

## Review Symposium

# On Vili Lehdonvirta's *Cloud Empires: How Digital Platforms Are Overtaking the State and How We Can Regain Control*, Cambridge, MA, MIT Press, 2022

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**JEL classification:** O330 Technological change: choices and consequences, diffusion processes; Z10 Cultural Economics • Economic Sociology • Economic Anthropology: General; D22 Production and Organizations: Firm Behavior: Empirical Analysis.

## Whose social order?

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Socio-economic research into the digital economy rarely requires elaborate justification. Too obvious are the digital economy's effects on how 21st century societies communicate, exchange, live, produce and work. The uncontentious timeliness of the topic has been both a blessing and a curse for the research field. The digital economy's relevance has enabled original empirical work, serendipitous findings and scholarly community-building. At the same time, this topical legitimacy has contributed to a less than ideal ratio between the collection of stylized facts about aspects of the field and systematic theory-building and generalization.

With *Cloud Empires*, Vili Lehdonvirta—for years a central node of the empirical research community—has produced a path-breaking suggestion of where to take the field theoretically. *Cloud Empires*' core conceptual move is to analyze large digital firms as private providers of the institutional foundations of commerce in digital fields. The main service the digital economy's giant corporations provide then is not technology or efficiency, but what economic sociologists have called the *social order of markets*. In a move reminiscent of classic sociological work on the Mafia, Lehdonvirta asserts that digital firms 'don't appear

stately merely by virtue of being powerful but are powerful precisely because in certain important ways they emulate the state' (Lehdonvirta, 2022, p. 7).

*Cloud Empires* deals with many fascinating sideshows, such as the near comical reliability with which Internet entrepreneurs abandoned libertarian promises in favor of bureaucratic management, or the crucial question of how to establish countervailing power in the digital economy. Still, I believe that its most noteworthy contribution to socio-economics is the empirically thick and conceptually precise reconstruction of how digital firms—often seemingly unwillingly—came to organize governance for a growing share of contemporary economic—and, one may add, public and political—life. Lehdonvirta demonstrates how field-specific coordination problems forced the hands of reluctant firms to establish regulatory capacities for, among others, labor markets, retailing and monetary systems. The style of reasoning of the individual chapters has strong resemblances with the branches of economic sociology and institutional economics that relate social structures in the economy to the coordination problems market actors face. This field-specific distillation of typical coordination problems and firms' incremental institution-building responses is certainly among the most rigorous and rich sociological applications of thinking in such terms in the literature.

Treating platform corporations as surrogate states leads to multiple interesting follow-up insights. Lehdonvirta criticizes competition policy-based solutions to the problem of platform power. If the digital platforms' core source of value is the provision of governance services, how exactly would increasing competitive pressures or government-enforced deconcentration benefit societies? Among the most fascinating follow-up insights is Lehdonvirta's take on the political power of platforms. The literature on platform power has—rightly—been focused on the extremely successful ways in which these businesses were able to enlist consumers and users into political-economic alliances against public regulators and incumbents (Culpepper and Thelen, 2020; Adler, 2021). Lehdonvirta's take is not incompatible, but slightly different. In important ways platforms have *become* the institutional infrastructure of core swaths of the economy. While the book does not engage with the recent literature on financial systems, its account takes the recent debate about the infrastructural power of business to a new field. Even more striking than in financial markets, however, cloud empires are not just providing the 'fuel' to govern markets effectively but have themselves become essential components of the institutional fabric of commercial life today. It is this infrastructural role that helps to explain why there is very little public surprise when platforms feel entitled to maintain embassies in 'foreign nations'.

One way to think about the limits of *Cloud Empires* is to think about the well-established limits of sociological theorizing based on coordination problems. While starting from problems allows the book a unique degree of analytical leverage and conceptual clarity, it does seem to imply that platforms do something useful in a clearly effective way. Lehdonvirta seems to be aware of this danger. When discussing the mind-boggling scale of organized fossil fuel waste to administer blockchains, the book reverts from a problem-centered narrative to one of organized irresponsibility, reckless profiteering and rampant hubris. Cases of classic exploitative frontier capitalism, one would think, rather than a world of clean 21st century solutions to coordination problems. Problem-centered explanations are of course not incompatible with major profiteering—ride hailing apps can both be understood as solutions to coordination problems *and* as attempts to extract resources from established transportation systems and labor markets. The fact that platforms 'solve'

problems does not imply that they do so well, cost-effectively or benignly. But then the theoretical account is already much less elegant, more historically contingent and more power-laden than the one *Cloud Empires* explicitly provides. Lehdonvirta's major follow-up project steers in exactly that direction, and the field can certainly look forward to his future publications exploring the messy global politics of the digital economy.

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# Cloud empires: the economic and cultural construction of an unequal future

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Digital tech companies have long since abandoned the ambition of being *just* economically relevant: through the control of public data and their exclusive use of technology they are also agents of the new political order, with their owners often acting as unelected politicians in office. Few sociologists have immersed themselves so deep in the Wild Wild West of the World Wide Web as Vili Lehdonvirta, who is—with his colleagues at the Oxford Internet Institute—one of the pioneers of platform work research in economic sociology. Far from being your typical academic book, *Cloud Empires* reads as an *oeuvre somme* or a compendium aimed at a broader readership and composed of 10 self-contained chapters brought together by an overarching question: Wasn't the Internet supposed to free us from both the tyranny of capitalism and the bureaucracy of the state? If so, why has it failed?

*Cloud Empires* is an incredibly effective example of academic trade, mostly due to Lehdonvirta's original use of narrative techniques applied to academic writing. It is also a book that—while written to engage with several popular narratives and tropes—makes a valuable contribution to the academic investigation of the platform economy. The monograph has been designed to provide comprehensive coverage of the field, and its breadth of coverage is one of its most impressive features; here I will focus only on two contributions of *Cloud Empires* that reflect the state of the art in the field while opening new avenues for future research: the relationship between platforms and the state and the cultural repertoires behind cloud empires.

In the book, the development of platforms is compared to the development of feudalism during the Middle Ages, Big Tech companies are equated to aristocrats, and platform sellers

are the modern equivalent of the rising middle classes during the French Revolution. The frequent metaphors and similitudes employed in *Cloud Empires* are not just smart devices to make the book as highly enjoyable and accessible as it is: they reflect more deeply how the author positions digital platforms within the economic history of global capitalism. Indeed, historical parallels serve to convey one of the book's core arguments: the reconfiguration of the business–state relationship exemplified by tech empires is not a new feature of capitalism and platforms reflect recurrent dynamics in economic history.

The first chapters of *Cloud Empires* do a wonderful job in explaining how and why these giant corporations came to undermine the existence of the Westphalian states *via* the control of information in national territories while also creating new political entities that have *de facto* sovereign power in accessing information, defense, and potentially the use of force exercised by the state. In some respects the growth of cloud empires reflects the capitalist tendency towards wealth accumulation since the 18th century as described by Piketty (2014). As the main sources of wealth and asset creation are data and information, tech companies appear to have an even more direct route to political power than traditional corporations.

In Chapter 11, Lehdonvirta imagines Jeff Bezos developing a comprehensive safety net system for platform workers, in a way similar to Otto von Bismarck in Germany in the 19th century. Here, the author's historical illustration of the Continental welfare state is one in which Otto von Bismarck implemented top-down welfare state interventions to improve his country's human capital (p. 200). This contrasts with more bottom-up historical accounts which see Bismarck giving institutional legitimation to existing *Kasse* systems that had been created by workers. According to this reading, welfare interventions were nationalized not just because they helped to sustain the human capital potential of workers but to avoid German unions being hijacked by the communist movement. Moving to current times, if we want to imagine a welfare state for the digital economy, we could think about platform unions coming up with *Kasse* systems to assist workers in navigating the uncertainty of task availability and their fluctuating income. But what would be Bezos' political interest in doing this?

An important avenue opened by *Cloud Empires* is the uncharted field of the relationship between the welfare state and platform work (cf. the forthcoming special issue on this topic in *Competition & Change*, edited by L. Antonucci and B. Palier). Traditional welfare states are not equipped to react to the insecure working lives of platform workers (Lehdonvirta, 2022, p. 190–199), while platforms seem to erode the financial foundations of existing welfare states given their tax avoiding tendencies (*ibid.*, p. 164–165). Markets and states—Lehdonvirta writes—are both ineffective in creating a sustainable digital economy, thereby generating a frustrating conundrum. The background story here is that states have changed their goals from full employment *via* direct interventions (the Keynesian workfare model) to the activation of the entrepreneurial self (the Schumpeterian workfare model) (Jessop, 1993). In this context, the rise of platform work is an extreme case of the individualized labor market design with workers as entrepreneurs of themselves in the search for tasks. Reading *Cloud Empires*, the issues presented by the platform economy are more complex than the old 'market versus state' dilemma: the state is complicit in the development of this new model and, as we know from existing research on corporate welfare, its boundaries with the market have been blurred. The proposition to democratize the platform economy in the concluding chapter of *Cloud Empires* reads as an invitation to reduce the role of the market in our societies and within state intervention itself.

In a context where commodification is so widespread and the corporate logic so pervasive, where does the expectation that the world wide web would have freed us from the tyranny of the market (i.e. the very premise of the book) come from? To answer this question, we need to delve deeper into the narratives and cultural repertoires behind the digital economy. The book offers interesting glimpses of the biographies of tech entrepreneurs in its initial chapters—often these are stories of men with a highly technical background (geeks or nerds) and affinities for libertarian thinking. What do entrepreneurs' identities say about the social world they imagine and the realities they construct with their actions? In Chapter 6, Lehdonvirta finds that the style of central planning of tech empires is remarkably similar to that of the Soviet Union—a Soviet Union 2.0, as he calls it. This might be the direct effect of how the symbolic images of tech entrepreneurs, including such obsessions as going into space, have been shaped by Cold War images of the future, as illustrated in the brilliant *Imaginary Futures* by Barbrook (2007).

Tech empires are shaped by cultural repertoires according to which progress is to be achieved through technical and apolitical advancements, reflecting a political ideology that is rooted in libertarian thinking. As laid out by Talpin (2023), a key belief of libertarian thought is that technological enhancement of human life is possible if economic elites benefit from it. If the ownership of the future is an intrinsically unequal matter (Lanier, 2014), the future of digital economy research—as masterfully initiated by *Cloud Empires*—is inevitably intertwined with the investigation of inequality.

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# Can antitrust regulations improve the digital economy?

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*Cloud Empires* emphasizes that digital platforms are not 'simply businesses like any other' (Lehdonvirta, 2022, p. 219). Their economic allure lies beyond the products or services they

offer in the ‘institutional infrastructure’ (ibid., p. 200) they provide, which instate trust between online sellers and buyers and run international transactions smoothly in the absence of state regulations in the digital space (ibid., p. 220). This institutional value contributes to their large market shares. Over time, actors gravitate towards the same rules for exchange, and thus towards a single (Amazon, Google search, etc.) or a few (Uber-Lyft, Apple iOS-Google Android, etc.) platforms due to network effects. Collective decisions determine the accepted rules, and individuals have limited control over the rules that apply to them (ibid., p. 221). As a result, once a digital platform gains popularity, it can alter these rules at will and without any accountability to the actors that they bind. This ‘top-down control’ over digital markets can lead to deeply unfair and inefficient outcomes (ibid., p. 219).

This characterization of digital platforms leads Lehdonvirta to advance two important critiques of antitrust (competition) law regulators’ recent attacks on digital platform monopolies. First, he argues that efforts to force these platforms to shrink or share their markets might harm current users, stripping them of the ‘virtual states’ (ibid., p. 3) essential for economic exchange: ‘Breaking up a platform into several similar but smaller platforms would reduce its market power but also reduce its value to people’ (ibid., p. 220). Second, while certain vertical breakups, like preventing Amazon from being a seller on its own marketplace, can curb some abuses, they cannot tackle all the issues raised in the book—such as exorbitant fees, preferential treatment and the creation of unstable and unsafe jobs: ‘The root problem remains: the marketplace is ruled by billionaire technologists and venture capitalists whose interests diverge after a certain point from the interests of the people and businesses who populate the platforms’ (ibid., p. 223). Consequently, Lehdonvirta advocates an alternative policy: facilitating the bottom-up ‘democratization of digital platforms’ by ‘helping platforms’ different social classes to organize for their own benefit, encouraging them to collectively defend their interests against platform aristocrats, and protecting them from retaliation when they do’ (ibid., p. 233).

While these policy recommendations logically arise from treating platforms as quasi-states, they still necessitate further clarification. First, it remains unclear why online marketplaces cannot support both competing platform companies and an overarching institutional infrastructure that stabilizes and facilitates market exchange, even in the absence of state regulations. In certain competitive markets, the institutional rules of exchange are established through the collective efforts of private enterprises themselves, such as standard-setting bodies, trade unions and certification and rating institutes (see [Timmermans and Epstein, 2010](#)). While these private rules are voluntary, they are enforced through economic network effects, akin to the dynamics analyzed by Lehdonvirta. In contrast to platform rules, however, these collective standards are often more democratically designed, incorporating diverse economic interests. Thus, by constraining platforms’ ability to unilaterally impose rules on a majority of market participants, antitrust regulations can compel them to participate in the collaborative formulation of these standards. This approach not only preserves some institutional infrastructure but also addresses the issues arising from its unilateral construction.

This leads to my second point: It is also unclear why antitrust actions would hinder rather than complement and bolster the democratic revolution in the digital economy advocated by Lehdonvirta. In fact, the emergence of competing platforms could be a prerequisite for the successful collective organization of small merchants to safeguard their interests. Following Lehdonvirta’s analogy of bourgeois revolutions ([Lehdonvirta, 2022](#), p. 230), one

might argue that these revolutions were facilitated, in part, by international military and economic competition between pre-modern states. As Skocpol contends, 'in the periods before the Revolutions, each of these regimes—Bourbon France, Romanov Russia and Manchu China—found itself in a situation of intensifying military competition with nation-states abroad', compelling these monarchs to 'mobilize extraordinary resources from the society and to implement in the process reforms requiring structural transformations' (Skocpol, 1979, p. 50). Lehdonvirta himself posits that imperial competition drove Bismarck's invention of the welfare state (Lehdonvirta, 2022, p. 196). In other words, by constraining the financial power of platform monopolies and compelling them to compete more efficiently with other platforms, antitrust regulations can also coerce them, albeit reluctantly, into heeding the democratic demands of platform participants and looking out for their interests.

Nevertheless, Lehdonvirta's critique of antitrust enforcement remains potent as long as these regulations continue to be interpreted through the lens of 'consumer welfare' and remain solely fixated on economic efficiency and price stability (see Ergen and Kohl, 2019). As underscored by Steinbaum (2019) and Paul (2020), antitrust rules are presently applied too leniently to platform companies when they dictate wages and prices to the small merchants and independent contractors on their platforms (referred to as 'vertical price fixing'). Conversely, the rules are overly restrictive when these small merchants and contractors attempt to coordinate their wages and prices collectively themselves (known as 'horizontal price fixing' or 'cartels'). For instance, if all Uber drivers collectively agreed on a minimum ride fare and demanded it from Uber, they could face antitrust litigation. However, if antitrust rules were revised to permit such coordination, it would empower these small market actors, granting them more economic leverage to assert their demands from digital platforms.

Consequently, a fundamental reevaluation of antitrust rules is imperative in order to address the significant issues in digital platforms highlighted by Lehdonvirta while still allowing space for effective and democratic institutions governing digital marketplaces. The question that remains is whether the Federal Trade Commission Chair Lina Khan and other regulators, utilizing antitrust to curb digital platform monopolies, can usher in such a radical rethinking of antitrust principles.

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# Platforms as surrogate states?

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Tracing the origins of digital platforms and juxtaposing their emergence with the rise of market exchange and institutions, Lehdonvirta's *Cloud Empires* is both engaging and accessible. By comparing the power of digital platforms to those of states, the book astutely offers a remarkably unique and innovative way of looking at platforms. Its argument equips us with a novel way of not only understanding platform power but also curbing it.

There are some obvious differences between states and platforms, which are clearly acknowledged in the book. To begin with, platforms are driven by profits, and the same cannot be said about (democratic) states. Further, also unlike (democratic) states, platforms have little to no accountability to their users and have the power to make unilateral decisions regarding various aspects of how a platform is governed. Still, likening platforms to states, as this book does, has its advantages.

First, the analogy allows one to come to terms with the immense power tech platforms and companies hold in real, concrete ways. Some platforms have been able to amass economic resources to the extent that they are richer than many states and have immense influence in domestic and international politics and markets. The book masterfully shows how platforms can be seen to govern their users much like states if one were to think of the fees platforms charge users to use a platform as taxes, their ability to resolve disputes at a greater scale than any state's judiciary, their ability to institute what can be thought of as minimum wages, and the various ways in which platforms facilitate trade within and between states. Thinking of platforms in this way, further, allows us to appreciate in tangible terms the impact they have on their users—who rely on these platforms not only to access goods and services but to earn a living, and even to access education and health services. It also makes it more shocking that platforms, for the most part, escape meaningful and effective state regulation.

Private, digital, platforms thus have taken on many of the functions that are usually associated with states. The book points out the danger in this: the digital world is not governed by those who represent its inhabitants and are responsive and accountable to them through democratic processes. Rather, platforms can unilaterally decide on and change their practices as they see fit. Costs associated with switching to a different platform, alongside network effects, enable platforms to function at a transnational scale as near-monopolies. Driven by the motive to grow profits, successful platforms end up operating similarly to autocratic states. The transnational and unequal structure of the platforms renders it extremely difficult for collective action efforts by workers to bear fruit.

In its argument, the book does not simply draw an analogy between states and platforms but argues that digital platforms rival states. This argument is based on an in-depth and sharp analysis of how some of the major international platforms came to exist and consolidated power. The argument is an innovative and interesting one, yet the book leaves certain issues underdeveloped. First, while there is an emphasis on how the power of private



platforms is similar to that of states, there is less clarity on how digital platforms differ from non-digital private organizations, and why digital platforms are unique in the way that they rival states (when one can argue that non-digital private organizations can do that too). Like digital platforms, private enterprises have tried to resolve disputes internally before bringing cases to trial in court. They routinely create internal processes and set up customer service divisions to address disputes over various issues. Such actions, sometimes discussed as alternate dispute resolution, have been widely practiced by U.S. corporations since the late 1990s, for example (Lipsky and Seeber, 1998). One difference between offline organizations and those online is that offline organizations may fall under some kind of industry and labor regulation more regularly. This difference, however, points to the idea that the difference between online and offline organizations is that platforms often find ways to escape existing regulations, either by finding loopholes in regulations or by employing an army of lobbyists to make effective regulation difficult. In other circumstances, the state appears to be unwilling to regulate the industry for a variety of reasons, economic interests being one.

Another issue that the book leaves out is the wider social and political-economic conditions under which platforms emerged. Gig work has evolved into an important source of livelihood for many, and social security and basic needs such as education and healthcare have been outsourced to private providers. Would platforms have achieved the same success in the absence of a decline in the welfare state and rising inequalities? Delving into the histories and trajectories of the founders provides an interesting insight into the beliefs and motives that gave rise to some of the major platforms of our time, but their rise and the rise of their platforms did not occur due to their motivation and beliefs alone—a partnership between the tech industry and the state made available and actively developed not only the expertise, skill and infrastructure upon which these cloud empires were built but also the lax regulatory environment in which most platforms could consolidate power.

One can easily appreciate the book's exploration of historical parallels in the realm of technological advancement, particularly in the digital domain, in which there exists a tendency to assume that every development is entirely unprecedented and ground-breaking. The perceived novelty and unfamiliarity of technological advancements can lead to a sense of helplessness among those of us looking to address their negative consequences. However, as discerning scholars of social science theory often discover, many of these seemingly unprecedented phenomena bear striking resemblances to events of the past. While the past does not dictate the future outright, it allows us to glean valuable insights from historical narratives, thereby empowering us to transcend the notion of helplessness in both the present and the future. The book's numerous historical analogies, whether regarding the emergence of markets, states, social institutions or the challenges surrounding commerce in the absence of digitalization, fulfill two crucial purposes: first, they help elucidate the origins, rise and power of digital platforms, and second, they instill a sense of optimism as to what actions might be taken so that digital platforms can better serve society.

In the book, Lehdonvirta gives us a solution to the problem of platform power—the users of the platforms must take control and govern digital infrastructures. The pathway to this lofty goal, however, is not entirely clear. That being said, the book leaves one looking forward to what more Lehdonvirta has to offer, and I look forward to reading his analyses of the developments towards a digital revolution that will hopefully occur in the near future.

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# Pre-modern wine in digital bottles?

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*Why did Silicon Valley technologists end up recreating in digital form the very institutions that they were trying to obsolete?* This is the starting point for *Cloud Empires*, a thorough and provocative work and a fundamental contribution to rethinking Big Tech's power. Lehdonvirta searches for an answer in the history of the (Western) e-commerce evolution by tracing the economic, political, and social institutions guiding this process. In a nutshell, the book shows how the Internet 'recapitulated the past three thousand years of economic history in thirty years', moving from occasional exchange founded on reciprocity to regular trade based on reputation and finally to large impersonal marketplaces organized by central authorities.

There is much to like, learn, and discuss in *Cloud Empires*. To start with the praise, it has the two elements that—I believe—make a book important: it provides an original conceptual synthesis of a highly relevant problem backed by meticulous research, and it is bold, confronting some of the most powerful developments of our time and with ideas on how to conceptualize Big Tech's novelty. The problem-structure and development are based on masterfully condensed case studies, in each of which a key economic, social or political institutional form is discussed. In this way, as we learn about the history of (digital and physical) marketplaces, the book convincingly breaks down complex overarching problems into simple terms to uncover their relevance for theory development.

The central hypothesis of the book, and the answer to the opening question, is that technology cannot be considered a factor that can ultimately change the fundamental forces that shape how societies are organized. Paraphrasing Keynes, it suggests that while the Silicon Valley technologists believed to be exempt from the need for authority, they were the slaves of the institutions they were trying to change. The author argues that since e-commerce companies had to solve online the same fundamental problems that physical marketplaces had solved before, they ended up recreating the same institutions and power structures. Henceforth, 'platform companies don't appear stately merely by virtue of being powerful but are powerful precisely because in certain important ways they emulate the state.' Overall, my interpretation of Lehdonvirta's hypothesis is that, beyond the digital sparks, platforms are not bringing much new in theoretical terms, a view diverging from other approaches in the institutional (e.g. [Hinings et al., 2018](#)), political economy (e.g. [Srnicek, 2016](#)) and organizational (e.g. [Gawer, 2022](#)) literature.

The book's provocative conceptualization does have weak spots, most of which point towards interesting future research problems. In the first place, I miss a more detailed reflection bridging the gap between the level of the observations (in the e-commerce sector) and the system level at which part of the theorization is done. What is the relevance of the economic, political, and social institutions identified in these marketplaces to explain wider socio-economic dynamics? Further, while central and ubiquitous in the digital economy, marketplaces are only part of the forms of social interactions in which platforms play an increasingly fundamental organizing role. What are the institutions at play in these other forms (with the notable case of social media), and how do they contribute to cementing platforms' power? Exploring these issues would also allow for a more direct discussion with other system-level accounts addressing the same phenomenon, such as the hypothesis of platform and surveillance capitalism (Srnicek, 2016; Zuboff, 2019).

Second, while I find the hypothesis that e-commerce is re-modeling past institutions fascinating, I also see a potential conflict regarding the mismatch between the state of development of economic and political institutions. On the one hand, Lehdonvirta argues that with regard to economic institutions 'we are somewhere in the 1950s' (between markets and central planning), while on the other, with regard to political institutions 'we are in a pre-modern situation' (in need of a bourgeois revolution). I find this mismatch intriguing and worth further exploration. At the same time, it raises the question of whether there must be correspondences between economic and political governance structures and how divergence would affect socio-economic fields.

A third remark is that I find it hard to agree that if digital marketplaces have managed to re-create three thousand years' worth of institutional evolution in only thirty years, we are not dealing with something new for social theory. Quite the contrary, the opposite conclusion would be equally interesting. Even accepting Lehdonvirta's take, it raises the question why traditional economic institutions seemingly only evolved up until the middle of the 20th century.

My final consideration is to highlight the efforts to connect theory and policy. The book's last chapter is dedicated to assessing the forces driving institutional change and the limitations of the available policy tools to deal with Big Tech's increasing power. From this analysis emerges a concrete and original agenda: to create political institutions in platforms to reduce power asymmetries by leveraging the role of 'middle-class' actors. The major question this bourgeois-revolution take on the future of the platform raises is this: If the situation of the platforms as political institutions is pre-modern, then what pitfalls of modern political institutions should be avoided, and which principles should be conserved?

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## Response to critics

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I am deeply grateful to Timur Ergen, Lorenza Antonucci, Melike Arslan, Suvina Singal and Martín Harracá for applying their considerable erudition to engaging with the arguments in *Cloud Empires*. They each have specialisms that are critical to understanding the consequences of the digital economy to contemporary society, and they successfully bring these to bear in their critiques of my book.

As Timur Ergen notes, I wanted to show that it is possible to describe platforms using exactly the same theoretical vocabulary that has been developed in an influential tradition of economic sociology and institutional economics to describe how order obtains in markets and society more generally. Exchange is possible only if various coordination problems are somehow resolved, and the solutions to these problems are called institutions. Different types of solutions are possible, and we tend to attach different labels to them, such as ‘community’ or ‘state’. Yet this approach does not require us to presuppose that just because two institutions are labeled differently, they are also different in theoretically relevant ways. As Ergen suggests, an organized crime group controlling a territory can be theoretically indistinguishable from a state in how it protects property rights, enforces contracts, and taxes the population. Along the same lines, *Cloud Empires* argues that digital platforms can be indistinguishable from states—except that where states order interactions within territorial boundaries, platforms order de-territorial spaces brought into being with information and communication technologies.

A big advantage of this approach in my view is that it does not require us to invent any new theoretical concepts to explain what platforms do. Neither does it require us to essentialize platforms as a theoretical concept. Rather, the theory is micro-founded on coordination problems recognized across sociology, political science and economics. However, Ergen also alludes to a well-known concern with theorizing that proceeds from the idea that institutions are solutions to problems. Economic historian Sheilagh Ogilvie (2007) expresses this concern as ‘Whatever is, is right?’ How can we properly critique institutions if baked into our definition of them is the notion that they are somehow effective or efficient at what they do? This is especially a problem in scholarship that assumes that institutions change through a process of Darwinian selection in which older institutions are gradually discarded as social or technological innovation enables more efficient ones. Such scholarship ends up having to claim that some plainly exploitative practices must somehow be efficient in the bigger picture.

The opposite of this evolutionary theory is a conflict theory of institutional change, in which the focus shifts to how institutions determine the distribution of welfare between different groups or classes of society. Through political and technological struggle, each group seeks to reshape the institutions in such ways as to maximize their own share. From this perspective platforms appear as yet another attempt by capital to increase its share at the

expense of workers, or by the Global North at the expense of the South. But this approach has its own problems. Taken to extremes it implies a kind of social determinism in which institutions are infinitely malleable and any outcome is possible if only we will it politically. That 'all that would be needed for us to reach paradise would be more ethical technologists who keep the faith and resist the temptation to sell us out' (Lehdonvirta, 2022, p. 206).

Like many other economic sociologists and political economists, I seek to combine these two opposite approaches to understanding institutional change. On the one hand, I am approaching institutions as solutions whose efficient forms are to a significant extent dictated by the problems they seek to address. This explains why platform companies ended up replicating institutional forms that they were trying to obsolete, and why more radical alternatives failed. On the other, I recognize that both platforms and states can trade off varying degrees of efficiency to divert more surplus to particular groups. This explains variation that can be observed over time in the platforms' rules and outcomes, as the aristocrats and the middle classes mobilize to pursue their self-interest. And it provides a theoretical opening to consider further efforts to achieve more equitable outcomes, as my discussants eloquently highlight.

Suvina Singal appreciates the parallels that I draw between platforms and states, yet she finds *Cloud Empires* underdeveloped in terms of how it relates digital platforms to non-digital private organizations. It is normal for private corporations, she points out, to have internal bureaucracies and dispute resolution systems. How is this different from platforms? There are two answers implicit in the book and its theoretical approach. One is that private companies order their employees to further particular corporate interests, whereas market liberal states make laws and courts available for the general public to use as institutional infrastructures to support whatever exchanges they wish to pursue. Of course, there are many examples of autocratic states that provide no such public goods and function simply as their leaders' private wealth extraction machines; in economic-institutional terms they are more accurately seen as private organizations, even if they enjoy recognition as public institutions. As for platforms, I seek to show in *Cloud Empires* how they function as open institutional infrastructures in the manner of market liberal states, but also how they have changed over time towards furthering their insiders' particular interests in the manner of private companies or autocratic states.

Another answer to Singal's challenge is that platforms/states differ from private organizations because they are difficult to exit. An employee who does not like their company's rules can, with some difficulty, switch to another employer. An app developer who does not like Apple's rules has no such option. Of course, there are also previous examples of companies whose rule is difficult to escape, like the East India Company in 18th century South Asia, or Hudson's Bay Company in swaths of 18th century North America. But although these were labeled as companies, in theoretical terms they functioned as *de facto* states ruling over subjects. In this way the platform, too, resembles public order more than it resembles a private organization.

Towards the end of the book, I argue that platform companies' self-interest as quasi-states may lead them to produce other types of public goods besides market institutions—even something resembling welfare state institutions. Lorenza Antonucci uses her considerable knowledge of social theory and history to contextualize these arguments in broader debates about capitalism and the welfare state. She points out that the idealized state welfare systems that I write about no longer exist in many ways, as states have shifted towards a

Schumpeterian workfare model. In my view, this further diminishes the difference between platforms and states.

What interventions could make platforms more accountable to their inhabitants? Melike Arslan questions why online markets could not include both competing platform companies and an overarching institutional infrastructure that stabilizes and facilitates market exchange. Indeed, many competition policy analysts now argue that platforms should be compelled to offer horizontal interoperability with competing services using open standards that serve as such an overarching framework. I am by no means against this, but my point is that it has been tried already. This is exactly how early Internet services like the Usenet Marketplace (discussed in Chapter 2) used to work. In my view not enough is being done to learn from this past. According to my analysis, the model worked only as long as and to the extent that the competing service providers could successfully solve the many collective action problems inherent to governing a field in which nobody had overall authority. As Arslan mentions, some standards are self-enforcing coordination equilibria that require little to no policing. But in other situations, actors can offset their own costs by imposing them on others. Usenet providers individually shirked the collective responsibility of combating fraud and spam until their market imploded.

The successful collective maintenance of shared institutional rules by private enterprises that Arslan refers to is usually embedded in the context of a state actor that provides the ultimate authority to enforce agreements. There is no such ultimate authority in the transnational space inhabited by states and Internet companies, only attempts at collective governance that at present appear to be unraveling. This is not to say that state authority could not have a role in underpinning overarching frameworks for platform markets, but such efforts unavoidably become entangled in geopolitics, as recently discussed by Bradford (2023). My own research is also increasingly concerned with interactions between states and large technology companies in the international arena.

Finally, Martín Harracá asks how something that has ‘recreated three thousand years’ worth of institutional evolution in only thirty years’ could not be something new for social theory. This is a good question. I have argued that the speed at which digital institutions have changed compared to historical ones has to do with their relative weightlessness: once the physical infrastructures that underpin the digital economy are in place, changing the rules of the game can be as simple as changing the code that defines them.

## References

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