty*. The MIT Press.

- Bratton, B. J. (2018). On hemispherical stacks: Notes on multipolar geopolitics and planetary-scale computation. In S. Wang (Ed.), *As we may think: Feedforward: The 6th Guangzhou Triennale* (pp. 77–85). Guangzhou Guangdong Museum of Art.
- Casilli, A. (2020). *Schiavi del clic. Perché lavoriamo tutti per il nuovo capitalismo?* Feltrinelli.
- Casilli, A., & Posada, J. (2019). The platformization of labor and society. In M. Graham & W. H. Dutton (Eds.), *Society and the internet. How networks of information and communication are changing our lives* (pp. 293–306). Oxford University Press.
- Cowen, D. (2014). *The Deadly life of logistics: Mapping violence in the global trade*. University of Minnesota Press.
- Cuppini, N., et al. (2022). Il capitalismo nel tempo delle piattaforme. Infrastrutture digitali, nuovi spazi e soggettività algoritmiche. *Rivista Italiana Di Filosofia Politica*, 2, 103–124.
- Davis, M., & Xiao, J. (2021). De-Westernizing platform studies: History and logics of Chinese and U.S. platforms. *International Journal of Communication*, 15, 103–122.
- Deleuze, G. (2006). *Two regimes of madness. Texts and interviews 1975–1995*. Semiotext(e).
- de Seta, G. (2021). Gateways, sieves, and domes: On the infrastructural topology of the Chinese stack. *International Journal of Communication*, 15, 2669–2692.
- De Stavola, F. (2022). *Al sur de la plataforma: trabajo y capital en la app latinoamericana Rappi*. Ph.D. thesis, UNAM, Universidad Nacional Autónoma de México.
- Easterling, K. (2014). *Extrastatecraft. The power of infrastructure space*. Verso Books.
- Fan, L. (2021). The forming of E-platform-driven flexible specialisation: How E-commerce platforms have changed China's garment industry supply chains and labour relations. *China Perspectives*, 1, 29–36.
- Foucault, M. (1994). *Dits et écrits* (Vol. IV). Gallimard.
- Fuchs, Ch. (2014). *Digital labor and Karl Marx*. Routledge.
- Grappi, G. (2016). *Logistica*. Ediesse.
- Holcombe, R. G. (2015). Political capitalism. *Cato Journal*, 35(1), 41–66.
- Huws, U. (2017). Where did online platforms come from? In P. Mey & V. Kirov (Eds.), *Policy implications of virtual work* (pp. 29–48). Palgrave MacMillan.
- Huws, U. (2020). *Reinventing the welfare state. Digital platforms and public policies*. Pluto Press.
- Into the Black Box. (2021). Platform battlefield: Digital infrastructures in capitalism 4.0. *South Atlantic Quarterly*, 120(4), 689–702.
- Lakoff, A. (2020). “‘The supply chain must continue.’ Becoming essential in the pandemic emergency.” *Items. Insights from the Social Sciences*. November, 5. <https://items.ssrc.org/covid-19-and-the-social-sciences/disaster-studies/the-supply-chain-must-continue-becoming-essential-in-the-pandemic-emergency/>
- Lin, K., & Ngai, P. (2021). Mobilizing truck drivers in China: New migrant struggle and the emergence of infrastructural capitalism. *South Atlantic Quarterly*, 120(3), 647–654.
- Marx, K. (1977). *Capital* (Vol. 1). Vintage Books.
- McKenzie, M. (2022). *Platforms as capitalists, infrastructures of accumulation: Examining the platformisation and commercialisation of the labour relationship*. Ph.D. thesis, University of Sydney.
- Mezzadra, S., & Neilson, B. (2013). *Border as method, or, the multiplication of labor*. Duke University Press.
- Mezzadra, S., & Neilson, B. (2019). *The politics of operations. Excavating contemporary capitalism*. Duke University Press.
- Mezzadra, S., & Neilson, B. (2022). The capitalist virus. *Politics*, published online July 11, 2022. <https://doi.org/10.1177/02633957221131754>
- Mezzadra, S. (2021). Oltre il riconoscimento. Piattaforme digitali e metamorfosi del lavoro. *Filosofia politica*, 35(3), 487–502.
- Mezzadra, S. (2023). Potenzialità dell'esercito industriale di riserva. *Cartografie sociali*, 15, 167–180.
- Moertenboeck, P., & Mooshammer, H. (Eds.). (2021). *Platform urbanism and its discontents*. nai010 publishers.

- Neilson, B. (2012). Five theses on understanding logistics as power. *Distinktion: Scandinavian Journal of Social Theory*, 13(3), 323–340.
- Peck, J., Phillips, R. (2021). The platform conjuncture. *Sociologica*, 14(3), 73–99.
- Pirone, M. (Ed.). (2023). *Ultimo miglio. Lavoro di piattaforma e conflitti urbani*. Fondazione Giangiacomo Feltrinelli.
- Pistor, K. (2020). Rule by data: The end of markets? *Law and Contemporary Problems*, 83, 101–124.
- PLUS Research Group. (2022). Investigating platforms. A critical Lexikon. *Soft Power*, 9(1), 165–187.
- Scholz, T. (2016). *Platform cooperativism. Challenging the corporate sharing economy*. Rosa Luxemburg Stiftung, New York Office. Available at <http://www.rosalux-nyc.org/platform-cooperativism-2/>
- Srnicek, N. (2017). *Platform capitalism*. Polity Press.
- Sukhankin, S. (2022). Tracking the digital component of the BRI in Central Asia, Part Two: Developments in Kazakhstan. *China Brief*, 21, 9. Available at <https://jamestown.org/program/tracking-the-digital-component-of-the-bri-in-central-asia-part-two-developments-in-kazakhstan/>
- Tooze, A. (2021). *Shutdown. How Covid shook the world's economy*. Allen Lane.
- van Dijck, J., Poell, Th., & de Waal, M. (2018). *The platform society. Public values in a connective world*. Oxford University Press.
- Vecchi, B. (2017). *Il capitalismo delle piattaforme*. Manifestolibri.
- Weber, I. (2023). State capitalism, imperialism, and China: Bringing history back in. *Environment and Planning A. Economy and Space*, online first. <https://doi.org/10.1177/0308518X231159904>
- Woodcock, J. (2021). *The fight against platform capitalism: An inquiry into the global struggles of the Gig economy*. University of Westminster Press.
- Zhang, L., & Lan, T. (2023). The new whole system: Reinventing the Chinese state to promote innovation. *Environment and Planning A. Economy and Space*, 55(1), 201–221.
- Zhang, L. (2023). *The labor of reinvention. Entrepreneurship in the new Chinese digital economy*. Columbia University Press.

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