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How platforms govern: Social regulation in digital capitalism

Petter Törnberg[1,2]

Abstract

The rise of digital platforms has in recent years redefined contemporary capitalism—provoking discussions on whether platformization should be understood as bringing an altogether new form of capitalism, or as merely a continuation and intensification of existing neoliberal trends. This paper draws on regulation theory to examine social regulation in digital capitalism, arguing for understanding digital capitalism as *continuities* of existing capitalist trends coming to produce *discontinuities*. The paper makes three main arguments. First, it situates digital capitalism as a continuation of longer running post-Fordist trends of financialization, digitalization, and privatization—converging in the emergence of digital proprietary markets, owned and regulated by transnational platform companies. Second, as the platform model is founded on monopolizing regulation, platforms come into direct competition with states and public institutions, which they pursue through a set of distinct technopolitical strategies to claim power to govern—resulting in a geographically variegated process of institutional transformation. Third, while the digital proprietary markets are continuities of existing trends, they bring new pressures and affordances, thus producing discontinuities in social regulation. We examine such discontinuities in relation to three aspects of social regulation: (a) from neoliberalism to techno-feudalism; (b) from Taylorist hierarchies toward algorithmic herds and technoliberal subjectivity; and (c) from postmodernity toward an automated consumer culture.

Keywords

Digital capitalism, platformization, regulation theory, neoliberalism, technopolitics

Introduction

"In a lot of ways Facebook is more like a government than a traditional company," Mark Zuckerberg pondered in a recent interview (Foer, 2017). Platform corporations like Facebook have achieved unprecedented levels of power and wealth, emerging as a new form of what Stern (2011) calls "company-states": corporations with powers to regulate not just trade but also law, land, and liberty—in short, to regulate life. These powers have not escaped the platform companies, many of whom view their governance as so central to their business model that they refer to their users as "citizens." As platforms mobilize their digital powers as a political force, governments are finding themselves negotiating toe-to-toe with platform companies over issues that used to be firmly located within the realm of democratic decision-making.

The platform emerged as a dominant model after decades of experimentation and trials in search of an organizational structure that would fit the affordances of digital technology. The platform model draws on digital technology's unprecedented capacity to shape life by embodying social infrastructure in order to engage in a form of privatized governance. Just as Fordist-Keynesianism rose following the Great Depression, and post-Fordism from the 1970s crisis (Harvey, 2007), so the incipient rise of a natively digital form of accumulation followed the 2008 Financial Crisis. The years since has seen the explosive growth of platforms such as Amazon, Alphabet, Airbnb, Facebook, and Uber—forming an ecosystem which is now central to contemporary capitalism (Langley and Leyshon, 2017; Van Dijck et al., 2018).

The rise of platforms has attracted a large literature seeking to understand the implications of this shift. Whereas some scholars emphasized its discontinuities and

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cast platformization as producing an altogether new form of capitalism (Fuchs, 2021; Staab, 2019; Zuboff, 2019), others emphasize its continuities, casting it as an intensification and acceleration of existing neoliberal tendencies (Boyer, 2021; Montalban et al., 2019; Peck and Phillips, 2020; Zwick, 2018). While most authors have framed platform capitalism as a universal and transnational phenomenon (Graham and Anwar, 2019), others have emphasized its local and contingent nature—suggesting that its problems and disruptions are functions of national contexts (Thelen, 2018; van Doorn et al., 2021).

This paper seeks to bridge these perspectives by taking a regulation theory perspective to developing an understanding of digital capitalism as continuities of existing capitalist trends coming to produce *dis*continuities—shaped by local institutional context but at their core sharing a common pattern: the digitalization, privatization, and financialization of market regulation. While platform capitalism in its current form may, as Boyer (2021) and Montalban et al. (2019) argue, not yet constitute a coherent or consistent regime of accumulation, it is more akin to post-Fordism of the early 80s: simultaneously a continuation and a break from the previous era, contested and not yet fully formed, and characterized by a plurality of often contradictory institutional forms and strategies. Just as early post-Fordism, platformization has put pressure on and destabilized existing regulatory structures—with still unknown implications for the economic, political, and social order. However, while contemporary platforms may constitute merely a "transitory solution that will be amended by further private innovations and completed by the implementation of public rules of the game" (Boyer, 2021: 2), these transitory solutions, we will argue, foreshadow the digital era that is in the process of becoming. The paper draws on the regulation theory literature to examine these harbingers, seeking to identify what institutional architecture can be anticipated (Aglietta, 2000; Boyer, 1990; Dunford, 1990; Lipietz, 1987; Staab, 2019). The paper makes three main arguments.

First, we will situate digital capitalism in the recent history of capitalist transformation to argue that it constitutes both a continuation of and break with existing capitalist trends of neoliberal financialized capitalism. Digital capitalism's defining feature is that its markets are *proprietary*—owned and managed by private corporations (Langley and Leyshon, 2017). This can be seen as a continuation of post-Fordist trends, as neoliberalism's constant annexation of new fields by the market reaches its pinnacle in digital capitalism's market's annexation of *the market itself* (Barns, 2019). This continuity, however, produces *dis*continuities, as digital proprietary markets operate under condition and pressures that are qualitatively different from those of post-Fordism.

Second, as the platform business model is based on extracting rents by controlling access to a necessary resource (Sadowski, 2020), it hinges on the capacity of platforms to monopolize control over markets. This puts platforms in direct competition with states. Uber, for instance, needs to outcompete not only Lyft, but also the state-mobilized taxi medallion system and public transport infrastructure. Platforms thus seek to unnest their markets from the control of public institutions, in order to effectively operate on the same level as states. To do so, platforms engage in a set of political strategies, drawing on the distinctly intertwined technological, legal, and political forms of power that characterizes the digital era. Platforms should be understood as actors use such powers to target vulnerabilities in local institutions in the pursuit of the market control, resulting in a variegated process with diverse strategies and institutional forms—but whose common denominator is the privatization of governance through digital technology. If Fordism was defined by national markets with national regulation, and post-Fordism by transnational markets with national regulation, then digital capitalism is characterized by digital proprietary markets—owned and regulated by transnational platform companies.

Third, through the new pressures of privatization and the new forms of control enabled by digitalization, platformization shifts the foundations of the mode of social regulation —that is, the set of institutions, cultural logic, norms, and policy paradigms that provide the context for the operation of the accumulation (Aglietta, 2000). As Fordism brought a modernist, mass-individualist culture, characterized by hierarchical institutions and top-down control, and post-Fordism emerged with neoliberal political ideology, market discipline, and postmodernist consumer culture, so digital capitalism is coming to gradually give shape to its own distinct set of superstructures based on the capacities of digital technology. We will here seek to sketch some early outlines of the shifts in social regulation following digital capitalism, examining its capture mechanism, labor process, and cultural logic: (a) from neoliberalism toward techno-feudalism; (b) from Taylorist hierarchies toward algorithmic herds; and (c) from postmodernism toward an automated consumer culture.

In this paper, we will weave these three arguments from the threads of existing literature, using a schematic and typified analysis which seeks to cast light on the structural pressures shaping an emerging form of regulation. We will first draw on regulation theory to situate digital capitalism as a continuity in the recent history of capitalist development. We will then examine the political strategies pursued by platforms to claim the power to regulate markets. Finally, we will in examine the emerging discontinuities of platformization for social regulation.

Situating digital capitalism

Regulation theory focuses on the way in which the economy is embedded in social, cultural, and political contexts (Aglietta, 2000; Boyer, 1990; Dunford, 1990; Lipietz, 1987), tracing the historical change of the political economy through two central concepts, "regime of accumulation" and "mode of regulation." The former describes the way production, circulation, consumption, and distribution organize and expand capital. The latter is the set of norms, culture, and policy paradigms that provide the context for the regime of accumulation. The starting point of regulation theory is that capitalism needs the state, as it generates conflicts and tensions which obstruct its own further development. Capitalism must thus be hemmed in by constraining structure that are products not of rational individual calculation or competition, but of the collective decision-making of the state, understood here as the local arrangements of institutionalized political power (Aglietta, 1998).

While it has been impossible to conceive of a capitalist economy without an explicit role for the state, the relationship between capitalism and the state is at the same time been an uneasy one, characterized by tensions between their competing forces (Streeck, 2011). This conflict tends to settle into periods of temporarily stable power balances —structural couplings between accumulation and social regulation—punctuated by crises and reorganization, whose outcomes are shaped and constrained by the basic tendencies and counter-tendencies of a particular accumulation trajectory, but ultimately decided by political agency (Aglietta, 1998). Regulation theory draws on these tensions to explain the trajectories of capitalist societies, focusing on how sets of mediations and regulatory structures come to—temporarily—contain the internal contradictions of capitalism (Aglietta, 2000; Boyer, 1990; Dunford, 1990; Lipietz, 1987); as Harvey (1989b: 196) puts it, "rescheduling the crisis."

Fordism was the principal regime of accumulation from the second World War to the mid-70s, resolving the contradictions of capitalism by leveraging rapid growth to hold at bay the tendency toward growing inequality (Piore and Sabel, 1986). Largely unsaturated consumer markets and rising consumer purchasing power enabled firms to sell large quantities of highly standardized products, resulting in high growth rates. Fordist social regulation was based on the nation-state functioning as the container and regulator of a market (Boyer, 1990; Dunford, 1990). As the state was shaped by its democratic pressures, its role was to manage the rapidly growing national markets for the benefit of their citizens. This has been referred to as the "Fordist-Keynesian" (Goodwin et al., 1993; Webster, 2014), or "managerial" (Harvey, 1989a) state, which played a central role for social regulation within Fordism: stabilizing patterns of production, demand, and consumption, by shaping a culture of mass-consumption for the standardized goods pouring off machines and assembly lines, institutionalizing collective bargaining and monopoly pricing, managing fiscal policy and productive infrastructure (Gartman, 2004). To achieve these ends, the Fordist state readily intervened in or even substituted market processes, pursued industrial policy, and set standards for the social wage by constructing a variety of welfare systems, and acted to limit the mobility of capital, while expanding public expenditures and welfare state-building (Amin, 1994; Dunford, 2000; Hall and Jacques, 1989; Hebdige, 1994). These institutions, enabled by high growth rates, thus resulted in a temporary suspension of the conflict between capitalism and democracy (Streeck, 2011).

By the end of the 1960s, however, the Fordist system of mass-production and mass-consumption came under pressures, with signs of a growing crisis of accumulation (Meyer, 1981). The West European and Japanese recoveries from the war were complete, and their internal market were growing saturated as "basic needs had by and large been covered" (Streeck, 2012: 30). As a result, the inherent contradictions of capitalism become more and more apparent. Geographical mobility of capital was both a driver and result of this crisis, as runaway industries sought to reduce wage costs through investment in low wage locations, escaping national wage bargaining systems and thus eroding the power of labor unions (Dunford, 1990; Webster, 2014). Due to the lack of transnational institutions and international harmonization of the Fordist wage compromise, globalization severed the connection between growth of income, demand, and productivity—adding a second "demand side" to the crisis.

The transnationalization of capital brought a new fundamental logic shaping the role of the state: rather than markets operating within the boundary of a managerial state, nation-states now competed with one another over free-flowing global capital. The competition between nations and regions for global capital raised the constant specter of "regulatory undercutting" (Tickell and Peck, 1995): pressures on states to compete for business, while viewing their market regulation as a crucial condition for their competitive success. In short, globalization meant that the accumulation crisis also became a crisis of social regulation, as accumulation become global, while regulation remained national. The result of this downward race has been referred to as the "entrepreneurial" (Harvey, 1989a), or "neoliberal" state (Harvey, 2007; Tickell and Peck, 1995)—whose role, as per neoliberal theory, is to support the free market by guaranteeing private property rights, the rule of law, and the institutions of functioning markets and free trade—but to avoid venturing beyond these tasks (Harvey, 2007). The mission of the neoliberal state is thus to support profitable capital accumulation on the part of both domestic and foreign capital, and to persistently seek out ways of improving its competitive position as an entity vis-à-vis other states in the global market. While we now tend of think of this transition as a sharp break, it was in reality gradual and geographically variegated: the 1980s was dominated by Japan and West Germany as competitive powerhouses of the global economy, characterized not by a neoliberalism, but by strong welfare states, powerful unions, and high wage levels. This multiplicity of institutional forms over time faded, as a process of "creeping neoliberalization" (Harvey, 2007: 89) brought the gradual ideological transformation of state and social regulation, spurred by the formalization and institutionalization of neoliberal ideology by organizations as IMF and the World Bank.

While Fordism at least temporarily resolved the tensions between democracy and capitalism by leveraging rapid growth (Streeck, 2011), post-Fordism did not provide such a solution. Rather than addressing the Fordist growth crisis, it shifted the emphasis from generating to *redistributing* wealth (Lapavitsas, 2014), by bringing "the financialization of everything" (Harvey, 2007) through the elimination of regulatory constraints and barriers that had hitherto confined financial activity (Harvey, 2007; Vogl, 2017; Zucman, 2014). The result was consolidation of oligopolistic, monopoly and transnational power, and rapid growth in social inequality—trends that made the neoliberal state appear "either a transitional or an unstable political form" (Harvey, 2007: 79).

Digitalization first emerged as part of these macro-trends of capitalist reorganization. Digital technology provides the infrastructure for the global financial system: financial products are fundamentally predictive mathematical and computational entities. By expanding the range of social phenomena that can be captured, predicted and controlled, digital data and algorithms enable the financialization and annexation into capitalism of new aspects of the social world (Sadowski, 2019)—"liquifying" areas previously inaccessible to capital and expanding the production resources available to capital (Lohr, 2015; Van Dijck, 2014).

While digitalization hence originated as part and parcel of larger post-Fordist macro-trends, capital were soon to discover that digital technology offered new forms of social control—which were to provide the scaffolding for a more fundamental transformation of capitalism. The seed of these transformations emerged in the aftermath of the 2008 Global Finance Crisis, in the form of a natively digital organizational form: the *platform*. Platforms make use of the affordances of digital technology to curate programmable social infrastructures that enable buyers and sellers to meet, that is, to constitute a form of *proprietary market* (Langley and Leyshon, 2017). The platform business model can thus broadly be understood as leveraging digital technology to privatize the market itself and financialize its ownership and regulation. If Fordism was defined by national markets with national state regulation, and post-Fordism by transnational markets with national regulation, then digital capitalism is defined by digital proprietary market—owned and regulated by transnational private companies through digital technology.

The platform model hence constitutes the convergence of several long-running post-Fordist trends: neoliberalism's tendency toward privatization and financialization of everything; the flexible formation of new financial conventions; use of digital code as means of shaping social institutions and data as means of financializing them. Digital capitalism should in this sense be understood as digital *finance* capitalism, as digitalization and financialization are so entangled as to be virtually inseparable (Lohr, 2015; Van Dijck, 2014). While the platform model thus builds naturally on both existing post-Fordist institutions and with digital technology, it at the same time represents a novel "complex alchemy of political, societal, institutional, and technological ingredients" (Grabher and König, 2020: 96)—which we now turn to examine.

States and platformization

While platformization began with "sharing economy" platforms such as Airbnb and Uber, it over time generalized into a broader capitalist logic drawing on the capacities of digital technology. At its core, the platform model is founded on leveraging new mechanisms for monopoly power to claim control over strategic chokepoints for accumulation, enabling firms to manipulate the market and extract rents from producers by controlling access. While Fordism pursued profits through wealth creation and rationalization of production, and post-Fordism through financial markets and wealth relocation, digital capitalism thus generates profit through rentiership—based on the capacity to control access to key resources (Langley and Leyshon, 2017). The platform strategy thus hinges on making markets uncontestable (Baumol, 1986) by using digital and political strategies to raise steep barriers to entry, thus allowing the extraction of monopoly rents.

The monopoly powers of digital capitalism are fundamentally different from the steel and rail monopolies of the Fordist era: firms like Amazon are not even close to having a monopoly on retail—but are yet able to extract monopoly rents by drawing on digital powers to dominate key points for accumulation (Peck and Phillips, 2020; Zuboff, 2019). Such digital dominance stems from three primary sources. First, from the strategic employment of *infrastructuralization* to produce lock-ins: platforms seek to provide basic functions that become entrenched, creating dependence on a privatized infrastructure (Larkin, 2013). As Rahman and Thelen (2019: 180) observe, "the very idea of the 'platform' reflects an aspiration to be the foundational infrastructure of a sector." Second, the mediating position granted by ownership of social infrastructures gives access to data flows, allowing platform companies to shape social pattern through global architectures of behavioral monitoring, analysis, prediction, and modification (Zuboff, 2019). The capacity to draw advantages from massive amounts of data, scalable at near-zero cost, results in feedback loops generating market concentration —what has been referred to as "digital monopolies" or "dataopolies." Third, through the strategic employment of demand-side economies of scale—so-called "network effects" (Rochet and Tirole, 2003): since the value of using a platform is a function of the number of market participants, incumbents are strongly favored (McAfee and Brynjolfsson, 2017). The result is a "feedback loop that produces monopolies" (Parker et al., 2016: 6), leading to most mature platform markets being dominated by one or two giants (Peck and Phillips, 2020).

As platform become truly valuable only if they can claim control over access to a resource, competition plays out as winner-take-all turf wars which systematically favor capital and scale, in which dominant platforms leverage power in one sector to override competition in others (Cusumano et al., 2020). Unlike the monopolies of the Fordist era, the new form of monopoly power is not based on vertically integrated corporations and direct ownership, but on digital capacities for market control and manipulation (Peck and Phillips, 2020; Zuboff, 2019). The result is that corporations grow and expand according to a data-centric logic—continually spreading their roots to gain control of the infrastructure on which their rivals depend, and extend their data extraction into new areas—thus horizontally capturing and consolidating markets through what Srnicek (2017b: 256) describes as a "rhizomatic form of integration." As a result of such horizontal expansion, platform firms spread and compete across a range of markets: Amazon (originally a bookstore), Google (originally a search engine), and Meta (originally a social networking website) are now engaged in turf wars to claim control over a diverse range of market segments.

As platforms are seeking to monopolize market control, the state is effectively part of their competition: Uber competes with Lyft, but also with regular taxis and the public urban transportation system. The well-documented regulatory and political consequences of platforms can thus be understood as part of platform's competition with states, as platforms seek to exploit institutional weaknesses in order to break out of the control of the state. As was recently uncovered, Uber, for instance, seeks to exploit regulatory loopholes and mobilize political and legal power to avoid having its business regulated by states. The leaked Uber files how the company strategically breaks laws, bypasses regulators, exploits violence against drivers, and lobbies governments across the world (Davies et al., 2022). The centrality of politics to platforms means that their impact and nature are highly contingent on the local institutional landscape, as they seek to target and exploit specific local regulatory and institutional conditions. For example, Thelen (2018) finds that the disruptive effects of Uber differ significantly across Germany, Sweden, and the United States, as the platform adapts to local forms of regulation and governance, seeking to identify and target loopholes and regulatory gray zones. The platforms' disruptive strategies have proven particularly efficacious in countries in the Global South whose public institutions were ravaged by neoliberal chock doctrine, providing conditions favorable to laissez-faire platformization. Labor platforms such as Uber feed on neoliberal conditions not only due to lax regulation, but also as they depend on a pool of desperate workers inadequately protected by the welfare state (Chueri, 2022). In many countries in the South, labor platforms have thus seen particularly rapid growth—feeding on high levels of inequality and a large informal labor sector. Such differences highlight that platformization—as neoliberalization before it—is a contingent and path-dependent process, with variegated outcomes. However, while the impact of platformization varies markedly across territory, platforms tend to follow some common political strategies, defined by the use of the powers of digital technology. We will here briefly outline some key characteristics of the platform strategy vis-à-vis states, and how these strategies shape variegated pathways of regulatory transformation.

The platform model implies developing technological solutions to social problems—what Morozov (2013) calls "technosolutionism"—as strategic means for colonizing the realm of political decision-making: supplanting public and political, with private and technological. The platforms use technology to exploit regulatory gray areas—engaging in what Hecht (2009) calls "technopolitics": the "strategic practice of […] using technology to constitute, embody, or enact political goals" (Hecht, 2009: 15). While platforms are better understood as regulatory than technology entrepreneurs (Pollman and Barry, 2016), technological innovation is thus central to their regulatory pursuits. While technological innovation always has had political consequences, those consequences have now become its chief purpose.

Platforms tend to expand rapidly, fueled by massive venture capital backing, which allows them to undercut competition and quickly build a userbase (Langley and Leyshon, 2017). While the literature has understood this primarily as a means of outcompeting other platforms, it also serves as a strategy vis-à-vis the state, as quick expansion allows the platform to build political and legal power, hire lawyers and lobbyists, and mobilize their user base as a political force (Collier et al., 2018; Culpepper and Thelen, 2020; van Doorn, 2019). Having established a business in a regulatory grey area, the rapid expansion allows companies to present slow-moving lawmakers with a *fait accompli*, while mobilizing overwhelming political and legal power to fight attempts at after-the-fact regulation (Srnicek, 2017a).

Platforms seek to spread their rhizomatic roots to claim control of the infrastructure on which states, regulatory agencies and political elites depend. As platform corporations have thus emerged as the "infrastructural core" (van Dijck et al., 2018: 12) of the global digital economy, they have also become embroiled in geopolitical conflict—emerging as "key pawns in a mounting hegemonic strife"

(Bassens and Hendrikse, 2022: 1). As a result, states seek to support platformization as means of attaining geopolitical influence. China's party-state has for instance supported the growth and internationalization of domestic platform companies, while imposing political control over the web and protecting their market from foreign competition (Peck and Phillips, 2020). Chinese state-controlled TikTok provides an illustrative example, as the platform has grown into one of the most important social media platforms in Europe and the US—while being not allowed in China itself, leaving Western politicians with the unappealing choice of shutting down a platform used by a large share of their electorate, or having their citizens be subject to Chinese influence and data extraction. While China and the US are strategically investing in platforms as geopolitical tools, and Europe is seeking to maintain sovereignty through regulation, many countries in the Global South are seeing foreign-operated platforms extract profits from their national markets.

Platforms not only seek to exert regulatory influence on states, but also to achieve a form of sovereignty of their own. While platforms exert significant control through infrastructural design and data extraction, they often seek to maintain a narrative of neutrality in order to avoid regulatory responsibilities. For instance, labor platforms like Uber or MTurk draw on their algorithmic form of worker control (Cheney-Lippold, 2011) to claim that their workers are not employees, but "independent contractors" who are therefore not fully subject to labor laws and welfare state protections (Ravenelle, 2019). This means that the platforms can devolve costs and risks onto workers, such as varying demand, lost earnings, responsibility for bodily injury, and damage to tools and assets. Short-term rental platforms such as Airbnb similarly use similar narratives to claim that they are merely connecting guests to private home rental, thus bypassing the regulation of hotel accommodation and shifting responsibility for taxation and legal obligations to their "hosts" (Törnberg, 2021). This is part of a broader strategy, in which platforms—from social media to gig work—use technological designs to target regulatory grey areas, algorithmic governmentality to shape the market to their interests, while drawing on a discourse of neutrality in order to shift legal responsibilities onto their users (Van Dijck and Poell, 2013).

While platforms pass on regulation onto their users, they also function as a legal and political front for these users—concealing their identities and mobilizing legal and political power to shield them from regulatory burden. Airbnb, for instance, has been shown to actively obfuscate host information to conceal their identity from governments and tax agencies, to mobilize significant lobbying efforts to fight stringent regulation, suing governments and tax agencies, and even to organize their users in "social movements" to push their political interests (van Doorn, 2019). Platforms thus attempt to effectively *un*nest their proprietary markets from the larger public market of which it is part, making participants subject only to the taxation and governance imposed by the platforms themselves. Platforms, in other words, seek to operate on the same level as states—as sovereign managers and regulators of markets.

In summary, platforms compete with states for the right to regulate, resulting in platformization as a path-dependent and contingent process driven by corporations using the social powers of digital technology to target institutional and regulatory vulnerabilities. Just as post-Fordism's pressure for interstate competition brought the rise of neoliberalism through variegated pathways, so are the shared patterns of platformization emerging gradually from a mosaic of plural and even contradictory institutional forms and strategies. Individual corporations may not always be successful in their ambitions, but the overall pattern is the digitalization, privatization and financialization of market regulation. We will now turn to examining the consequences of platformization for social regulation.

Social regulation in digital capitalism

Platformization can thus be broadly understood as the employment of new digital mechanisms for market dominance, driving a process of privatization and digitalization of regulatory functions for which capitalism have previously had to rely on the state. Like post-Fordism was shaped by capital breaking out of the confines of the Fordist-Keynesian nation-state, so digital capitalism is shaped by capital breaking out of even the minimal neoliberal state (Harvey, 1989b). By privatizing markets, platformization responds to the contradictions of the neoliberal state by reducing the role of democratic institutions over market regulation (Gorwa, 2019). This can be seen in that platforms are now using digital infrastructure to fulfill regulatory functions previously carried by public institutions: Platforms register market participants, set conditions of entry to the market, and set the rules of competition. They guarantee creditworthiness of customers and the efficiency of delivery. They act to enforce market contracts, providing guarantees to both sides that their agreed upon exchange will be fulfilled. They provide and police regulatory guidelines, administering punishments such as fines, reputational costs, or even expulsion from the market. They organize labor relations, setting wages not via state-mobilized minimum salaries or wage bargaining institutions, but through proprietary algorithms. They centralize and mobilize market information, solve market coordination problems, adjudicate disputes, and provide the information needed assess of the quality of goods.

While the platformization emerged as a continuation of long-running trends and slotted into existing institutional arrangements, there are signs of what regulation theorists call *endometabolism*: endogenous tensions within the architecture that may lead to further institutional transformations (Boyer, 2005). These tensions stem from primarily two factors. First, proprietary markets are shaped by different relationship between the regulators and the market, producing new forces shaping its social regulation. Second, governing through digital technology brings about a particular *way of seeing* those governed. Scott (1997) famously characterized how the modernist state made the social world legible and amenable to state power through a top-down population-based epistemology, exerting power through hierarchical command-and-control. Bauman (2003) traced the roots of this top-down epistemology of the Fordist-Keynesian state to the Fordist factory, with its hierarchies and strict boundaries. As the platform is coming to replace the Fordist factory as the chief "epistemological building site" (Bauman, 2003: 82) for contemporary capitalism, a new way of seeing emerges—one that renders legible through Big Data, and exerts control via programmable social infrastructures. Törnberg and Uitermark (2020) and Isin and Ruppert (2020) situate this digital form of control in Foucault's history of power, arguing that it signifies a move from regulatory power's top-down "average man" data epistemology to a power shaped by the epistemic features of Big Data: cluster-based, relational, interactional, fluid and ostensibly bottom-up—in short, *complex*.

As a result, platformization is creating pressures for a new governing logic, coming to shift the fundamental market ideology, discipline, and rationality that provided the foundation for post-Fordism's social regulation. In the same way that Foucault (2008: 259–260) suggests that the modern disciplinary power was reshaped by the biopolitical power exerted by neoliberal rationalities, so is the biopolitical power of neoliberalism thus now being altered by complex power made possible by digital technologies (Cheney-Lippold, 2011; Pfister and Yang, 2018). As neoliberal rationality came with an associated ideology and belief in the legitimacy of market rationality in regulating every aspect of human life, so does this complex control come with its associated ideology: what Malaby (2011) terms "technoliberalism," defined by faith in the legitimacy of emergent effects—"the emergent properties of complex interactions enjoy a certain degree of rightness just by virtue of being emergent" (Malaby, 2011: 56).

We now turn to examining three implications that this shift has on three aspects of social regulation, situating each of these discontinuities as part of the continuities of longer trends—from Fordism, to post-Fordism, to digital capitalism.

From neoliberalism to techno-feudalism

In a famous analysis of post-Fordist regulation, Harvey (1989a) described how the mode of market governance has been historically shaped by the competing pressures of democratic forces and competition. During Fordism, Harvey argued, democratic pressures meant that the state was "managerial" in relation to its market: it sought to embed, manage, and shape its market for the benefit of citizens, through welfare provisions, and active intervention and development. As we have discussed, post-Fordism signified this managerial system being undermined by globalization, forcing states to compete for transnational capital. This led to what Harvey termed the "entrepreneurial" mode of market regulation, as states sought to improve their competitive position by providing beneficial conditions for capital.

When platforms succeed in supplanting states as regulators and securing monopoly dominance, they are subject to limited pressures from both market competition and democratic forces. The platforms are thus neither managerial nor entrepreneurial in relation to their market but represent a mode of governance that Merrifield (2014) describes as "parasitic," and Durand (2020) as "predatory": a form of governance administered primarily in the pursuit of its own interests. If the managerial state sought to manage and shape their markets for the benefit of their citizens, and the entrepreneurial state sought to provide attractive conditions for transnational capital, the proprietary platform markets are designed to maximize platform profits.

As a result, these proprietary markets will not be neoliberal in the traditional sense. While platform owners tend to suggest that they merely provide neutral infrastructure for market forces by embodying the invisible hand of the market through algorithms and data, they are incentivized to design and regulate their markets according to their own profit-making motives rather than the tenets of neoliberal ideology (Sadowski, 2020; Staab, 2019). Platforms design the rules for the market exchange according to their own interests, often involving bending or suspending the principles of fair trade. While the privatization of regulation can be understood as a continuation of the neoliberal agenda of expanding market mechanisms, the outcome is a power dynamic that appears less like neoliberalism, and "more closely resemble those for serfs on a feudal manor—always at the mercy of the lord who can expropriate their business without any compensation" (Kenney et al., 2019: 877). Durand (2020) similarly compares platform capitalism with a form of "techno-feudalism," based on the similarity of its predatory mechanism of accumulation through appropriation and non-productive rentiership, ensured by extra-economic forms of coercion (see also Christophers, 2022).

As Peck and Phillips (2020) argue, such pseudo-Feudal and anti-competitive tendencies are however not necessarily antithetical to capitalism, but are in fact an inherent and long-standing feature (see also Morozov, 2022). Peck and Phillips see platforms through Fernand Braudel, situating them in the Braudelian zone of the "antimarket," and describing them as a "new machine with an old purpose: that of controlling markets from above and, in the process, generating significant concentrations of political-economic power" (Morozov, 2022: 75). While rentierism and expropriation have always been features of capitalism, platformization hence represents their rise into major factors at the core of capitalism

From Taylorist hierarchies to algorithmic herds

Fordism was characterized by a Taylorist model of production, centered on economy-of-scale and efficient mass-production of relatively homogeneous goods through highly hierarchical organizations. Labor discipline organized through fixed membership of employees in vertically integrated corporate structures, in which processes were divided into small steps, subject to detailed management. This afforded precise control and efficiency, but at the cost of rigidity and strong labor power. In contrast, post-Fordism emphasizes flexibility, innovation, and economy-of-scope. Worker discipline was achieved not through fixed employment in formal hierarchies, but by insecure and precarious forms of short-term employment and internal market competition between workers over indicators and targets. This afforded flexibility and undermining labor power, but at the cost of efficiency and precise worker control.

Platformization has meant a continuation and expansion of the post-Fordist production model—but bringing aspects of qualitative transformation, as programmable social infrastructures are employed as a means of precise worker control (Prassl, 2018; Wood et al., 2019). The neoliberal market-based model is supplanted by a programmable proprietary market, drawing on algorithms, data, and AI to shape worker behavior in precise but ostensibly horizontal ways. Platform workers are controlled through dynamic ratings and scorings, while being automatically monitored and managed through data streams and algorithmic management (Jarrahi et al. 2021). Neoliberalism's "market regime of governance" (Asen, 2017: 330) is thus transformed into a regime that is not just marketized but also technologized, shaping a technoliberal subjectivity among workers which can be shaped according to corporate needs. Rouvroy and Berns (2013: 10) describe an "algorithmic governmentality": a rationality "founded on the automated collection, aggregation and analysis of big data so as to model, anticipate and preemptively affect possible behaviours." By, for instance, having workers interact as competitors in a market rather than collaborators in a team, and designing interfaces that prevent them from communicating or learning about one another, platforms prevent emergence of a critical political subject and thus reduce the possibility for collective action. Platforms furthermore shape worker subjectivities by gamifying performance and using indicators and performance evaluations drawing on reviews from customers and colleagues to create a horizontal peer-to-peer system of domination. The result is a labor regulation combines the precise control of Taylorism with the flexibility, and informal precarious labor contracts of the neoliberal market model, undermining the mobilization of labor power and thus the possibility of a much-theorized Polanyian backlash for platform worker re-embedding.

Uber illustrates this production mode, as their social infrastructure is designed to limit and constraint actions of participants in such a way as to steer the outcome. While purporting to provide a market, Uber sets the base rates its drivers charge, and limits the ability of drivers to accept or reject these offers—even creating "phantom cabs" to give an illusion of greater supply, in order to push down prices (Rosenblat and Stark, 2016). The Uber reputation system works as a normative apparatus, nudging both drivers and passengers toward a specific behavior. Uber thus controls workers through a mix between soft and hard discipline, combining gamification, scores, and nudges with detailed tracking, algorithmic control, and threats of fines and expulsion—all A/B-tested and designed with precision to shape worker behavior. This illustrates how platformization is bringing about the emergence of a distinct model of production.

Toward an automated consumer culture

The cultural logic of Fordism was characterized by a regime of mass-consumption and mass-individuality that drove demand for standardized goods pouring off machines and assembly lines (Gartman, 2004). As discussed, the Fordist crisis of accumulation began as a demand crisis, as these "basic needs had by and large been covered" (Streeck, 2012: 30). The post-Fordist response was characterized by a shift toward individualization, targeting specific consumer niches, and shaping a culture in which consumers engage in distinction through differentiation (Bourdieu, 1979). As scholars have long argued, postmodernism can thus be seen as the cultural logic of post-Fordism and neoliberalism (Baudrillard, 2016; Harvey, 1989b; Kroker, 1985).

While we still tend to think of technological innovation primarily as a means of increasing productivity, the brunt of investment in technological innovation since the Fordist crisis has been geared toward financialization and generating demand rather than maximizing productivity, as a result of the demand-side weakness of post-Fordism. It remains debated whether the implementation of digital technologies since the 1970s has made *any* significant contributions to productivity (Gordon, 2017). While much attention around AI and digital automation has been on its potential impacts on labor, digitalization has similarly been characterized by rationalization of consumption rather than of production: corporations like Alphabet and Meta are essentially advertising platforms, extracting individual data, and employing sophisticated AI to predict, steer, and manipulate consumer behavior. The growth of such platforms is leveraged on their promise to generate consumption, and to make these effects predictable and thereby possible to financialize.

Digital capitalism is thus beginning to shape a consumer culture of its own. If the Fordist cultural logic was characterized by mass-individuality, and post-Fordism by post-modernity and subcultural difference, digital capitalism is characterized by a cultural logic emerging around manipulation based on digital control (Törnberg and Uitermark, 2021). From Fordism's economy-of-scale to post-Fordism's economy-of-scope, we now seeing an incipient shift toward an economy-of-*action*, in which marketing is growing increasingly capable to craft consumer demand by shaping it out of the malleable clay of identity and differences (Zuboff, 2019). This casts platformization as bringing a distinct regime of consumption, characterized by the employment of increasingly illiberal forms of control, domination, and manipulation, drawing on consumers' social insecurities and anxieties to shape consumption needs. Platformization hence appears as part of a move toward the culmination of alienation, in which digital powers allow the market-system to assume a life of its own (Dyer-Witheford et al, 2019: 2).

Discussion

The Fordist-Keynesian state was a container of a national market; it served a "managerial" role (Harvey, 1989a), mobilizing collective bargaining, striving to steer and supplement the market for the welfare of its citizens. As capital broke out of the boundaries of the nation-state in the wake of the 1970s crisis of accumulation, states effectively lost their capacity to regulate capitalism and they were reduced to compete for global capital—over time shaping the "neoliberal" or "entrepreneurial" state (Harvey, 1989a, 2007). While Fordism temporarily resolved the inherent tensions between democracy and capitalism by leveraging rapid growth to halt the rise of inequality, post-Fordism and neoliberalism saw a rapid growth of social inequality —suggesting that it is an unstable or transitional political form (Harvey, 2007: 79). This set the scene for the emergence of digital capitalism, in which capital leverages *platforms* to stage yet another breakout—now from even the hollowed-out neoliberal state.

Platforms are *technopolitical* actors, employing technology to constitute, embody, or enact political goals, seeking to employ digital power to monopolize governance. Platformization can thus broadly be understood as the growing use of digital powers for social control within contemporary capitalism. Just as the shift from Fordism to post-Fordism, the process of platformization resulting from this is a creeping, gradual, and variegated path-dependent process, in which diverse platforms strategically engage with the local institutional context, seeking to identify and exploit its gaps and weaknesses. Platformization however shares the common characteristic of being an active political intervention by capital in relation to the state, seeking to shift decision-making powers from elected bodies to private firms.

Under digital capitalism, markets are thus proprietary, and platform companies are coming to compete with—and even supplant—the regulatory role of public institutions. Digital capitalism is founded on the sophisticated forms of control enabled by digital technology, which is coming to shape a mode of accumulation founded on new forms of domination. By privatizing market regulation, digital capitalism resolves the neoliberal tension between democratic and market forces, by rendering obsolete democratic institutions and collective decisions-making in relation to market regulation. Digital capitalism is thus founded on the privatization, digitalization and financialization of market regulation.

While Fordism pursued profits through rationalization of production, and post-Fordism through financialization and appropriation, digital capitalism is characterized by accumulation through coercion—drawing on digital powers to maintain a chokehold on key points for accumulation and using the threat of exclusion to extract monopoly rents. In post-Fordism, globalization enabled the manufacturing sector to be offshored, thus undermining labor power and creating pressure on states for market deregulation, shifting rich economies toward the service sector. Platformization constitutes a continuation of this trajectory, as platform in practice constitute a form of privatized and deterritorialized tax-havens, which enable service sectors jobs to be digitally offshored. This is expanding competitive pressures on states to provide markets that are attractive for capital through a privatized form of "regulatory undercutting" (Tickell and Peck, 1995), while enabling ways for businesses to escape unions and state regulation.

Digital capitalism results in pressures for a new mode of social regulation, as capital is using code to rewrite laws, and employing the medium of digital technology to supplant the role of democratic institutions.

First, while the privatization of markets can be read as a continuation of the neoliberal agenda in the sense of being an expansion of market forces into new realms. The platforms set the rules of interaction and competition, designing market mechanisms according to their own interests, which often run counter to the ideals of free-market competition. If the contradiction of the neoliberal state was between democratic and market forces, the contradiction of digital capitalism is thus between market participants and platforms.

Second, platforms are based on the use of programmable social infrastructure to control social outcomes, which emerge seemingly organically from individual interaction. Through code and data, governance is depoliticized and privatized, organized as proprietary algorithms which employ massive behavior data to engineer social systems through infrastructural design—turning social issues into technical problems to be solves through private means. Platformization implies replacing the political life of the community with privatized technology as the basis for governance. They in this sense embody politics after the "end of politics" (Krivý, 2018), stripping the outcomes of their actions from their political, conflictual and power dimensions, and casting them as inevitable and natural. As neoliberal ideology was based on a belief in the inherent legitimacy of market logic, so these cybernetic systems are subject to their own technoliberal ideology: the trust in the invisible hand of the platform algorithm.

Conclusion

This paper has examined the continuities and *dis*continuities associated to the rise of digital capitalism through the lens of regulation theory. As we have seen, digitalization first emerged as part and parcel of macro-trends of capitalist reorganization in response to the post-Fordist crisis, and as complementary to existing financialized neoliberal institutions. However, digitalization also brought challenges to the existing regime: as digital goods are not scarce but can be copied with near-zero marginal costs, they pose a much-debated challenge for capitalist accumulation—leading some scholars to even speculate that they would bring the arrival of a post-capitalist utopia (Mason, 2016). Capitalism's solution to this dilemma was the *platform*, which creates artificial scarcity by using digital technology's capacity to centralize and control access to resources. The platform model is ultimately founded on predatory mechanisms of accumulation through non-productive rentiership, ensured by extra-economic forms of coercion (Durand, 2020; Christophers, 2022). This has brought some scholars to suggest that digitalization will not bring post-capitalism, but perhaps rather a *pre*-capitalism—sharing more in common with feudalism than socialism.

Such a transformation would concern not merely a transition from one regime of accumulation to another, but to new regime of production altogether. At the same time, this pseudo-feudal form of accumulation is currently situated within a larger institutional hierarchy which is very similar to the financialized neoliberal accumulation regime. The combination between new and old—what regulation theorists may call a "hybrid" regime—suggests that we are finding ourselves in what Gramsci referred to as an interregnum: the moment of uncertainty in which the new is just beginning to sprout from the ashes of the old. While we have outlined how platformization exerts pressure on existing institutions and social regulation, the resulting regulatory regimes and institutional configurations of digital capitalism are still very much in the making. As regulation theorists emphasize, while the outcomes of such moments are conditioned and constrained by larger capitalist trajectories, they are ultimately determined by political processes. At this fork in the road, we may broadly outline three possible paths forward.

The first path is a continuation of the current relatively laissez-faire platform capitalism which has thus far dominated in the West, in which regulation has primarily taken place within the anti-trust frameworks developed for the vertical monopolies of the Fordist era. Such antitrust regulation focuses on economic dimensions, such as protecting consumers from rising prices, and is thus relatively toothless in facing the democratic and political threats posed by platforms' amassing of power through data extraction and infrastructural control. The EU has taken a more aggressive stance than the US, launching antitrust investigations against Alphabet, Amazon, and Apple, and seeking to re-impose neoliberal market logic via the Digital Markets Act. As Bassens and Hendrikse (2022) argue, such moves are part of defending older non-platform firms from foreign platform competition and seeking to strengthen the zone's technological sovereignty, but are limited by their lack of influence over the US corporate-owned core infrastructures. Ultimately, this path thus implies that the novel forms of accumulation are met by old governance mechanisms and motivated by geopolitical interests, implying that platform corporations are thus likely to continue to grow and consolidate, effectively representing the rise of an elite class with the power to manipulate social, political, and economic conditions. Platforms are likely to claim more and more governance capacity through digital surveillance and control—"in functional arenas from room-letting to transportation to commerce, persons will be increasingly subject to corporate, rather than democratic, control" (Pasquale, 2018: 2).

A second path is illustrated by trends in China, where the state has taken an active role in shaping the growth of the private platform economy, with the aim of expanding its both geopolitical and domestic control. China is beginning to draw on private firms to construct state-lead programs for platform-based citizen control, most clearly illustrated in the much-debated Social Credit Scoring system, in which Chinese nationals are evaluated—under the threat of exclusion—through a reputation score which combines social, political and credit rating data. The platform model's capacity for control and data extraction are thus made to fuel a repressive state apparatus, suggesting a potential path in which platform power brings the capacity of state control to reach deeper into social, political, and economic dimensions of the daily life of citizens (Caprotti and Liu, 2020; Jiang and Fu, 2018).

A third path, yet lacking in significant real-world examples, would entail treating the social infrastructures of platforms in the same way as other public infrastructures, such as electricity or gas provision, which are typically managed by state-run departments of public utilities or public commissions. This would make platform infrastructures subject to high level of regulation in service of a democratically defined public good, effectively making platform design subject to political and democratic decision-making.

Such models could include what has been referred to as "platform cooperativism," in which non-market actors are charged to develop platforms, founded on non-market values such as solidarity, democratic ownership, and seeking to achieve fair labor conditions by for instance implementing digital forms of collective bargaining processes (Schneider, 2018; Scholz, 2016). While technologically feasible, such platform cooperatives are however unlikely to be competitive with the private quasi-monopolies founded on near-inexhaustible financial investments, without strong state support and matching regulatory frameworks. This suggests that it may be productive to think in terms of a more fundamental societal shift (Muldoon, 2022).

While platformization stems from a near inevitable growth of the governance capacity of technology, the paths ahead thus still lie open. While it is not without good cause that early technoutopianism has been supplanted by technodystopianism, it is important to realize that the hopes put in digitalization were not fundamentally misplaced. Digital technology may today be employed to undermine democratic power, weaken public services, promote labor precarity, violate privacy, and destabilize the world's democracies, but its political possibilities could just as well serve to enable new forms of democratic governance (Schneider, 2018; Scholz, 2016). We could envision digital technology supporting transnational regulatory governance institutions, thus providing the seed for a new institutional fix to resolve the long-standing Fordist crisis. Realizing such optimistic visions however calls on us to exercise our political imagination and realize that we have the capacity to take charge of events—political muscles that have atrophied during decades of neoliberal hegemony. Code is institutions, code is regulation, code is political—and so it must be made subject to political life. By highlighting platformization as a both political and contingent process, this paper hopes to have, however marginally, contributed to this ambition.

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