Philosophy & Technology (2025) 38:12
https://doi.org/10.1007/s13347-025-00840-5

RESEARCH ARTICLE

The Politics of Platform Technologies: A Critical Conceptualization of the Platform and Sharing Economy

Shaked Spier[1]

Received: 3 July 2024 / Accepted: 10 January 2025

Abstract

This paper offers a political analysis of the platform and sharing economy—an economic model in which digital platforms facilitate social and economic interactions. Its two central models, mainstream and cooperative platforms, offer similar applications and services (e.g., home-sharing, food delivery), but fundamentally differ in their ownership and governance structures, economic models, and technical designs. Building on literature from the politics of technology (PoT), the paper develops an approach for the political analysis of platform technologies, combining central components from the works of Winner, Feenberg, and Pfaffenberger. This approach is then applied to analyze the platform and sharing economy, highlighting the political significance of platform technologies. The analysis reveals three key insights. First, when incorporated into particular social arrangements, digital platforms become means for shaping social realities rather than mere tools for specific uses. Second, mainstream platforms perpetuate capitalist conditions in the digital sphere and therefore necessitate platform capitalism to function, whereas cooperative platforms resist and undermine it. Third, the dynamics between the platform models embody a struggle over the question of the good life in the digital economy. Additionally, the paper uncovers a philosophical weakness in Winner's definition of "inherently political technologies" that warrants further attention in PoT literature.

Keywords Politics of technology · Critical theory of technology · Digital platforms · Platform economy · Sharing economy · Platform cooperatives

✉ Shaked Spier
s.spier@utwente.nl

[1] Philosophy Section, Faculty of Behavioural, Management and Social Sciences, University of Twente, Enschede, The Netherlands

Published online: 28 January 2025

1 Introduction

Digital platforms increasingly mediate social, economic, and other forms of human interactions, which puts them in a position to influence the power dynamics and moral values that shape these interactions. This paper focuses on the platform and sharing economy – an economic model in which digital platforms facilitate social and economic interactions such as lending, renting, providing, and sharing access to goods and services. These platforms can be roughly divided into two types: the mainstream model of commercial and corporate platforms and cooperative platforms that rely on democratic decision-making and shared ownership. While mainstream platforms and their cooperative counterparts offer similar applications and services (e.g., home-sharing, food delivery), they fundamentally differ in a variety of issues that extend beyond the mere utility or application level. Most notable are their ownership and governance structures, economic models, and technical designs and operations. Moreover, each platform model aims at bringing different social and economic realities into being, which extend beyond the platform's direct utility.

The tension between these two platform models not only illustrates the contrasting social realities they aim to create but also makes a compelling case for the relevance of *politics of technology (PoT*) literature to analyze their social, political, and economic implications. PoT considers technology in its complex interplay with humans and society. Due to this interplay, issues surrounding technology are considered through the lens of power dynamics, social struggles, and moral values. PoT addresses two overarching questions regarding this interplay: first, PoT recognizes the importance of technology in shaping modern society. Therefore, it addresses the social, political, economic, etc. relations and realities that technologies help bring into being. Second, PoT addresses the development of technology and how to influence technological progress to create a more desirable and just society (Berg, 1998).

In this paper, I develop an approach for the political analysis of digital platform technologies based on PoT literature and apply it to the analysis of mainstream and cooperative platforms and their politics. The analysis reveals that when platform technologies are integrated into specific social arrangements, they become means for shaping social realities rather than serving merely as tools for particular uses like home-sharing, food delivery, or ride-hailing. Mainstream platforms perpetuate capitalism's socioeconomic conditions in the digital sphere. Therefore, they are inherently political in the Winnerian sense due to their reliance on platform capitalism as a social order. In contrast, platform cooperatives are designed both technically and institutionally to resist key aspects of platform capitalism. Their structures necessitate democratic decision-making and shared ownership, preventing them from functioning without these elements. According to a strict interpretation of Winner, platform cooperatives are not inherently political in their relation to platform capitalism as a social order, which is counterintuitive. This highlights a weakness in PoT theory that, while requiring further attention, exceeds the scope of this paper to address or resolve. However, this does not

reduce platform cooperatives to merely a reactive force against mainstream platforms—they are not the Luddites of platform capitalism. Instead, they use their technology to promote an alternative social vision and reality. Ultimately, the dynamics between the platform and sharing economy's countermodels embody a struggle over the question of the good life in the digital economy. Analyzing these dynamics is crucial not only to understand how digital platforms mediate power but also to uncover how their design choices affect the values and realities we aspire to in a digital society.

The paper is structured as follows: Section 2 begins with an overview of the platform and sharing economy, including its main platform models and their relevance for a PoT-based analysis. Following this, I discuss PoT's theoretical background, outline its central claims, and identify its analytical concepts and tools, drawing on the works of Langdon Winner, Andrew Feenberg, and Bryan Pfaffenberger. In Section 3, I apply these concepts and tools to analyze the politics of the platform and sharing economy. The analysis is made concrete by examining the politics of each platform model, the relationships between the models, and the platforms themselves, using specific platforms from each model as examples to support my arguments. Section 4 concludes the paper by discussing the normative implications of the presented conceptualization.

This paper contributes to the existing literature in three main ways. First, it conceptualizes the dynamics of the platform and sharing economy in political terms, thereby *re-politicizing* digital platforms and their operations. This counteracts the depoliticizing effect of technology-centered and data-driven governance approaches of mainstream platforms. Second, the paper uses case studies of two alternative platform models to analyze their politics as they unfold through their technical design, social contexts, and related social struggles. This provides an empirically informed political analysis that highlights the political significance of platform technologies. Third, by uncovering a philosophical weakness in Winner's work, this paper identifies a theoretical gap in PoT that warrants further attention.

2 Background and Theory

This section will begin with an overview of the platform and sharing economy and its platform countermodels. Relevant characteristics of each platform model and the case studies of particular platforms will be presented in Sect. 3 to put these characteristics within the context of the platforms' politics. Interested readers can refer to (Dijck et al., 2018; Frenken & Schor, 2017; Schor, 2020; Srnicek, 2016; Sundararajan, 2017; Woodcock & Graham, 2020) for in-depth discussions of the platform and sharing economy's mainstream model and (OECD, 2023; Scholz, 2017, 2023; Scholz & Schneider, 2017) for platform cooperatives.

2.1 The Platform and Sharing Economy's Countermodels

The platform and sharing economy describe an economic model, in which digital platforms facilitate social and economic interactions such as lending, renting,

providing, and sharing access to goods and services. The platforms' modularity often enables users to offer innovative services and products within the platform's ecosystem. The platform and sharing economy's initial narrative argues that digital platforms facilitate "collaborative consumption" of underutilized resources. This practice is asserted to have positive environmental impacts, strengthen social connections among participants, and economically empower the middle class (Botsman & Rogers, 2011; Sundararajan, 2017). Although the narrative explicitly incorporates commercial use, the focus on individual users sharing their resources, as opposed to merely renting or leasing them, and on the underutilized nature of these resources implies that the non-commercial aspect is pivotal in this narrative. In practice, the platform and sharing economy thrives on the economics of scale and network effects – the value that users derive from the platform depends on the number of platform users and platforms with a critical mass of participants draw further participants (which often leads to the market dominance of a single platform) (Frenken & Schor, 2017; Srnicek, 2016). These imply that platforms' scale in size translates to power.

The platform and sharing economy can be roughly divided into two platform models:

Mainstream platforms belong to the commercial, corporate platform model that dominates the platform and sharing economy. Their ownership and economic models are based on shareholders, investors, and venture capital. Therefore, they strive for profit maximization and market dominance. Mainstream platforms are often criticized for data collection and monetization, algorithmic management, precarious working conditions, worker (mis)classification as self-employed, tax avoidance, anti-competitive practices, exploitation of regulatory loopholes as well as negative implications to democracy, local communities, and the environment (Dijck et al., 2018; Frenken & Schor, 2017; Lemley & McCreary, 2020; Scholz, 2017; Srnicek, 2016). To fend off criticism, mainstream platforms often make claims that resemble the neutrality thesis. Their main argument is that the platforms are mere intermediaries or marketplaces and, therefore, are not responsible for the social and political consequences of their use.[1] This position has a depoliticizing effect on the discourse surrounding the platform and sharing economy by diverting it from the platforms' societal effects and possible economic and technical alternatives.

Platform cooperatives (*platform co-ops*) emerged as alternatives to mainstream platforms and their shortcomings.[2] Similar to mainstream platforms, these are businesses that use digital tools such as websites, mobile apps, or protocols to sell goods or services (as well as mediate between users that offer or consume them). They rely on two core principles that differentiate them from their mainstream

[1] Airbnb's work to reduce discrimination on the platform (Murphy, 2016) constitutes a notable exception in this regard and stands in contrast to Airbnb's efforts in other domains such as municipal and tax regulations.

[2] Other alternative models are municipal/city-owned platforms and union-backed labor platforms (Scholz, 2017).

counterparts: democratic decision-making and shared ownership. Co-op members (e.g., workers, users, and institutional partners such as local businesses, public administration, and unions) collectively control the platform both on the institutional and technical level (e.g., the platform's technical design and operation). The particular ownership and governance structures vary between platforms and can be classified into four groups: producer, worker, multi-stakeholder, and data platform co-ops (OECD, 2023; Platform Cooperativism Consortium, 2020; Scholz, 2017, 2023; Scholz & Schneider, 2017). Although the platform co-op model is fairly novel, they are based on a rich history of cooperative organizations and values, and therefore consider their alternative platform organizations as instances of a more radical transition towards a social and solidarity economy (Scholz, 2016, 2023; Vercher-Chaptal et al., 2021). However, they face a variety of challenges: balancing their social mission with economic viability, concurring with established mainstream platforms, overcoming legal barriers, creating ethical technologies, and resisting the degeneration of institutional democracy into hierarchical control.

As Table 1 illustrates, mainstream and cooperative platforms offer similar utility. However, they fundamentally differ in a variety of issues that extend beyond—or lie beneath—the mere utility level – their ownership and governance structures, economic models, and technical designs and operations. These differences are the core of their politics. Put differently, platforms are not necessarily political due to their utility (e.g., home-sharing, food delivery). Instead, they are political due to their institutional structure, technical design, and their influence on social and economic interactions. Furthermore, they are political due to how they are integrated within structures that (re-)produce power relations, promote particular moral and political values (while demoting others), impact stakeholders and their interests, etc. These aspects are crucial for analyzing the politics of digital platforms and conceptualizing these platforms not merely as technical tools, but—to paraphrase Pfaffenberger—as "politics constructed by technological means" (Pfaffenberger, 1992, p. 282).

The following section will lay out PoT's theoretical background and identify its analytical concepts and tools that will be used to analyze the platform and sharing economy's politics.

Table 1 Mainstream and cooperative platforms with similar utility

Application / utility	Mainstream	Cooperative
Home-Sharing / Short-Term Rentals	Airbnb	Fairbnb
Food Delivery	Deliveroo, Wolt, UberEats	CoopCycle
Ride-Hailing	Uber, Lyft	Drivers Cooperative
Freelance Labor	TaskRabbit, Upwork	Coopify, Up & Go

2.2 The Politics of Technology

Any discussion on the politics of technology begins with Winner's seminal question, *Do Artifacts Have Politics?* (1980). In this paper, I build on a subset of PoT literature to expand on Winner's claims and identify analytical tools and concepts suitable for addressing the politics of digital platforms. First, given my critical theory standpoint, I turn to Feenberg. His critical theory of technology provides a theoretical foundation to politicize (the philosophy of) technology, combining a neo-Marxist critique with modern approaches such as constructivism, Science and Technology Studies (STS), and post-phenomenology (Brey, 2010; Verbeek, 2013). Integrating Winner's and Feenberg's works balances Feenberg's neo-Marxist tendencies, offering a comprehensive account of PoT. This approach enables a critical analysis of the platform and sharing economy that extends beyond merely criticizing capitalism. Additionally, I incorporate Pfaffenberger's *Technological Dramas* (1992). Pfaffenberger provides a valuable theoretical perspective by addressing technology-related struggles in terms other than the Marxist conception of class struggle and resistance to capitalism, which is evident in Feenberg's work. Yet, as I will show, Pfaffenberger's view is compatible with critical theory. Finally, I present an interpretation of Feenberg and Pfaffenberger that considers resistance and struggle as progressive dynamics rather than merely reactive ones. This perspective reveals different paths for using, developing, and contextualizing technologies.

Before turning to the *politics* of technology, I will address the idiom's second part by briefly clarifying the term *technology*. Early philosophical traditions that took an interest in technology, most notably the Frankfurt School's critical theory and Martin Heidegger's phenomenology, propagated an essentialist, determinist, and somewhat dystopian conception of *Technology* (singular, with a capital T) as a broad phenomenon. Following the empirical turn, more recent philosophical notions—that position themselves as Heidegger's and the Frankfurt School's critical successors, one may add—aim to overcome this essentialist conception. Instead, they delve into the meanings and workings of particular *technologies* (plural, with a small t) in particular contexts and social arrangements. These include Feenberg's critical theory of technology and Peter-Paul Verbeek's post-phenomenology (Bantwal Rao et al., 2015; Brey, 2010; Feenberg, 1999; Sassower, 2017; Verbeek, 2013, 2020). To be sure, I address digital technologies in the latter respect. Therefore, the following discussion aims to provide a theoretical foundation for analyzing the politics of concrete technologies and their social arrangements; in this paper, by applying PoT to analyzing the politics of mainstream and cooperative platforms.

Winner distinguishes between two ways in which technology has political properties: first, he argues that the invention, design, or arrangements of technologies become ways of settling affairs in society. When technical arrangements (artifacts that are developed and designed in certain ways) are incorporated within certain social arrangements, their purpose, use, and impact extend from a mere functional level to a social and political level. Second, Winner further argues that technological artifacts can be *inherently* political. Technological artifacts can be inherently political by either *requiring* a particular set of social and political conditions to function or by being *strongly compatible with* such conditions. He distinguishes between

social conditions that are *internal* to the technical system, such as those within the institution that deploys the technology, and those that are *external*, like broader economic conditions and legal frameworks (Winner, 1980).

Building on Winner, the politics of technology can be understood through several aspects. First, technological development and design processes are biased in particular directions, determining the politics of technological artifacts. Second, technological artifacts embody the values of certain social groups (elites). This claim relates to the *value-ladenness* of technology (the position that technologies have embedded values in the sense of built-in tendencies to promote or demote certain moral, political, or social values) and therefore, rejects the neutrality thesis. That said, unlike ethical approaches to technology that focus on mediation and normative judgments, PoT literature examines moral issues through technology's political dimensions. Third, technologies embody social relations and distribute power (Brey, 2008), as illustrated by Winner's examples of low-hanging bridges, tomato harvesting machines, and centralized nuclear power plants versus decentralized solar systems. Fourth, the politics of technological artifacts are determined not only by their design but also by their incorporation into concrete social arrangements, which reproduce and reinforce the existing social order while narrowing possibilities for societal change. This challenges some critics' claims that Winner—or PoT in general—overemphasizes technology's design while neglecting the social, economic, and organizational contexts in which these technologies are implemented. Finally, Winner distinguishes two layers of technological utilization by stating that technologies "encompass purposes far beyond their immediate use" and "transcend the simple categories of 'intended' and 'unintended' altogether (Winner, 1980, p. 125). These layers include technologies' functional use and the broader ethical-political implications embedded and expressed through them.

Feenberg's two-tiered instrumentalization theory makes this distinction explicit. The theory offers a dialectic of technological rationality that differentiates between the primary (causal) level and the secondary (cultural) level of instrumentalization. The *primary instrumentalization* encompasses technology's functional, reifying aspects. The primary instrumentalization is reductionist and decontextualizes the technological objects. In *secondary instrumentalization*, technological artifacts are recontextualized; they are constituted in particular social contexts, where socio-cultural aspects such as aesthetics and ethics are added (Feenberg, 1999, 2002; Michel, 2017; Veak, 2006). Consider, for example, the smartphone: its creation involves extracting rare metals and reducing communication to efficient technical processes (primary instrumentalization), while its societal adoption reflects broader socio-cultural values, such as connectivity, self-expression, and the signaling of social status (secondary instrumentalization). In addition, in primary instrumentalization, power is involved in the "instrumentalization" of nature and subjects as functionalities. In secondary instrumentalization, social power is involved when social values, ideologies, etc. are inscribed in technologies (Bantwal Rao et al., 2015). Ultimately, Feenberg observes that the distinction between primary and secondary instrumentalization is not always clear-cut. Decontextualization is never absolute and the processes of primary instrumentalization are conditioned by secondary instrumentalization.

Feenberg illustrates this with an example: "Cutting down a tree to make lumber and building a house with it are not the primary and secondary instrumentalizations respectively. Cutting down a tree "decontextualizes" it, but does so in line with various technical, legal, and aesthetic considerations determining what kinds of trees can become lumber of what size and shape and are salable as such. The act of cutting down the tree is thus not simply primary but involves both levels, as one would expect of an analytic distinction" (Feenberg, 2008, p. 34).

Feenberg emphasizes technology's *ambivalence*—its availability for alternative developments with different social and political consequences. This ambivalence applies to both technical choices and the contextual dimensions of technology's deployment. Put differently, technology is ambivalent in both its primary and secondary instrumentalization. For Feenberg, this makes technology a contested field where social groups with differing interests struggle. As he puts it: the "ambivalence of technology is distinguished from neutrality by the role it attributes to social values in the design, and not merely the use, of technical systems. In this view, technology is not a destiny but a *scene of struggle*. It is a social battlefield, or perhaps a better metaphor would be [Bruno Latour's] "parliament of things" in which civilizational alternatives contend" (Feenberg, 2002, p. 15 italics added). This ambivalence conveys two principles: the conservation of social hierarchy and *democratic rationalization*. In democratic rationalization, the contested field of technology is restructured to serve social needs beyond the hegemonic (capitalist) order (Feenberg, 1999). Notably, this approach differs from the Marxist dialectical model of struggle between Technology (with a capital T) and society, or of oppression versus liberation, sometimes associated with Feenberg's theory (Bantwal Rao et al., 2015; Kellner, 2017; Verbeek, 2013). Alongside social group struggles, Feenberg considers the struggle over technology as resistance to capitalism and its workings, such as the incorporation of practices like worker deskilling into technology design.

In this context, Pfaffenberger makes a valuable addition by conceptualizing the introduction of new technologies in social contexts as a struggle between groups of stakeholders (*design* and *impact constituency*) and the dynamics of their interactions and dialectic strategies (Pfaffenberger, 1992). While Feenberg focuses on resistance and struggles under capitalism, Pfaffenberger emphasizes the dynamics between social groups. Therefore, technological dramas offer a conceptualization of resistance and struggle that meaningfully complements Feenberg.

A technological drama begins with *technological regularization*: the design constituency introduces or adapts a technology (artifacts, systems, or technology-related practices) into a social context. By doing so, it coercively affects the allocation of power, prestige, or wealth according to its vision and interest. Technological regularization provokes the impact constituency's struggle to compensate for the loss of social power and self-esteem (caused by the introduction of technology). They adopt various strategies including the adaptation of technologies, social practices, and institutions: *technological adjustment* and *technological reconstitution* (Pfaffenberger, 1992). Moreover, as Brey highlights, new technologies do not impose only threats to the impact constituency but also bear opportunities. Through technological adjustments and reconstitution, the impact constituency can seize these opportunities rather than merely reacting to threats (Brey, 1999).

In *technological adjustment*, impact constituencies adopt strategies to compensate for losses from technological regularization. These strategies, however, do not challenge the foundations of regularization but seek access to or limited control over it (Pfaffenberger, 1992). *Technological reconstitution* involves impact constituencies actively reshaping technological artifacts, their design, and production. They deploy a "revolutionary" ideology and *antisignification* (a symbolic inversion, e.g., the inversion of dominating social and political paradigms) to create *counterartifacts* and alternative social contexts. These counterartifacts embody features that negate or reverse the dominant system's political implications (Pfaffenberger, 1992).

Broadly speaking, the approaches towards struggle in PoT literature vary from conceptualizing struggle in terms of resistance to Technology (with a capital T), resistance to a particular social order (e.g., capitalism) or certain aspects of that order (e.g., exploitation and deskilling of labor), struggle between different social groups that are affected by particular technologies (with a small t) and their social arrangements, or social struggles that are mediated through technology. Some of these notions tend to offer a reductionist concept of resistance and struggle as primarily reactive forces.

Within this context, Feenberg's and Pfaffenberger's positions are not mutually exclusive, but rather indicative of the different ways, in which resistance and struggle concerning technology can be progressive (rather than merely reactive) in both the technical and social sense. Feenberg argues for a democratic transformation of technology: "At the highest level, public life involves choices about what it means to be human. Today these choices are increasingly mediated by technical decisions. *What human beings are and will become is decided in the shape of our tools no less than in the action of statesmen and political movements.* The design of technology is thus an ontological decision fraught with political consequences. The exclusion of the vast majority from participation in this decision is profoundly undemocratic. Fundamental change requires a democratic transformation of technology" (Feenberg, 2002, p. 3). For Feenberg, democratization is achieved by incorporating alternative interests and values into technical design or, more practically, by including "participant interests" in a design process that embraces a wide variety of stakeholders (Feenberg, 1999, 2002). Pfaffenberger, on the other hand, views influencing technology's design as part of the progressive struggle dynamics within the technological drama, where the impact constituency employs strategies such as the adaptation of technologies, social practices, and institutions (Pfaffenberger, 1992). Although Feenberg and Pfaffenberger do not explicitly frame their conceptualizations as progressive, I highlight this dimension to emphasize its significance in the platform and sharing economy's politics, as well as to underscore how these conceptualizations differ from resistance that is merely reactive or reduced to passive opposition.

2.3 PoT's Analytical Concepts and Tools

The paper's approach combines elements from Winner, Feenberg, and Pfaffenberger. Based on the preceding discussion, I distinguish three central concepts and tools for

the analysis of the politics of technology and apply them to mainstream and cooperative platforms:

1. I apply the two-tiered instrumentalization theory of primary and secondary instrumentalization to digital platforms to show that their politics go beyond their primary instrumentalization (their direct application such as home-sharing, freelance labor, or food delivery).
2. I unpack the reciprocal relationship between platforms and the social order. I begin by presenting a conception of "social order" that integrates both Winner's and Feenberg's related concepts, and by identifying the key aspects that constitute platform capitalism as a social order. I then use them to analyze how mainstream and cooperative platforms either reproduce and reinforce the social order of platform capitalism or, conversely, undermine and resist it, thereby contributing to the creation of alternative social realities. Based on this analysis, I examine whether mainstream and cooperative platforms are *inherently political* in the Winnerian sense.
3. I apply both Feenberg and Pfaffenberger's technological dramas to analyze the struggle dynamics in the platform and sharing economy. As mentioned above, their notions of resistance and struggle go beyond the reduction of resistance to reactive opposition to technological development. Thus, the analysis will consider them as progressive dynamics that potentially uncover different paths for using, developing, and contextualizing technologies.

Additionally, I address the platforms' technical design in each of the aforementioned discussions. Using examples of particular platforms and their designs, this focus follows two objectives: first, to explicitly link each platform model's politics to its technical design. Second, to demonstrate how tangible aspects such as specific functions and operations, value-laden technical affordances, and the design process relate to PoT's abstract and analytical tools and concepts.

3 The Politics of Digital Platforms

This section of the paper consecutively applies the previously identified analytical concepts and tools of PoT. To reiterate, mainstream and cooperative platforms offer similar utility (applications and services). However, they fundamentally differ in a variety of issues that extend beyond mere utility. These include ownership and governance structures, economic models, and technical designs and operations. The following analysis will delve into these differences to unpack their political dimensions.

3.1 Primary and Secondary Instrumentalization

Feenberg's instrumentalization theory provides an analytical framework to address the tension between the functional similarities of mainstream and cooperative platforms (see Table 1) and their organizational, cultural, and economic differences.

In the following analysis, I will examine how the politics of mainstream and cooperative platforms unfold through the processes of primary and secondary instrumentalization.

The utility of each platform is conditioned by various considerations that determine which activities are considered applicable to the platform's utility and how the platform's algorithms mediate these activities. For example, Airbnb and Fairbnb apply different definitions of the accommodation types that can be offered on the platform (e.g., allowing/inhibiting multi-listing[3]) and which kind of sharing activities the platform facilitates (e.g., Airbnb technically facilitates only fee-based rentals and inhibits other sharing models such as barter exchange and Couchsurfing, Fairbnb donates 50% of the platform fees to social and environmental projects at the travel destination) (Spier, 2022, 2024). These considerations are driven by the platforms' secondary instrumentalization but are immanent to their primary instrumentalization as they are manifested in the platforms' algorithms.

Primary instrumentalization offers a means for conceptualizing the sharing economy's and mainstream platforms' key notions. Hitherto personal objects and resources (one's home, car, time, and skills) are decontextualized and reduced to "underutilized resources". They are then reified and commodified in two ways: first, as means for generating income, products, and services (an Uber ride, Airbnb flat).[4] Second, as unified digital representations that are conditioned by the platform's technical affordances (Bialski, 2016; Spier, 2024). In computer systems, human subjects are continuously decontextualized and reduced from full-blown persons to "users" that are integrated into the network (Feenberg, 2002, 2008). On digital platforms, subjects are decontextualized as persons and reduced to one-dimensional roles within the platform's terminology, such as "Hosts" and "Guests" (Airbnb), "Rabbits" and "Taskers" (TaskRabbit), or "Riders" (Deliveroo). In these roles, they are subjected to the reviews of other users using the platforms' review systems, which are inaccurate, inflated, and influenced by the platform's technical affordances (Bridges & Vásquez, 2018; Frenken & Schor, 2017; Spier, 2024; Zervas et al., 2021). Labor platforms' nearly ubiquitous classification of workers as self-employed further reduces subjects to contractors for which the platform holds no accountability (Scholz, 2017; Woodcock & Graham, 2020). Through algorithmic management, platform workers' labor is decontextualized and deskilled. For example, mainstream delivery platforms break down so-called "gigs" into tasks that are given to the couriers in consecutive order. Couriers have neither control over the tasks (e.g., refusing deliveries of bulk orders or to dangerous neighborhoods) nor can they invest from their subjective and contextual experience and knowledge in their execution (e.g., choosing routes more suitable for their vehicle or personal safety) (Woodcock, 2020; Woodcock & Waters, 2017). Lastly, mainstream platforms' datafication decontextualizes virtually all forms of platform use and reduces them to data, which is then

[3] The same host offering several listings – an indication of business activity.

[4] The terms Uber and Airbnb instead of taxi and hotel room have acquired an independent status in the platform and sharing economy. For example, users explicitly "call an Uber" and "book an Airbnb" rather than a taxi or hotel.

circulated between platforms and networks, analyzed, commodified, and used to generate further forms of value (e.g., monetization through advertising, generation of network effects) (Dijck et al., 2018; Srnicek, 2016; Zuboff, 2019).

In each platform model, the platform technology and its direct application are recontextualized differently and embedded in distinct social contexts. In mainstream platforms, the hierarchical corporate structure, shareholders' profit interests, and the neoliberal ideologies of platform founders shape primary instrumentalization in specific ways, forming the basis for the criticism against them (see Sect. 2.1). In contrast, platform co-ops embed the platform technology within a framework of democratic decision-making and shared ownership. This recontextualizes the platform and its application according to a broader range of ethical, legal, and aesthetic considerations, reflecting a wider range of stakeholders and interests. The following discussion highlights these differences by contrasting the secondary instrumentalization of platform co-ops with the primary instrumentalization dimensions of mainstream platforms:

Platform co-ops share mainstream platforms' decontextualization of personal objects and resources. However, instead of prioritizing reification and commodification, their recontextualization includes further ethical, political, and aesthetic considerations. For example, Fairbnb's "1 host – 1 house" policy[5] and prohibition of corporate-owned units ensure that Fairbnb remains non-extractive and does not contribute to the commodification of living space (Spier, 2022). Additionally, platform co-ops strive for the platform activity to empower local communities, for example, through communities' sovereignty over the platforms' local operations. In contrast to mainstream platforms, this recontextualizes the platform uses in ways that coincide with the platform and sharing economy's original narrative of strengthening communities.

Platform co-ops' co-determination and their emphasis on the empowerment of platform workers and users recontextualizes subjects in non-reductionist ways. The co-determination of the platform's organizational and technical operations constitutes workers and users as stakeholders that shape the platform (and hence, the impact it has on them). This is apparent in the platforms' technical design. For example, based on couriers' requirements, CoopCycle intentionally built "frictions" such as manual task assignments by a dispatcher, providing couriers with complete gig information, and the ability to deny gigs. This indicates that CoopCycle prioritizes qualitative, contextual knowledge and decision-making. This contrasts with mainstream platforms' emphasis on *frictionlessness* which is characterized by their quantitative and data-driven approach to decision-making and actions (Spier, 2022). Furthermore, platform co-ops abstain from algorithmic management, habit-forming design, and gamification (Scholz, 2023; Spier, 2022); all of which are prevalent in mainstream platforms (Cheng & Foley, 2019; Christensen, 2022; Jhaver et al., 2018; Mason, 2018; Sigala et al., 2019; Woodcock, 2021). This is another way in which platform co-ops resist the decontextualization and reduction of subjects (both

[5] Only hosts that use the property themselves or have one second home on the touristic market in their city are allowed to use the platform.

workers and users) to one-dimensional roles, where their platform use is dictated by algorithms.

Finally, platform co-ops limit data collection and usage for supporting the platform operations while excluding workers' performance evaluation, data monetization, etc. This is arguably a result of platform workers' and users' co-determination of data usage, which leads to unusual technical implementation of various functions. For example, CoopCycle's geo-tracking function delivers the couriers' location only in real-time and to the dispatcher; there is neither data collection to evaluate couriers' performance nor location data delivered to customers (in contrast to mainstream platforms) (Spier, 2022). Thus, CoopCycle limits the geo-tracking function to its declared purpose of supporting the dispatch process.

Applying Feenberg's instrumentalization theory to the platform and sharing economy reveals that when integrated into specific social contexts, platform technologies become more than mere tools for particular purposes like home-sharing, food delivery, or ride-hailing. Moreover, mainstream platforms' primary instrumentalization is shaped by their secondary instrumentalization. Their ownership structures, financial models, and legal frameworks are designed to maximize primary instrumentalization. In contrast, platform co-ops prioritize secondary instrumentalization. They begin with their social role and the social realities they aim to create, and then take steps to mitigate certain aspects of primary instrumentalization. Nonetheless, it is worth noting that platform co-ops still allow for some degree of primary instrumentalization.

These distinctions highlight that platforms serve as mechanisms for shaping social realities by promoting specific interests while marginalizing others, influencing power dynamics between individuals and groups, and promoting particular ideologies. Moreover, by making the social, ethical, and political dimensions of platform usage explicit and embedding them on a technical and aesthetic level, the recontextualization in platform co-ops' secondary instrumentalization also constitutes a *re-politicization* of platform usage (Spier, 2022).

3.2 Social Order

Theorists such as Hobbes, Marx, Durkheim, Parsons, and Habermas offer varying definitions of social order, each based on different assumptions about human nature and societal cooperation (Hechter & Horne, 2003). These differing perspectives mean that multiple definitions of social order can coexist. In this paper, I adopt a general conception of "social order" from sociology that combines key aspects of these different theories as outlined by Hechter and Horne (2003). This approach offers a conception that comprises what Winner vaguely refers to as "a particular set of social conditions […], social and political relationships of a particular stripe" (Winner, 1980, p. 130) and Feenberg's concept of "social hierarchies" when discussing the ambivalence of technology between conservation of hierarchy and democratic rationalization (Feenberg, 1999). According to this conception, social order refers to a specific system of social structures, institutions, economic conditions, values, and cultural norms. This system allows individuals to coordinate their actions

and cooperate to achieve common goals, thereby ensuring stability, predictability, and functionality in society.

To gain meaningful political insights into the platform and sharing economy, it is crucial to identify and characterize the social order relevant to this context. The platform and sharing economy is an economic model where individuals engage in social and economic interactions through digital platforms. Therefore, analyzing the politics of these platforms requires a characterization of social order that includes the social structures, economic conditions, and institutions enabling such coordination and cooperation.

A suitable characterization is *platform capitalism* – a system of business models and digital infrastructures that are based on the aggregation and utilization of data, generation of network effects, and concentration of power (Dijck et al., 2018; Srnicek, 2016; Staab, 2019). Platform capitalism is closely related to, but distinct from, the narrower concept of *surveillance capitalism* – an economic system that is based on the (unsolicited) aggregation and commodification of personal data (Zuboff, 2019). In the following, I identify the key aspects that constitute platform capitalism as a social order based on Srnicek, Staab, Dijck, and Zuboff's works – platform capitalism's economic structures, power dynamics, and its impact on the nature of work and employment relationships. For each aspect, I discuss how mainstream and cooperative platforms either reproduce and reinforce or undermine and resist the identified aspects. Finally, I build on the presented analysis to examine whether mainstream and cooperative platforms are *inherently political* in the Winnerian sense.

Platform capitalism's *economic structures* are based on platform-facilitated decentralized transactions between stakeholders. This is a common characteristic of both mainstream and cooperative platforms. Additionally, data-driven economic models and the commodification of hitherto private resources and personal data are central to platform capitalism's economic structures (and link it to surveillance capitalism). Mainstream platforms are designed to facilitate decentralized transactions in ways that are compatible with platform capitalism's economic structures. Their business model is based on venture capital, the platform founders' exit strategy (early maximization of the platform's market value), market dominance, and profit for shareholders. Therefore, platforms seek to monetize every aspect of platform use. For example, Airbnb is technically designed to promote the commodification of private living space and suppress non-commercial uses (Bialski, 2016; Spier, 2024). Similarly, datafication is central to mainstream platforms' operations (Dijck et al., 2018; Srnicek, 2016; Zuboff, 2019). For example, performance and behavioral data are used to press platform workers' wages, influence users' interaction with the platform, and advertising (Scholz, 2017; Woodcock, 2020; Woodcock & Graham, 2020).

Platform co-ops, in contrast, resist platform capitalism's commodification tendencies and prioritize socially and environmentally sustainable forms of interaction and exchange. For example, Fairbnb resists the commodification of living space using its "1 host – 1 house" and no corporate-owned apartments policies (that are technically implemented in the platform). Also, it enables local communities to enforce further regulations if needed (Fairbnb, 2021; Spier, 2022). Platform co-ops strive

for alternative ways of scaling than profit-oriented growth ("scaling up") which is central to platform capitalism. Instead, platform co-ops adopt strategies of seeding replication of models and using shared digital infrastructure in different geographical locations or sectors ("scaling out") and of creating additional social, environmental, and cultural value on a local level and involving more stakeholders ("scaling deep") (Scholz, 2023). The shared ownership and co-determination of platform co-ops give members control over the data and how it is used. As a result, platform co-ops avoid datafication and the commodification of data. For example, CoopCycle does not collect data for couriers' profiling and performance analysis (Spier, 2022), and Up & Go omitted the creation of personal profiles (Scholz, 2023) (both of which are standard operations in mainstream platforms). Thus, platform co-ops' resistance to platform capitalism's economic structures contributes to the creation of an alternative digital economy that prioritizes a different set of moral and political values over commodification.

Platform capitalism's economic structures shape the *power dynamics* in ways that shift power from users, businesses, and the public toward big platform companies. Mainstream platforms use network effects, data-driven operations, and information asymmetries as power mechanisms that reinforce these power dynamics. These mechanisms are both structural and technical. For example: network effects are reinforced through technical lock-in[6] methods that prevent users from migrating to other platforms; platform companies control the technology and therefore have privileged access to data; and they design the algorithms to strengthen information asymmetries by withholding information from users and the public (e.g., regulators and legislators). This lack of transparency consolidates power in the hands of platform companies. It limits the ability of stakeholders (e.g., users, regulators, and other platforms) to fully understand or challenge the mechanisms that govern mainstream platforms' operations and their broader social and political implications. In this way, opacity becomes a central power mechanism that reinforces economic inequalities and information asymmetries.

In contrast, platform co-ops intentionally eliminate information asymmetries and use network effects to redistribute (instead of concentrating) power. For example, cooperative labor platforms generally allow "multi-homing"[7] and are transparent to workers in terms of relevant gig information, algorithm design, and the co-op's organizational and financial management (Scholz, 2023; Spier, 2022). Some platform co-ops, such as CoopCycle, are open source, which further eliminates information asymmetries by making the algorithms transparent. However, not all platform co-ops are open source. This is typically not a rejection of open-source principles but rather a result of financial constraints faced by small, struggling co-ops or the need for alternative licensing models that grant access to other cooperatives while preventing exploitation by external entities (Scholz, 2023).

[6] Lock-in methods make users dependent on the platform, suppressing change to other platforms without substantial switching costs (e.g., inhibiting the export/migration of reputation data, profiles, user networks, etc.).

[7] Work for several platforms simultaneously.

CoopCycle also uses its operations to contribute to further open and democratic digital infrastructures such as OpenStreetMaps (instead of Google Maps) (Spier, 2022) and data cooperatives such as MIDATA and Savvy offer a foundation for an alternative data economy that is empowering and socially oriented instead of profit-oriented (Bühler et al., 2023; Scholz, 2023). Additionally, platform co-ops' democratic governance focuses on distributing rule-making, instead of rule-enforcement. Thus, it shifts the power dynamics from the platform technology as a coercive administrative system to the (democratically controlled) platform institution as a legislative system (Lehdonvirta, 2022). In sum, platform co-ops are technically and organizationally structured to redistribute power from the central platform or co-op toward workers, users, and business partners as well as within their digital ecosystem (among digital platforms and infrastructures with shared values). By providing open source and open data environments and tools that can be adapted to local needs (e.g., those of other platform co-ops) while preserving basic cooperative values, many platform co-ops contribute to shaping a different digital economy than platform capitalism and, ultimately, a different social reality.

Platform capitalism transformed the *nature of work and employment relationships*. It enabled the emergence of the gig economy, in which platforms facilitate temporary or freelance work of a decentralized workforce. In this setting, algorithmic management is central to the management and coordination of work. Mainstream platforms rely on algorithmic management, gamification, and information asymmetry to control as many aspects of platform work as possible. Thus, they challenge individual autonomy in platform capitalism. These mechanisms are based on platform companies' ability to derive insights from behavioral and personal data due to their aforementioned privileged access to data. Furthermore, platform workers face precarious working conditions, meager wages, surveillance, and lack of transparency (e.g., on algorithmic decisions that influence their wages). These are exacerbated by mainstream platforms' central ownership, profit orientation, and lack of workplace democracy, which are further central aspects of a capitalist system (Scholz, 2017, 2023; Schor, 2020; Sundararajan, 2017; van Doorn, 2017). Platform co-ops use the platform technology to coordinate a decentralized workforce as well. However, as the example of CoopCycle in the preceding section shows, platform workers' co-determination of the platform's operations ensures that algorithmic management is implemented to support platform workers instead of coercing them. Moreover, platform co-ops offer their workers better working conditions, higher wages, education, and general satisfaction through meaningful involvement in the workplace (Scholz, 2017, 2023). While the nature of work and employment relationships inevitably transforms in the digital economy, platform co-ops shape them in ways that often resist the logic of platform capitalism and offer an alternative to mainstream platforms.

In his notion of "inherently political technologies", Winner's distinction between internal and external social conditions differentiates two levels that constitute a social order. As the following discussion will demonstrate, the level of external social conditions is particularly relevant when examining the—*inherent*—politics of digital platforms within the context of platform capitalism.

Functionally, platforms could operate (e.g., facilitate interactions) within conflicting *internal* social conditions. However, such an arrangement creates contradictions and tensions that hinder their meaningful use. For example, consider the conflicts that would emerge from implementing a hierarchical, surveillance-based platform in a cooperative environment, or designing a platform to give users control over data, operations, and finances within a hierarchical, for-profit, venture-capital-financed company. In other words, the technical and institutional structures of platforms necessitate corresponding social conditions: hierarchical management and profit-oriented structures for mainstream platforms, and democratic decision-making and shared ownership for cooperative platforms. Consequently, both platform models are inherently political, as they are strongly compatible with specific *internal* social conditions.

However, their relationship to the *external* social conditions of platform capitalism is crucial for understanding their politics, as it reveals their impact on broader social realities beyond the confines of the platform institution. Mainstream platforms are inherently political because they require platform capitalism as *external* social conditions to function. To be precise, they do not require platform capitalism to operate in a basic, functional sense that is common to all platform models (i.e., to facilitate interactions). Rather, they require it to function as the complex technical system that defines them as a particular platform model. This includes the ways interactions are facilitated, the economic and governance structures that shape these interactions, and how these elements are manifested in the platforms' technical design. Following a strict interpretation of Winner, platform co-ops cannot be considered inherently political in relation to their current *external* social conditions; they neither require nor are strongly compatible with platform capitalism, even though they operate within it.[8] However, platform co-ops are undeniably political in their relation to the external social conditions because they are designed to resist key aspects of platform capitalism and, in some cases, promote an alternative social order. In this sense, platform co-ops exemplify Feenberg's concept of *democratic rationalization* – the use of technology to undermine existing social hierarchies (Feenberg, 1999; Veak, 2006).

The case study of platform cooperatives highlights a weakness in Winner's argument regarding inherently political technologies in relation to *external* social conditions. Winner's definition unfairly attributes platform co-ops a "lower" ontological status than mainstream platforms concerning their political nature. This is because Winner's definition of inherently political technologies focuses on compatibility with the social order but overlooks the significance of resistance. Therefore, I argue that Winner's definition is insufficient and that PoT theory requires adaptation. For example, resistance to the *external* social conditions of the social order (such as Feenberg's democratic rationalization) could be conceptualized as an additional category of inherently political technologies. However, addressing this philosophical

[8] Please note that the association of platform cooperativism with socialism is contested as well. Trebor Scholz argues that platform cooperativism should remain a "big tent" that accommodates a wider range of political philosophies and movements (Scholz, 2023).

weakness requires an extensive engagement with the notion of "inherently political technologies", which exceeds the scope of this paper and, I suggest, should be given attention in future PoT literature.

3.3 Resistance & Struggle

Digital platforms are ambivalent – platforms with similar utility can develop in alternative directions with considerably different social and political consequences. According to Feenberg, this ambivalence of technology makes it a scene of struggle between the conservation of social hierarchy and democratic rationalization (Feenberg, 1999; Veak, 2006). The preceding section discussed how mainstream and cooperative platforms embody these two poles. While platform co-ops resist (platform) capitalism and its workings, they can neither be reduced to resistance to mainstream platforms as Technology (with a capital T) nor to being a primarily reactive force. Instead, platform co-ops use technology, reshape, and adapt it to promote an alternative social vision and reality that goes beyond the mere rejection of platform capitalism. Put differently, platform co-op politics go beyond passive resistance or reactive opposition to mainstream platforms in particular and platform capitalism in general; instead, they embody progressive resistance that envisages and promotes alternative social and economic realities.

The following discussion delves further into the struggle dynamics of mainstream and cooperative platforms. It applies Pfaffenberger's framework to the platform and sharing economy and examines how a "technological drama" unfolds through the struggle dynamics of its stakeholders.

In the platform and sharing economy, mainstream platforms' founders, owners, and shareholders form the *design constituency*. As the preceding sections have shown, the introduction of platform technologies and accompanying processes and practices (e.g., employment practices, data collection and analysis, algorithmic design) played a central role in shaping the social context of the digital economy and platform capitalism. This introduction of mainstream platforms promoted their founders' and shareholders' interests by shaping the digital economy in ways that allocate them power and revenues and promote their ideological worldview. In Pfaffenberger's terms, the introduction of mainstream platform technologies can be understood as *technological regularization*.

The *impact constituency* in the platform and sharing economy is the diverse group of stakeholders that is negatively affected by mainstream platforms: platform workers in precarious working conditions (e.g., Deliveroo and UberEats couriers) or workers from sectors that are impacted by platforms (e.g., taxi drivers affected by Uber); users that lose control over their personal data and autonomy in their platform use; and local communities that absorb the negative impact of mainstream platforms' externalities (e.g., rising rents and loss of personal safety in neighborhoods with high concentration of Airbnb flats, overuse of local infrastructures by logistics and delivery platforms).

In the platform and sharing economy, *technological adjustment* strategies operate within the boundaries set by mainstream platforms, their business models, and

platform capitalism. Therefore, examining technological adjustment falls outside the scope of this paper, which focuses on the politics arising from dynamics between platform models.

Platform co-ops are an evident product of *technological reconstitution* processes: these are technologies and institutions (social contexts) that emerged from the impact constituencies' *antisignification* of platform capitalism and mainstream platforms. Many platform co-ops were founded as a direct reaction to the loss of self-esteem through mainstream platforms. For example, ex-Deliveroo couriers established the Kolyma2 co-op and joined the CoopCycle network as Deliveroo withdrew abruptly from the German market in 2019 (Henning, 2019) and Drivers Cooperative emerged as New York taxi drivers' reaction to Uber's growing market dominance, price dumping, and working conditions (Scholz, 2023). Platform co-ops engage in antisignification by inverting mainstream platforms' and platform capitalism's dominating paradigms such as their economic structures and algorithmically enforced power dynamics. Moreover, academics and activists (who are not strictly considered as part of the impact constituency) play a central role in the antisignification process, as the volume with the telling title Ours to Hack and to Own (Scholz & Schneider, 2017) exemplifies. Thus, they deliver the platform co-ops movement with a theoretical and discursive foundation.

However, platform co-ops' ideology goes beyond mere resistance to mainstream platforms and their logics. Instead, it aims to build an alternative digital economy that is based on values such as democracy, fairness, and solidarity (OECD, 2023; Scholz, 2017, 2023; Scholz & Schneider, 2017). Accordingly, their *counterartifacts*—the platform both as a technology and a cooperative institution—are designed not only to negate mainstream platforms' implications; they are designed to create an ecosystem that embodies a different digital economy (Scholz, 2023; Spier, 2022). Against this background, technological reconstitution in the platform and sharing economy is not merely a reductionist process of resistance to mainstream platforms or countering their threats. Instead, it is a process in which stakeholders seize the opportunity to develop an alternative social reality in the digital economy.

The dynamics of the two platform models uncover different paths for using, developing, and contextualizing technologies toward fundamentally different social realities. Therefore, the platform models and their dynamics embody a struggle that goes beyond resistance to particular dimensions of technology and/or capitalism such as resistance to Technology (with a capital T) or resistance to capitalism in terms of oppression versus liberation. Instead, it is a struggle over the question of the good life in the digital economy.[9]

[9] This perspective draws on Verbeek's (2013) critique of Feenberg. Verbeek argues that Feenberg conceptualizes struggle primarily as one of oppression versus liberation in the context of capitalism. Verbeek, in contrast, calls for the political philosophy of technology to emphasize the normative question of what constitutes the good life.

4 Conclusions and Normative Implications

In this paper, I deployed key concepts and tools from PoT literature to analyze the platform and sharing economy. The analysis revealed that both mainstream and cooperative platforms possess political dimensions, consistent with PoT's main claims.

First, applying Feenberg's instrumentalization theory helps conceptualize how mainstream and cooperative platforms, despite offering similar functionalities such as home-sharing and food delivery, differ in social arrangements like ownership, governance, and economic models, thereby unpacking their political implications. Second, mainstream and cooperative platforms exhibit contrasting relationships with platform capitalism as a social order: while mainstream platforms reproduce and reinforce its central elements, cooperative platforms resist and undermine them. Additionally, mainstream platforms are inherently political in the Winnerian sense, whereas according to a strict interpretation of Winner, platform co-ops are inherently political only in their relation to the internal (institutional) social conditions, not the external social conditions of platform capitalism as a social order. Consequently, the paper identified a philosophical weakness in Winner's work that requires further attention in PoT literature. Lastly, interactions between mainstream and cooperative platforms are shaped by dynamics of resistance and struggle. These dynamics are progressive rather than reactive, as they strive to seize the opportunities of digital platforms, shape social realities, and compete over diverging understandings of the good life in the digital economy. Throughout these layers of analysis, platforms' technical design serves a dual purpose – it is both influenced by the platforms' politics and at the same time used, whether intentionally or unintentionally, to shape their politics.

The presented political conceptualization of the platform and sharing economy has two central normative implications. First, by framing the dynamics of the platform and sharing economy in political terms, it *re-politicizes* discourse. Consequently, it counters the depoliticizing effect of technology-centered and data-driven governance approaches as well as the neutrality claims made by many mainstream platforms and their advocates. Second, as public affairs, societal discussions, and decisions are increasingly mediated by technical decisions and artifacts, democratizing technology implies democratizing related public affairs (Feenberg, 2002; Winner, 1980). Envisioning alternative social realities beyond contemporary (platform) capitalism, which, according to Feenberg, restore the significance of secondary instrumentalizations (Feenberg, 1999), requires role models. Recognizing platform cooperatives as inherently political presents such a role model, warranting further research not only from economic, technical, and social standpoints but also from a political perspective.

Acknowledgements Not applicable.

Author Contributions Not applicable (single author).

Funding The author declares that no funds, grants, or other support were received during the preparation of this manuscript.

Data Availability Not applicable.

Declarations

Ethics Approval and Consent to Participate Not applicable.

Consent for Publication Not applicable.

Competing Interests The author has no relevant financial or non-financial interests to disclose.

References

Bantwal Rao, M., Jongerden, J., Lemmens, P., & Ruivenkamp, G. (2015). Technological Mediation and Power: Postphenomenology, critical theory, and Autonomist Marxism. *Philosophy & Technology*, *28*(3), 449–474. https://doi.org/10.1007/s13347-015-0190-2

Berg, M. (1998). The politics of technology: On bringing Social Theory into Technological Design. *Science Technology & Human Values*, *23*(4), 456–490. https://doi.org/10.1177/016224399802300406

Bialski, P. (2016). 3. Authority and Authorship: Uncovering the Sociotechnical Regimes of Peer-to-Peer Tourism. In A. P. Russo & G. Richards (Eds.), *Reinventing the Local in Tourism* (pp. 35–49). Multilingual Matters. https://doi.org/10.21832/9781845415709-005

Botsman, R., & Rogers, R. (2011). *What's mine is yours: how collaborative consumption is changing the way we live* (Rev. and updated ed.). London: Collins.

Brey, P. (1999). Worker autonomy and the Drama of Digital Networks in Organizations. *Journal of Business Ethics*, *22*(1), 15–25. https://doi.org/10.1023/A:1006199816737

Brey, P. (2008). The Technological Construction of Social Power. *Social Epistemology*, *22*(1), 71–95. https://doi.org/10.1080/02691720701773551

Brey, P. (2010). Philosophy of technology after the empirical turn. *Techné: Research in Philosophy and Technology*, *14*(1), 36–48. https://doi.org/10.5840/techne20101416

Bridges, J., & Vásquez, C. (2018). If nearly all Airbnb reviews are positive, does that make them meaningless? *Current Issues in Tourism*, *21*(18), 2065–2083. https://doi.org/10.1080/13683500.2016.1267113

Bühler, M. M., Calzada, I., Cane, I., Jelinek, T., Kapoor, A., Mannan, M. (2023). Unlocking the Power of Digital Commons: Data Cooperatives as a Pathway for Data Sovereign, *Innovative and Equitable Digital Communities Digital*, 3(3), 146–171. https://doi.org/10.3390/digital3030011.

Cheng, M., & Foley, C. (2019). Algorithmic management: The case of Airbnb. *International Journal of Hospitality Management*, *83*, 33–36. https://doi.org/10.1016/j.ijhm.2019.04.009

Christensen, M. D. (2022). Doing digital discipline: How Airbnb hosts engage with the digital platform. *Mobilities*, 1–16. https://doi.org/10.1080/17450101.2022.2060756

Fairbnb (2021). Fairbnb Homepage: About Us. https://fairbnb.coop/about-us-3/. Accessed 20 October 2021.

Feenberg, A. (1999). *Questioning technology*. Routledge.

Feenberg, A. (2002). *Transforming technology: A critical theory revisited*. Oxford University Press.

Feenberg, A. (2008). Critical theory of technology: An overview. *Information technology in librarianship: New critical approaches*, 31–46.

Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. *Environmental Innovation and Societal Transitions*, *23*, 3–10. https://doi.org/10.1016/j.eist.2017.01.003

Hechter, M., & Horne, C. (2003). The problem of social order. In *Theories of social order* (pp. 27–32).

Henning, M. (2019). CoopCycle: Ein Open-Source-Bündnis vernetzt Lieferkollektive in ganz Europa. *netzpolitik.org*. https://netzpolitik.org/2019/coopcycle-ein-open-source-buendnis-vernetzt-lieferkollektive-in-ganz-europa/. Accessed 9 September 2022.

Jhaver, S., Karpfen, Y., & Antin, J. (2018). Algorithmic Anxiety and Coping Strategies of Airbnb Hosts. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* . Presented at the CHI '18: CHI Conference on Human Factors in Computing Systems, Montreal QC Canada: ACM. (pp. 1–12) https://doi.org/10.1145/3173574.3173995

Kellner, D. (2017). Andrew Feenberg, critical theory, and the Critique of Technology. In D. P. Arnold, & A. Michel (Eds.), *Critical theory and the thought of Andrew Feenberg* (pp. 263–282). Springer International Publishing. https://doi.org/10.1007/978-3-319-57897-2_12

Lehdonvirta, V. (2022). *Cloud empires: How digital platforms are overtaking the state and how we can regain control*. The MIT Press.

Lemley, M. A., & McCreary, A. (2020). Exit strategy. *Boston University Law Review*, *101*, 1.

Mason, S. (2018). High score, low pay: why the gig economy loves gamification. The Guardian. https://www.theguardian.com/business/2018/nov/20. Accessed 15 October 2021.

Michel, A. (2017). Future questions: Democracy and the New Converging technologies. In D. P. Arnold, & A. Michel (Eds.), *Critical theory and the thought of Andrew Feenberg* (pp. 217–240). Springer International Publishing. https://doi.org/10.1007/978-3-319-57897-2_10

Murphy, L. W. (2016). Airbnb's Work to Fight Discrimination and Build Inclusion: A Report Submitted to Airbnb. https://blog.atairbnb.com/wp-content/uploads/2016/09/REPORT_Airbnbs-Work-to-Fight-Discrimination-and-Build-Inclusion.pdf. Accessed 2020-04-09.

OECD (2023). *Empowering communities with platform cooperatives: A catalyst for local development* (OECD Local Economic and Employment Development (LEED) Working Papers No. 2023/14) (Vol. 2023/14). https://doi.org/10.1787/c2ddfc9f-en

Pfaffenberger, B. (1992). Technological dramas. *Science Technology & Human Values*, *17*(3), 282–312. https://doi.org/10.1177/016224399201700302

Platform Cooperativism Consortium (2020). What Is a Platform Co-op? https://platform.coop. Accessed 17 April 2020.

Sassower, R. (2017). Revisiting critical theory in the twenty-First Century. In D. P. Arnold, & A. Michel (Eds.), *Critical theory and the thought of Andrew Feenberg* (pp. 241–262). Springer International Publishing. https://doi.org/10.1007/978-3-319-57897-2_11

Scholz, T. (2016). *Platform cooperativism: Challenging the corporate sharing economy*. Rosa Luxemburg Stiftung. http://www.rosalux-nyc.org/wp-content/files_mf/scholz_platformcoop_5.9.2016.pdf

Scholz, T. (2017). *Uberworked and underpaid: How workers are disrupting the digital economy*. Malden, MA: Polity.

Scholz, T. (2023). *Own this! How platform cooperatives help workers build a democratic internet*. Verso.

Scholz, T., & Schneider, N. (Eds.). (2017). *Ours to hack and to own: The rise of platform cooperativism, a new vision for the future of work and a fairer internet*. OR Books.

Schor, J. (2020). *After the gig: How the sharing economy got hijacked and how to win it back*. University of California Press.

Sigala, M., Toni, M., Renzi, M. F., Di Pietro, L., & Mugion, R. G. (2019). Gamification in Airbnb: Benefits and Risks. *e-Review of Tourism Research*, *16*(2/3). https://ertr-ojs-tamu.tdl.org/ertr/article/view/315. Accessed 22 December 2022.

Spier, S. (2022). The Ethics and Politics of Platform Cooperatives (Fellowship Report). Platform Cooperativism Consortium. https://ia802203.us.archive.org/8/items/shaked-spier/Shaked%20Spier%20(Mar%2014).pdf. Accessed 2022-11-10

Spier, S. (2024). Uncovering Digital platforms' Ethics and politics: The case of Airbnb. *Philosophy & Technology*, *37*(2), 54. https://doi.org/10.1007/s13347-024-00742-y

Srnicek, N. (2016). *Platform capitalism*. Polity.

Staab, P. (2019). *Digitaler Kapitalismus: Markt und Herrschaft in der Ökonomie der Unknappheit* (Erste Auflage, Originalausgabe.). Berlin: Suhrkamp.

Sundararajan, A. (2017). *The sharing economy: the end of employment and the rise of crowd-based capitalism* (First MIT Press paperback edition.). Cambridge, Massachusetts: The MIT Press.

van Dijck, J., Poell, T., & de Waal, M. (2018). *The platform society*. Oxford University Press.

van Doorn, N. (2017). Platform labor: On the gendered and racialized exploitation of low-income service work in the 'on-demand' economy. *Information Communication & Society*, *20*(6), 898–914. https://doi.org/10.1080/1369118X.2017.1294194

Veak, T. J. (2006). Introduction. In T. J. Veak (Ed.), *Democratizing technology: Andrew Feenberg's critical theory of technology* (pp. ix–xxii). State University of New York.

Verbeek, P. P. (2013). Resistance is futile: Toward a Non-modern democratization of Technology. *Techné: Research in Philosophy and Technology*, *17*(1), 72–92. https://doi.org/10.5840/techne20131715

Verbeek, P. P. (2020). Politicizing Postphenomenology. In G. Miller, & A. Shew (Eds.), *Reimagining Philosophy and Technology, Reinventing Ihde* (Vol. 33, pp. 141–155). Springer International Publishing. https://doi.org/10.1007/978-3-030-35967-6_9

Vercher-Chaptal, C., Alvarado, A. S. A., Aufrère, L., Brabet, J., Broca, S., Smichowski, B. C., ... & Wanner, P. (2021). There Are Platforms as AlternativeS. Entreprises plateformes, plateformes collaboratives et communs numériques (Doctoral dissertation, DARES-Ministère du Travail, de l'Emploi et du Dialogue social; DREES). https://hal.science/hal-03413930. Accessed 2023-11-24.

Winner, L. (1980). *Do Artifacts Have Politics? Daedalus*, 109(1), 121–136.

Woodcock, J. (2020). The Algorithmic Panopticon at Deliveroo: measurement, precarity, and the illusion of control. *Ephemera: theory & politics in organizations, 20*(3), 67–95.

Woodcock, J. (2021). Towards a Digital Workerism: Workers' Inquiry, methods, and technologies. *NanoEthics*, *15*(1), 87–98. https://doi.org/10.1007/s11569-021-00384-w

Woodcock, J., & Graham, M. (2020). *The gig economy: A critical introduction*. Polity.

Woodcock, J., & Waters, F. (2017). Far From Seamless: a Workers' Inquiry at Deliveroo. *Viewpoint Magazine*. https://viewpointmag.com/2017/09/20/far-seamless-workers-inquiry-deliveroo/. Accessed 30 August 2021.

Zervas, G., Proserpio, D., & Byers, J. W. (2021). A first look at online reputation on Airbnb, where every stay is above average. *Marketing Letters*, *32*(1), 1–16. https://doi.org/10.1007/s11002-020-09546-4

Zuboff, S. (2019). *The age of surveillance capitalism: the fight for a human future at the new frontier of power* (First edition.). New York: PublicAffairs.