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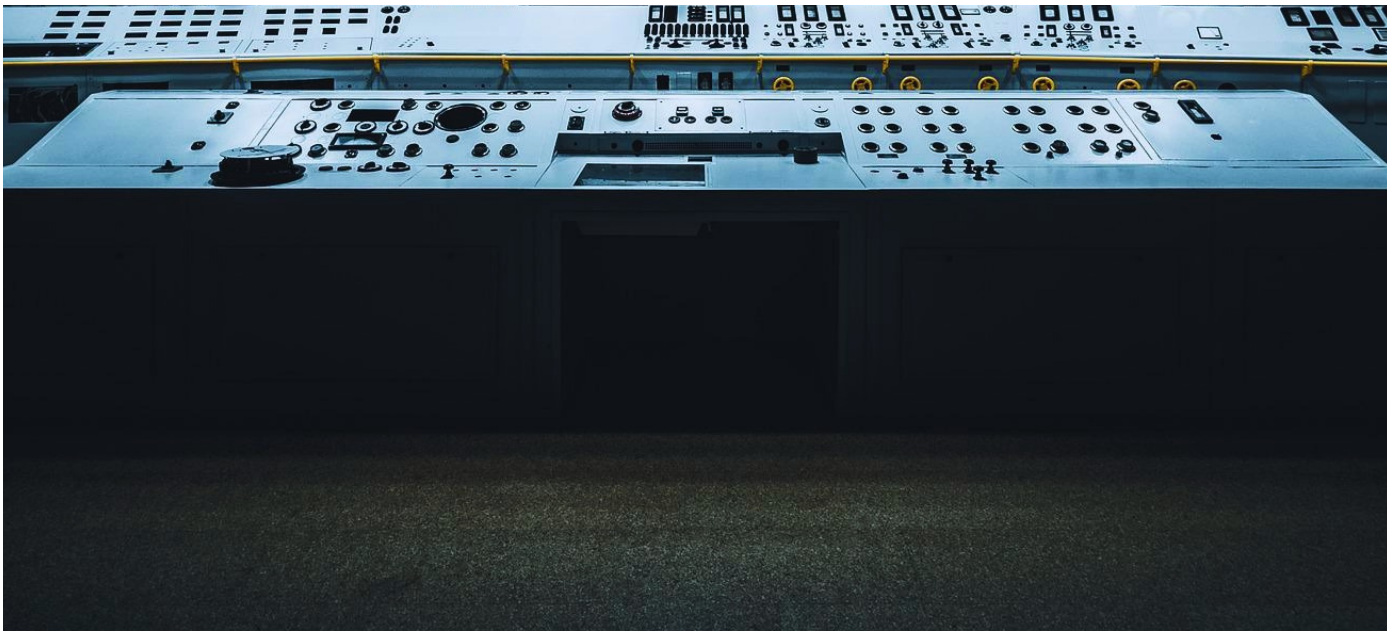
PLATFORMS HAVE THE POWER... AND PEOPLE CAN TAKE IT

EDITED BY BENVEGNÙ, CUPPINI, FRAPPORTI, MILESI, PIRONE



DEPARTMENT OF THE ARTS | UNIVERSITY OF BOLOGNA

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PLATFORMS HAVE THE POWER... AND PEOPLE CAN TAKE IT

EDITED BY CARLOTTA BENVEGNÙ, NICCOLÒ CUPPINI, MATTIA FRAPPOTI, FLORIANO MILESI, MAURILIO PIRONE

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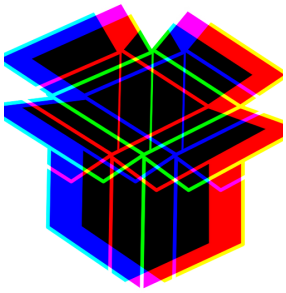

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INTRODUCTION

Platforms have the Power... ...and People can take it

Into the Black Box

Platform Capitalism is not a thing, but a social relation mediated by data elaboration. Paraphrasing the famous definition of Capital by Karl Marx, we claim that today's capitalism cannot be fully understood if data are not considered in their overbearing role. Indeed, the extractive power of capitalism is today not just conveyed on the «Territories of Extraction» of raw material, to recall an important book published just in 2020 by Martìn Arboleda titled Planetary Mine. As Sandro Mezzadra and Brett Neilson argued, «today we do not just mine coal, nickel, and other raw materials; we also mine data. Moreover, the forms of extraction implicit in data mining and other extractive activities that prey on human sociality are ever more at the edge of capital's expanding frontiers» (2019).

Since capitalism has been "electrified", then "digitalized" and finally "platformized", data have become a source of economic and political power: "the social relation mediated by data elaboration" is today led by Big Tech such as Amazon that should be conceived as an economic, social, and political actor holding power with no precedent in history of capitalism. Since the 1990s, we have witnessed a process of digitalization that after economic crisis of 2007/08 congealed into what Nick

Srnicek labelled as “Platform Capitalism”.

In the following pages, scholars approaching the topic from different parts of the World will contribute to inquiring this paradigm. Starting from «the promise of simplicity» that on-demand economy offers (see Hlongwa), authors don’t miss to focus «on the interconnections between e-commerce, financial, and logistics operations» (see Filippetto and Harracà) behind the implementation of digital technologies. This means to consider the infrastructural role of platforms (Berfelde) or the business model that lies behind firms such Amazon (Rispoli), as well as to investigate platform labour since – as Fagioli states – «work organisation is a central issue in reflections on platform capitalism». Thus, in the conclusion of the book, we propose “a manifesto for struggling within and against platform capitalism” where we try to sum up in eleven theses not only the main features that characterize platform capitalism today but also the traces for its overcoming. Somehow, then, this book contributes to the debate around platform capitalism and its great expansion in recent years which was further accelerated by the Covid-19 pandemic. Although literature on digital economy and platform capitalism expanded exponentially since 2007/08’s subprime economic crisis, less attention has been devoted to analysing its origins. We think that properly contextualizing the roots of platform capitalism (or Capitalism 4.0 as we defined it[1]) offers the opportunity to overwhelm the era of “post” (“post-Modernity” or “post-Fordism” more specifically), finally defining the era we are living.

[1] Cfr. Into the Black Box (eds.), Capitalismo 4.0. Genealogie della rivoluzione digitale. Roma, Meltemi.

Indeed, with this book we would like to further stress that we now effectively live in the “platform society” (Van Dijk, Poell, De Waal 2019) or in what we could define as a “platform era” (see, Cuppini, Frapporti, Mezzadra, Pirone 2023), remarking the specific features of the contemporary age without any nostalgia or absolutization of the past. As a matter of fact, it is difficult to deny the pervasive dimension of the “platformization” of society in multiple terms: first, in term of the hegemonic business model; second, considering the infrastructural role of platforms such the GAFAM (Google, Amazon, facebook, Apple and Microsoft); third, watching at the political role that nowadays platforms perform; fourth, inspecting the multiple forms of struggles prompted by platform workers; fifth, studying platform’s tangible role in urban transformations. Even though platform capitalism is not a label to describe contemporary capitalism as a whole since the literature started at least twenty years ago to talk in terms of “Varieties of Capitalism” (Hall and Soskice 2001, Peck and Theodore 2007), it seems undeniable that platforms represent a frontier for Capital valorisation processes. On the other hand, platform capitalism contains a summary of the multiple proveniences that characterized Capital’s evolution in the last sixty years which are particularly relevant to be investigated.

We want to quickly report some of them starting from the so-called Logistics Revolution.

According to a consolidated literature (Allen 1997, Bonacich and Wilson 2008; Cowen 2014) between the sixties and the seventies there occurred a “revolution” in the logistics sector that drastically changed how capitalism globally

performed. The Logistics Revolution concerns three big changes within or due to innovation in logistical practices. First, there were changes at the managerial level. The very core of the logistics revolution can be explained as Deborah Cowen does: «cost minimization had been replaced with a model that emphasized value added» (Cowen 2014, p. 34). The "circulatory time" of commodities was no longer a burden to the process of plus-value achievement by capitalist: something that – recalling Marx again – should be reduced «close to zero». Rather, from the sixties onwards, logistics was drawn by a business logic and rationality, thanks to a systemic approach. Until the introduction of this new approach «physical distribution was concerned exclusively with the movement of finished products» (ivi, p. 35). After the Logistics Revolution, attention was focused upon the total action «rather than upon its individual components» (Ibid). Somehow, from the sixties onwards, distribution and circulation were understood as elements of production. The second perspective concerns technological transformation, which can be emphatically summarized by the development of "containerization". The shipping container is probably one of the bigges innovations of the twentieth century. Despite its first appearance being in the US in 1928 (see Levinson 2006), the first massive use of containers happened during the Vietnam War in the sixties. For commercial purposes «the first Atlantic crossing by a container ship [was] in 1966» (Cowen 2014, p. 57). Basically, since the advent of the "second phase of globalization", «goods need to be moved quickly and accurately, at low cost and over great distance» (Bonacich and Wilson 2008, p. 14): The container answers to this purpose thanks to the intramodality it allows. In other words, the idea behind the Logistic Revolution realized through containerization was that «the flow from sale to ordering to production to shipping and to the next sale should occur in one smooth motion (ivi, p. 15).

Third, the Logistics Revolution contributed to the dismantling of Fordist factory hegemony affecting workers' political power. To sum up this perspective, we could recall the sixth thesis of the "Manifesto of Critical Logistics" we published a few years ago: «Therefore the "logistics (counter)revolution" is not just a technical innovation but a political reaction to class insubordination of Fordist workers and to de-colonization processes, forestalling and really building the neoliberal era. It is not a coincidence that today's logistics industry is a world where countless class conflicts are arising inside the more general growing paradigm of struggles in circulation»[1].

Following the innovation in logistics, another "revolution" occurred in the 80s, this time in the field of retail:: Wal-Mart became the new paradigmatic brand of economy roaring «out of an isolated corner of the rural South to become the vanguard of a retail revolution that has transformed the nature of US employment, sent US manufacturing abroad, and redefined the very meaning of globalization» (Lichtenstein 2009, 4). Thanks to the Logistics Revolution, the power of retailers increased drastically. According to Bonacich and Wilson (2008), retailers started informing manufacturers «what consumers were actually buying and

[1] http://www.intotheblackbox.com/manifesto/critical-logistics-a-manifesto/

therefore what the manufactures should produce, when they should produce it, and, sometimes at what price» (p. 6).

In some measure, the Retail Revolution represents the beginning of the the just-in-time era, which is a sort of mantra for contemporary capitalists. Before Amazon, Alibaba etc, a paradigmatic example was Wal-Mart, which partially gained (economic) power mining data from their clients. As Bonacich and Wilson put it: «the collection of POS data put power into the hands of the giant retailers. They knew consumers were buying, which prices were most effectively maximizing sales, which products were gaining and losing popularity, and how buying patterns were differing demographically and regionally» (ivi, p. 7-8).

After the neoliberal politics of Regan and Thatcher, the global network society of the 90s (Castelles 2010) witnessed a deep change in the market with the advent of a “Dot-com Revolution” (Becker 2006), bringing actors such as Amazon at the central stage. Furthermore, in 2000, the term "Digital Capitalism" first appeared in a book by Dan Schiller, a historian of information and communications. In the book, Schiller traverses the transformation of the internet that from the military realm, which brought a deep change in capitalism thanks to the new web spaces. In the same years and for the first times concepts like sharing economy appeared too. Such labels are loosely derived from the so-called Californian Ideology, in which an optimistic, technology-driven future was depicted as a combination between «the free-wheeling spirit of the hippies and the entrepreneurial zeal of the yuppies» (Barbrook and Cameron, 1995). The concept of "sharing economy" appeared in the first 2000s as «the very core of the most advanced economy» (Benkler 2004) even though it soon revealed its clear capitalist nature.

Thus, the Dot-com Revolution and Digital Capitalism jointly concurred to shape the new millennium economy that mixed up analogical and digital world like never before. For the first time, the new frontiers of Capital valorisation were pushed beyond the mere analogical sphere.

Eventually, after the 2008 economic crisis, Platform Capitalism (Srnicek 2016) burst onto the scene: a tremendous set of platforms «have penetrated the heart of societies» (Van Dijk, Poell, De Waal 2019, p. 2), quickly defining new ways of consumption as well as new figures of workers (Huws, 2014). Platforms like Airbnb, Uber (and then) Deliveroo, Glovo, Tencent, Rappi etc., came up beside other platforms such as Amazon, Google and Facebook. The Web was increasingly infrastructurized and platforms gained political power (after the economical one) through web control. In the digital space platforms are becoming hegemonic.

Furthermore, work “platformization” have reached another level. Platforms have brought us to a «Jurassic form of labour» (Scholz, 2016) in a new kind of economy (the “sharing economy”) that emerged «almost out of nowhere» (Huws, 2017). Rather, all the features of Platform Capitalism (both in terms of business and in terms of labour) appear a linear development of the “evolution” of economic system out of the 20th century.

We guess, the Covid-19 pandemic sharply shows this.

These four steps brought to the “Platform Era”. We would like to recall at least few features that seems particularly intriguing to properly grasps some of its operations.

The first one is the impact on labour. With the spread of platforms, workplaces and work modalities are changing. Also, the distinction between working-time and life time is blurring. Fagioli' chapter focusses exactly on some of these aspects. With platform businesses, labour does not disappear but, thanks to the extractive capacity of platforms, is extended and parcelled out. Urban areas as the "new terrain" of labour process as well as forms of self-entrepreneurialism like "playbour" or ranking systems are crucial features to be considered in order to understand platform labour dimensions. The rhetoric of a "gig work" fostered by platforms came precisely from the «promise of simplicity» described by Hlongwa in his chapter.

The second point to highlight is the role of platforms as urban infrastructures. Rabea Berfelde in her chapter brilliantly shows the urban infrastructural role played by Airbnb. In most of the literature (such as Srnicek, Van Dijck et al. etc) platforms like Airbnb are considered "secondary (service) platforms" and are thus different from the GAFAM. We wonder if all such platforms can be interpreted in an infrastructural sense too for at least two reasons: on one hand, they infrastructurize "digital space" precisely as the GAFAM ones; on the other hand, they are embedded into "contemporary governance" concurring to frame the "Stack" that govern today's social life (see Bratton 2015). In her chapter, Rispoli shows the advantages that platforms like Amazon gain in being on an infrastructural position in multiple terms. Quoting Rispoli: «building an infrastructural core is the factor that allowed the Big Fives (Facebook, Amazon, Apple, Microsoft, and Google Alphabet) to construct their ecosystems and to guarantee their prominence within the market, lowering the prices, not only favoured the network effects, but also the enhancement of exploitation of workers – at various stages of production, distribution, and circulation» (see infra).

Finally, we would like to stress how urban space has become a value-added space. With the focus on MercadoLibre's (MeLi) operations, Filippetto and Harracà offer a plastic demonstration. Since cities are the terrain of platform valorisation, platforms themselves are keen to influence city government, doing so through their enormous access to data. With such platforms conditioning city policies, scholars start to talk about «data driven governmentality» referring to the ways in which smart city are governed (Vanolo 2014). As an example, we could recall the Lisbon case, whose municipality adopted a series of protocols with micro-mobility service companies (such as Uber) to co-create new urban planning. However, these agreements soon fell apart due to the scarcity of data shared by the companies, which turned directly to the national government: it seems a further demonstration on the power of platform to choose even the most suitable level of administration to deal with.

The last chapter of this book is the «Manifesto for struggling within and against Platform Capitalism». As a proper Manifesto we try to undergo two different layers: one descriptive and one propositional. On one hand, we address eleven topics tangled by platforms that we «see as the characteristics – and contradictions – of the new era». Power, Infrastructure, Finance, Metropolis 4.0, Algorithmic subjectivities etc. are all features that characterize contemporary "platformized society" and the

transformation brought by it. On the other hand we try to address this question: «what alternatives do the contradictions of these transformations give us?». The peculiarities of "platform society" are tackled within the Manifesto with the precise aim to glimpse the traces of a possible different future «towards a world of plenty for all!».

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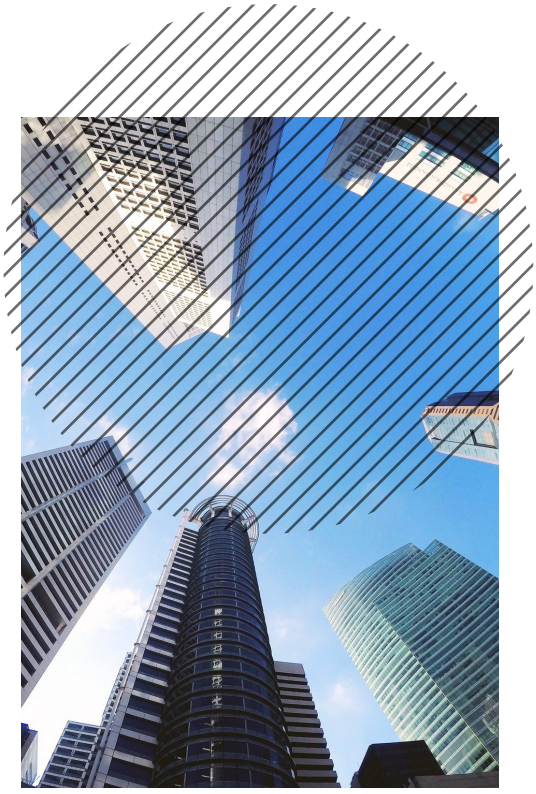
CHAPTER 1



CHAPTER 1

Airbnb: leveraging the crisis of care to become essential urban infrastructure

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Platforms are now increasingly qualified as infrastructural, i.e. understood as the ubiquitous background upon which everyday life unfolds and as technological and social forces governing public action. This article starts to challenge the dominant and ubiquitous character associated with platforms' infrastructural character by looking at Airbnb's operations in urban space. It asks in what ways the platform's business model is becoming infrastructural and what notion of infrastructure we can derive from is operations

The first part of the article looks at the socioeconomic transformations that form the background of the emergence and spread of the platform business model. It is argued that if we want to understand "platform urbanism" (Barns 2020) – i.e. how platforms reconfigure urban spatial relations – we need to analyse processes of financialisation and how they shape a specific convergence between tech and urban speculation into which platforms intervene.

The second part develops an understanding of precarisation, the 'crisis

of care' and of social infrastructure to disentangle how platforms leverage the contradictions resulting from the contemporary neoliberal and financialised restructuring of welfare.

The third part builds upon field research conducted in Berlin where I interviewed Airbnb-hosts that regularly share their private home with guests via the platform. It looks more closely at hosts' motivation to offer their home as a service. By now it is well known that Airbnb and its catering to touristic demand for short-term holiday rentals in residential neighbourhoods has severe consequences for local housing markets.

Potential rentier income is higher if landlords offer units permanently as short-term rentals which leads to the reduction of housing stock available for long-term residents (Wachsmuth and Weisler 2018; Cocola-Gant and Gago 2019). This causes rising rents and gentrification processes as a recently published study confirms for the context of Berlin: residential units that are permanently dedicated to short-term letting cause an increase in rental prices in the immediate vicinity (Duso et al. 2020).

Critical research on Airbnb rarely interrogates hosts' motivation to offer their private home via the platform. The findings from my field research presented in the third section reveal that hosts' decision is linked to economic motives resulting among other things from insecure employment relations and rising rents due to Berlin's housing crisis. The article argues that Airbnb deliberately positions the platform as an individual solution to precarity. Drawing on an understanding of infrastructure as found in Judith Butler's work — understood complexly as the social relations and support systems the reproduction of life depends upon — it is argued that Airbnb intervenes into this condition by positioning the platform as social infrastructure. This claim is further evidenced in the fourth section which looks at Airbnb's response to the unfolding Covid-19 crisis. By looking at its 'Open Home' initiative and its newly launched 'City Portal', it is argued that the platform pursues public-private partnerships and presents itself as a viable partner for austerity-ridden urban governments.

This article seeks to disentangle the mutually connected processes of platform urbanisation and platform infrastructuralisation by looking at how Airbnb leverages and shapes urban conditions of austerity. Thereby it applies a processual perspective of "platformisation"— understood as «the penetration of the infrastructures, economic processes, and governmental frameworks of platforms in different economic sectors and spheres of life» (Poell et al., 2019: 5–6)—to analyse the spread of the platform logic across society and to study its impact on labour and livelihood.

The convergence between tech and urban speculation

This first part of the article interrogates the socioeconomic background of the spread and proliferation of the platform logic across urban spaces and argues that it is closely linked to the shift towards a rent-based and financialised regime of accumulation.

The platform as a business model, which relies on venture capital investment, emerged from the political-economic responses to the financial crisis of 2008.

An ultra-loose monetary policy and low

interest rates lead to the growth of global money supply in combination with lower returns on financial assets which made riskier investment, such as venture capital strategies, more appealing. Crisis responses exacerbated trends of «financialisation» through which the logic of credit and capital markets spill over into the productive sector and capital accumulation in relation to industrial production experiences lower growth rates than finance. Finance and industry, however, should historically be understood as being closely related. For example, large companies relied on financial support from commercial banks for their investments, especially in fixed capital. What changes through financialisation, is the specific relation between finance and industrial production with companies now acting more independently of commercial banks and often being involved in financial transactions themselves. Additionally, commercial banks increasingly operate like investment banks and shift their activitis to open financial markets (Lapavitsas, 2009).

Through 'financialisation' value appropriation in the form of rent is becoming increasingly important for capital accumulation (Marazzi, 2011; Vercellone, 2010). Rent is, for example, appropriated in the form of interest on finance capital. Generally, rent is qualified as 'extractive' and 'appropriative' as is it a form of value distribution enabled by the control and ownership over an asset. This «supposes a certain exteriority of capital to living labor, to social cooperation» a situation where capitalist do not directly organise the social cooperation they exploit (Gago and Mezzadra, 2017: 579). A great deal of critical research argues that this rent-based logic also shapes the business model of platforms. For example, Jathan Sadowski qualifies «digital platforms […] as ubiquitous rentiers that endeavor to insert themselves into spaces, things, and interactions—especially ones that were not previously subject to rentier relations—in order to control access and capture value» (Sadowski, 2020: 564). Nick Srnicek argues that platforms are «digital infrastructures that enable two or more groups to interact» and thereby «position themselves as intermediaries that bring together different users: customers, advertises, service providers, producers, suppliers, and even physical objects» (Srnicek, 2017: 43).

Rental income is made possible by the infrastructure for whose use the platforms collect commission. Sadowski argues to differentiate between "data rent" and "money rent". Platforms mine not only data as raw material that eventually turns a profit, but also "turn social interactions and economic transactions into 'services'" that allow for the extraction of 'money rent' in the form of a commission (Sadowski 2020, 567). As has been argued, platforms are positioned as intermediaries between consumers and producers which enables them to appropriate rent resulting from market transactions. However, the goods and services platforms provide on their marketplace are produced independently, which sheds light on the labour involved in these operations.

Following this analysis, Airbnb can be understood as a technology that operates as intermediary connecting the suppliers of housing to a demand for a convenient set of options for short-term stays in cities. By mediating the exchange between hosts and guests, the platform is able to control

the access to the asset, i.e. the bedroom used for a holiday stay, and to collect rent in the form of a commission. It is a «lean platform» that provides a service built on the users' asset (Srnicek, 2017: 49–50). However, understanding the guests' holiday experience as a service commodity offered through Airbnb, sheds light on the labour involved in the production of this commodity.

Labour that hosting guests requires includes the cleaning and preparation of the apartment before the arrival of guests, curating the listing (keeping the photos up to date, writing texts to advertise the space), managing the booking and communicating with guests before and after their arrival. Airbnb meticulously organises this labour process in the form of «algorithmic management» (Cheng and Foley, 2019) and the way the platform's infrastructure operates (Bruni and Esposito, 2019).

Through recommendations, incentives and sanctions—which show a degree of «algorithmic ambiguity» (Cheng and Foley, 2019: 34)—as well as the infrastructure of peer-to-peer evaluation through which the labour process is subject to metrics and measurement, individuals are continuously subjectified as hosts in the image of what Airbnb understands to be good hospitality practices.

Thus, understanding Airbnb as a labour platform, complicates the claim that its business model is rent based and works through the 'exteriority' of capital to living labour. While platforms are certainly linked to financialisation through venture capital investment, which enables their growth-before-profit-strategy, we should analyse more cautiously how different modes of profit- and rent-seeking mix within their business model and 'extractive operations'. Analysing 'platform urbanism'—platform's urban operations and their impact on labour and livelihood—requires understanding how low interest-rates and low returns on financial assets led to interest-bearing capital not only seeking new investment opportunities in the tech sector, but also the built environment.

The global economic crisis of 2008, as it was triggered by the collapse of the subprime mortgage market, highlighted the urban dimension of 'financialisation'. Louis Moreno argues, with reference to David Harvey's work, that financialisation and urbanisation are structurally interdependent processes (Moreno, 2014). The «financialisation of rental housing», i.e. the process whereby rental housing was constituted as a global asset class (Fields and Uffer 2016), is one iteration of how 'financialisation' intensified speculation on the urban form.

Rental payments, enabled by the ownership of land and real estate, present a key avenue for the 'secondary exploitation' of workers income through land rents and financial rents.

The 'financialisation of rental housing' shows how through the neoliberal restructuring of the welfare state—for example the reduction of public subsidies and protections for social and rental housing—infrastructures of social reproduction, such as housing, are increasingly integrated into the accumulation cycle of this financialised regime. In Berlin, the financialised speculation on rental housing, which is primarily driven by large real estate companies, led to the current

exacerbation of gentrification and the housing crisis.[1]

Leveraging the crisis of care to become infrastructural?

The last section argued that financialisation forms the socioeconomic background which enabled the platform business model and led to the contemporary convergence between tech and urban speculation. This section takes a closer look at how platforms' operations play out on the ground and shape everyday life, labour and livelihood. Federico Chicchi argues that the growing importance of platform-mediated labour is related to the contemporary «post-waged context» or «the crisis of wage labour (and the salary agreement as it was determined in industrial capitalism)» (Chicchi, 2020: 16). The "platformisation of the capital-work relationship» (Chicchi, 2020: 17)—meaning that platforms classify their workers as independent contractors to support their self-proclaimed role as technology companies mediating between two parties which results in workers facing erratic work schedules, piece-rates and having to shoulder risks individually—represents an iteration of the 'precarisation' that comes which the flexibilisation of the labour market and the neoliberal restructuring of welfare.

[1] In 2019, the rent index published by the Senate Department for Urban Development and Housing (Senatsverwaltung für Stadtentwicklung und Wohnen, 2019), which records both existing rents and the prices of new rentals, showed an average increase in net cold rent from €4.24 per square metre in 2000 to €6.72 per square metre in 2019. The price of new rentals rose even more rapidly. In 2009, the average rent was still €6.19 per square metre and rose to an average price of €11.55 in the first quarter of 2020 (Berliner Morgenpost, 2016; Senatsverwaltung für Stadtentwicklung und Wohnen, 2019; Guthmann Estate, 2020).

This section goes beyond this more traditional understanding of precarisation in relation to insecure jobs and develops an understanding which takes the contradictory relation between capital and life into account.

Social Reproduction Theory claims, with reference to Marx' argument about the dialectical relationship between production and reproduction, that capitalism contains the irresolvable contradiction to separate life-making activities from capitalist accumulation. On the one hand, capitalist production depends on the reproduction of labour—labour power being the fundamental commodity of the capitalist production cycle—and on the other hand, life-making activities and the satisfaction of basic human needs are subordinate to capital accumulation (Ferguson, 2020; Bhattacharya, 2017; 2019).

Nancy Fraser calls this subordination of life-making activities under the logic of capital's valorisation process the «social reproductive contradictions» inherent to the capitalist system as such. Fraser argues that the particular form of these contradictions is historically contingent upon distinct regimes of capitalist accumulation as they are negotiated and regulated by the state. Under the contemporary regime of 'financialised capitalism' they take the form of 'care deficits' caused by the neoliberal restructuring of the welfare state since the 1980s, cutbacks in public spending and the privatisation of infrastructures due to austerity politics.

Fraser argues that these contradictions led to a 'crisis of care', a crisis experienced by subjects to

reproduce their lives (daily and intergenerationally) under conditions which systematically undermine their abilities to do so (Fraser, 2016; 2017). The 'crisis of care' forms the background of instances of precarisation—insecure housing due to rising rents and insecure work conditions—discussed in this article. The neoliberal intensification of precarisation processes is accompanied by a mode of government which cultivates a form of subjectification whereby individuals develop a self-responsible relationship to prevailing insecurity and risk (Lorey, 2015).

Platforms are often qualified by their increasingly infrastructural character. Plantin et al. examine how Google and Facebook shaped the commercialisation of the web. They argue that these platforms have become so ubiquitous that they qualify as infrastructure, meaning as gatekeepers mediating transactions within and beyond the boundaries of the web application (Plantin et al., 2018). As we have seen above, Srnicek defines platforms as 'digital infrastructures' matching the supply and demand of producers and customers. Lizzie Richardson also argues that platforms produce «a new form of collective or public infrastructure» (Richardson 2020, 460). Like Srnicek, Richardson associates their infrastructural character with the role platforms play in functioning like marketplaces connecting supply and demand. Richardson, however, goes beyond an understanding of the platform as cooperation and economic actor, by arguing that they primarily function by reorganising urban operations «such as transport, housing, and so on» «not through new physical infrastructure, but instead through novel technologies of coordination that can reterritorialize those already existing» (Richardson, 2020: 460). Richardson develops an understanding of platforms as network or relation between existing urban operations. Marco Marrone and Gianmarco Peterlongo express a similar view when they argue that platforms rearrange the tangible and intangible infrastructure on which the urban informal economy depends. By examining how Airbnb and delivery platforms intervene in a context of accelerated touristification in Bologna, they claim that these platforms dispossess «what remains of local informal economies – which have often also served as a buffer for unemployed or other social vulnerable individuals» (Marrone and Peterlongo, 2020: 122).

Richardson's as well as Marrone and Peterlongo's understanding of platforms as actors reconfiguring the relation between existent urban operations shows, that in order to understand how platforms are positioned as infrastructural intermediaries in everyday life, we need to go beyond an understanding of digital platforms as interface. To analyse how platforms are leveraging the crisis of care to promote their business model, I turn to an understanding of social infrastructure that can be found in Judith Butler's work. Butler argues that bodies due to their existential vulnerability are dependent on infrastructures «understood complexly as environment, social relations, and networks of support and sustenance that cross the human, animal, and technical divides» (Butler, 2018: 133). The differential access to infrastructures—the absence and/or provision, the preservation or destruction—then, shows whose lives are cared for and who's not. From Butler's

definition we can distill an understanding of social infrastructure that lives depend on for their reproduction.

Hosts' motivation to offer their home as a service

The last section developed an understanding of the 'crisis of care' which takes the contradictory relation between the sphere of production and reproduction into account. Whilst the massive expansion of low-wage, insecure jobs and rising rents predates the advent of "platform capitalism" (Srnicek 2017) the two case studies analysed here will show how platforms, like Airbnb, leverage this crisis to promote their business model as social infrastructure. In December 2019, I conducted field research on Airbnb in Berlin trying to identify what role the crisis of care—insecure employment relations and rising rents due to the contemporary housing crisis in Berlin—plays in hosts' motivation to offer their home as a service through the platform. Hosts were contacted through the platform's messaging feature requesting interviews instead of lodging. I tried to identify people that hosted on a very regular basis and only rented out a single room, i.e. a part of the flat they were living in. There are different types of Airbnb-hosts ranging from my interviewees who only rent out a single room in the apartment they are normally living in, to institutional investors that own multiple premises that are offered as short-term rentals on the platforms. I sought hosts that were personally involved in the management of their space to talk to them about the work that hosting requires and to find out whether renting out a part of one's home as a short-term accommodation is a means to supplement otherwise insufficient income.

All listings were located in the so-called 'Wrangelkiez', a neighbourhood in Berlin's district Friedrichshain-Kreuzberg. The concept 'Kiez' refers to a dense neighbourhood of tenement houses, characterised by a mix of uses, social groups and a strong cultural life.

The 'Wrangelkiez' is known for being multicultural, close to many nightclubs which makes it a tourist hotspot. The neighbourhood has a particular high number of Airbnb listings in comparison to otherer areas in Berlin. In December 2019 there were in total 160 listings in this neighbourhood, of which about 54 were individual rooms in private flats. Berlin is a city of renters where 85% of urban dwellers live in rented accommodation as opposed to property they own (Senatsverwaltung für Stadtentwicklung und Wohnen, 2019).

This high percentage of renters is also reflected in the sample of the interviewed hosts: only one person owned the flat she was 'sharing' via the platform and another interviewee was living and hosting in a flat his partner owned. The other six hosts 'shared' a room in their rented accommodation.

All hosts cited economic motives as the main motivation for renting out a part of their home through the platform. The hosts' motivations can be divided into three categories:

(1) the income generated through Airbnb is a permanent and necessary source of income;

(2) renting out via Airbnb serves to bridge a temporary financial hardship;

(3) renting out is a

sporadic source of additional income. Anna belongs to the first group of hosts and for her the rental serves as a regular income. She has been renting out a room in her flat for around five to six years. Anna bought the flat she lives in with her one-year-old daughter and a flatmate for a comparatively low price in 2006, before the current rise in property prices.
She works as a self-employed real estate agent, studies part time and told me that during her pregnancy last year it was difficult to work and earn good money. Currently, she mainly lives from parental allowance and the Airbnb rental. She describes the Airbnb rental as a steady and good source of income:

«So, thanks to the flat I can be self-employed, because it's like a life insurance, otherwise it would probably have been far too insecure with these fluctuating incomes. It's relatively regular that I somehow earn something and what I earn, but still there are fluctuations and it's somehow [...] good to know that you have such a small insurance. »

Renting out a single room in her flat normally functions as an additional source of income for Anna. However, when she was unable to work as usual in her self-employed business during and after her pregnancy, 'sharing' her home via the platform became her primary source of income. Her flat, and the possibility of capitalising on it by renting it out through Airbnb, gives her the necessary security to pursue her self-employment.
Johanna, a 24-year-old student, belongs to the second group of hosts and for her generating an income through Airbnb serves to bridge a temporary financial hardship. She has been sporadically renting her room in a shared flat for about two or three years, mainly when she was not in town and her room was therefore empty. During the interview she told me that at the beginning of 2019, when she was writing her undergraduate thesis and therefore had less time to work, she stayed at a friend's place or her family's flat on the weekend to be able to share her room via the platform. Johanna told me:

«I actually needed this [the income from the Airbnb rental] because otherwise I would have had to work, but actually I relied on the fact that I have capital, that I have this room, which I can sublet incredibly easy, for little effort and for quite a lot of money.»

Johanna was using the platform temporarily when was unable to earn enough money to make a living because she had less time to work. During the interview she said that an alternative could have been to apply for housing benefit, but that renting out her room via Airbnb seemed to be the easier solution. Using Airbnb as a solution to temporary financial hardship instead of applying for housing benefit is an individual solution that reveals a self-responsible relationship to structurally induced insecurity. This phenomenon—which also shows the low barrier of using platforms like Airbnb in times of financial hardship—has been discussed in relation to Lorey's understanding of neoliberal rationality. Anna and Johanna are amongst the hosts that depend—either temporarily or regularly—on the income generated

through the Airbnb rental to secure their living.

Markus, 33, is the only interviewed host for whom the Airbnb rental is a sporadically used opportunity to earn some extra money. He rents out his entire one-bedroom flat when he is away on weekends or on holiday. Thus, he is also the only interviewed host who never physically shares the space with his guests. Markus works independently in the event industry. He described his work as secure, because he is in a permanent contractual relationship with two larger companies and told me that he could afford the flat without the Airbnb rental. For him the rental only serves as an opportunity to generate extra income and spend less of his monthly income on rent:

«[...]because I'm on the road quite a lot and often I'm not here and I've set a limit for myself what I want to spend in my life, [...], on rent per month. »

Markus was the only interviewed hosts who belongs to the third group and he uses the platform only sporadically to generate an additional income which enables a certain lifestyle.

In general hosts' stories revealed that the economic motivation to share your home results, amongst other things, from transitional financial hardships, precarious self-employment and difficulties in generating income during and after a pregnancy. Hosts' motivation to offer their home as a service via Airbnb can be understand as linked to the 'crisis of care' as it became evident, that for most of the interviewed hosts their regular income is not sufficient to ensure their own reproduction in the context gentrification processes and otherwise insecure income. Airbnb positions the platform as an individualised solution for precarisation processes by inciting hosts to understand their unused bedroom as an asset that can function as an insurance in insecure times. This is further evidenced by the «Airbnb Economic Empowerment Agenda», announced in March 2017, which states that the platform is «democratising capitalism»:

«At a time of growing economic inequality [...] Our people-for-people platform allows ordinary people to use their house – typically their greatest expense – to generate supplemental income to pay for costs like food, rent, and education for their children. [...] For some, home sharing has helped them stay afloat during tough times.» (Airbnb Citizen, 2017)

This suggests that the platform develops its products not only to respond to changing touristic needs, but in response to the 'crisis of care' and leverages the condition in a bid to become social infrastructure. To not reproduce the corporate narrative, we need to analyse more closely who is included into and who is excluded from Airbnb's reproductive model. Prior 1989 the Wrangelkiez was located at the margins of West Berlin. It was a cheap residential area and therefore home to migrant communities, in particular so-called 'Gastarbeiter'. Although the demography in this neighbourhoods is changing, it is still those communities that shape everyday life in the area (Amt für Statistik Berlin-Brandenburg, 2019). Looking at the overall Airbnb-listings in this neighbourhood, which shows mainly white middle class

hosts, paints a different picture of the neighbourhood. For all those excluded from this reproductive model, the platform exacerbates gentrification processes and thus precarity and socio-spatial inequality. It was argued that precarisation under neoliberal conditions is in a process of normalisation. However, as bodies are gendered and racialised, they are affected differently by these processes. Risks and opportunities are unequally distributed along lines of class, gender, race and nationality. People who are most affected by precarisation processes are excluded from Airbnb's reproductive model.

Airbnb's covid-19 response

When we look at "urban processes in covid capitalism" (Madden, 2020), it becomes clear that the unfolding Covid-19 pandemic has momentarily halted the circulation of value exploited by platforms like Airbnb. With a dramatic global decline in tourism and an urban crisis of social distancing, the platform had to re-invent itself once again to survive 2020. Airbnb raised a two billion dollar loan (Scigliuzzo and Tan, 2020) and laid off 1900 employees of its 7500 people workforce during the unfolding pandemic (Airbnb, 2020b) to stay afloat after its revenues decreased rapidly earlier in 2020. However, it needs to be remarked that the company does not bear the main costs of guest apartments and rooms staying empty as it does not own the accommodation offered on the platform. It is mainly hosts suffering financial losses from low touristic demand. In early March Airbnb loosened its booking cancellation policy without informing hosts. Additionally, the platform introduced a new search filter to show which listing have flexible cancellation policies. The two examples underline that platforms, like Airbnb, are more indebted to consumers, in this case tourists, which results in precarious labour conditions and hosts shouldering the risks of low touristic demand.

After an outcry by the host community on social media, the platform had to rethink the role of hosts in its crisis response. On 30 March, Airbnb announced a relief fund for hosts affected by Covid-19 related cancellations. Airbnb opened up the possibility to pay 25% of the amount that would normally be earned through the bookings from the fund. This, however, only applied to bookings made between 14 March and 31 May. In a video message Airbnb's CEO Brian Chesky also announced a relief fund for so-called 'superhosts' with the amount of 10 million US dollars. The company claimed «We are partners» (Airbnb, 2020a) with our host community. The platform needs to portray itself as responsible actor towards their hosts and needs to continuously renew the 'partnership' with its host community, not only because their business model depends on hosts' assets—apartments and unused bedrooms — but also because their model of «regulatory entrepreneurship» (van Doorn, 2019) requires an organised user base that identifies their own goals with the company's. Airbnb incites its host community to proactively lobby governments against stricter regulations that would affect their future market opportunities (van Doorn, 2019; Ferreri and Sanyal, 2018). Airbnb's crisis response also advertised the provision of housing to front-line workers and medical staff in the vicinity of their workplace.

Under its 'Open Homes initiative' Airbnb regularly promotes the provision of 'emergency housing'. During the unfolding pandemic, hosts could voluntarily sign up to offer their places for free or at a reduced price and the platform would not charge any fees for stays arranged under this scheme. The company's statement claimed that in this initiative they were partnering up with NGOs, amongst others the International Federation of the Red Cross and the International Rescue Committee (Airbnb, 2020e). On 7 December 2020, ahead of its planned IPO, the platform launched the NGO Airbnb.org. On 9 December 2020 Airbnb went public on Wallstreet which its share price doubling on the first day. The success of this operation was certainly ensured by Airbnb's crisis response and its ability to demonstrate that it is a crisis-proof and flexible business model that can be continuously reinvented to address systemic disruptions. With the Open Homes initiative and the frontline stay initiative merging into this non-profit organisation, the platform claims that it its aiming to formalise its dedication «to facilitating temporary stays for people in times of crisis» (Airbnb, 2020f). With Airbnb.org we again see an attempt to partner up with NGOs and hosts being incentivised to offer their homes for free, at a reduced price or to donate. These initiatives are an example of how the platform pursues public-private partnerships aiming to position itself as a self-evident partner for the provision of welfare. Covid-19 is distinct because it unfolds simultaneously as an economic and a public health crisis and as such intervenes into broader patterns of the crisis of care caused by financialised capitalism discussed in the first and second part of this article. What Airbnb's crisis response shows is that platforms are designed to fill in the gaps which emerge when economies tend to collapse and respond to gaps in infrastructural and service provision resulting from fiscal restructuring and austerity politics.

In the midst of the Covid-19 pandemic, in September 2020, the platform also announced its «City Portal» initiative. According to Airbnb the product addresses governments and tourism organisations to help them «deal with the economic fallout and lost tourism tax revenues from the current COVID-19 pandemic» by providing data on short-term rentals and tax revenues (Airbnb, 2020c). It needs to be questioned why the platform has long been criticised for not providing the data necessary for local governments to enforce regulation and yet again offers their «partnership» in developing regulations for short-term rentals. By this form of partnership-building—although it remains to be seen how urban governments react to this offer—Airbnb seeks the institutional legitimacy trying to prevent stricter regulations that would undermine its business model. Furthermore, with these partnerships they recognise cities as sites of austerity politics that depend on the influx of tourist money. Airbnb leverages this condition aiming to take on governmental responsibilities (i.e. the regulation) at the urban level. This initiative is another instance of its pursued infrastructuralisation.

Conclusion: Airbnb as essential urban infrastructure?

Ranging from the individual facing precarious labour and livelihood, to cities

that are austerity-ridden and struggle financially when tourist economies come to a standstill, Airbnb deliberately positions its business model as a response to the 'crisis of care'. As we have seen, the infrastructural character of platforms is often understood in relation to their role of functioning like a marketplace connecting supply and demand. The notion of social infrastructure, which was developed in relation to Butler's work, reveals that platforms, like Airbnb, also aim at becoming essential infrastructures of social reproduction. Airbnb is leveraging the crisis of wage institutions, welfare and the privatisation of public resources as a way to promote their business model as an individual and tech-enabled solution to precarity. With their "Economic Empowerment Agenda" they reframe welfare as an individual and asset-based responsibility and with their «City Portal» initiative they reframe the common good as that which is provided by and benefits their host community.

Infrastructures are the background upon which everyday life unfolds. The dependency on them is defined by their key qualities «such as ubiquity, reliability, invisibility» (Plantin et al., 2018: 294). However, in order to not reproduce corporate narratives—i.e. platforms aiming to position themselves as infrastructural—we should challenge their seemingly ubiquitous character. In the case of Airbnb, we can do so by looking at who is included into and who is excluded from its reproductive model, i.e. to understand one's own home as an asset and insurance in uncertain times.

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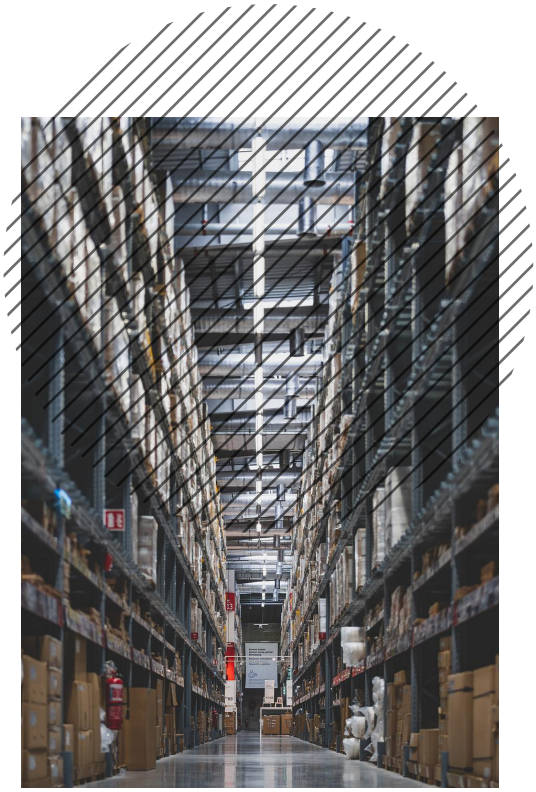
CHAPTER 2



CHAPTER 2

New valorization logics in the figure of the digital platform. The case of MercadoLibre

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In contemporary capitalism's transformation, the platform economy seems to be emerging as a leading actor in applying digital technologies, new business models, and renewing capital-labor relationship forms. Big digital platforms have expanded worldwide at extraordinary rates, are making enormous efforts in research and development, and have reached record levels of market valuation. The top five companies in the S&P 500 are all technology giants, representing today over 20% of that index, an unprecedented level of concentration. This was further exacerbated by these companies' accelerated growth as a consequence of the global COVID-19 pandemic. This chapter describes and analyzes MercadoLibre's (MeLi) operations, Latin America's leading e-commerce platform that has expanded its businesses into the financial and logistics sphere. In particular, we focus on the interconnections between its e-commerce, financial, and logistics operations[1]. We follow Mezzadra and Neilson (2017, 2019) approach by using the categories of extraction, logistics, and finance to

[1] The authors are very grateful for Pablo Miguez' s detailed reading of this work and comments. We also want to specially thank the IBB team for encouraging us to write this chapter.

analyze capitalist operations and their interactions. This perspective considers extractive operations in an expanded sense, particularly with regard to finance but also in the logistics of supply chains and production networks. According to the authors, «In the present conjuncture, extractive operations such as those we analyze in the cases of logistics and finance dominate the composition of aggregate capital and tend to command and submit other operations of capital to their logics» (Mezzadra and Neilson. 2019: 6).

Generally speaking, these three areas have provided conceptual orientations and empirical grids for the analysis of contemporary capitalism and a framework to show its distinctive rationality and logic. We propose to connect this development with broader social issues and its consequences. At a global level, MeLi has been compared to Amazon and Alibaba for running similar businesses in different markets. With Alibaba it share similarities in the development of its payment systems, and with Amazon it shares a similar trajectory of rapid growth (in terms of revenues and workforce) and the development of its own logistics network.

A remarkable aspect of digital platforms is that they facilitate the building of global monopolistic or oligopolistic markets in very short periods of time (Casilli, 2018; Vercellone et al., 2018). The earliest research on platforms already showed that network effects are an element that favors the spontaneous constitution of highly concentrated markets.

This led some researchers to argue that the existence of monopolies in this type of market structure is efficient (Evans, 2003; Rochet and Tirole, 2003): as a coordination mechanism, it would be optimal for all users to converge on the same platform, enabling interconnection between all of them. But the importance and scope of network effects can be nuanced: Not all users (or nodes) are equivalent, nor is the interconnection between all users relevant in all the services provided by the various platforms (Parker et al., 2016).

Further, platform companies build control mechanisms in their ecosystems by developing closed applications and privatized Internet infrastructure to maintain a competitive advantage over their rivals (Srnicek, 2018). Thus, the technical-founded logic that supports the need for convergence can be reversed: As proposed by certain anti-monopoly approaches, if interoperability between platforms were forced, it could substantially modify the existence of barriers to entry in the markets in which they operate (Zingales et al., 2019). In this sense, it can be argued that these companies have developed their expansion and dominance with an enormous regulatory and tax “free space”, facilitating their constitution as dominant actors.

This power concentration also expresses the platform’s novelty as a space for economic organization (Srnicek, 2018). Here, productive activity occurs not only within the framework of the company, but in broader ecosystems in which formal organizations interact with other companies, independent contractors, distribution networks, and user and consumer communities. Based on the control of the technological infrastructure, it is possible to supervise all these actors' interactions through the use of algorithms.

This positions the platforms in a privileged place to capture the value produced (Harracá, 2017). By addressing the case of MercadoLibre, this chapter will explore how the transformations of the platform model act and are expressed.

A brief history of the company: key milestones

MercadoLibre was founded in 1999 by two Argentines, Marcos Galperín and Hernán Kazah, although the former has been the company's public figure. Galperín studied at the Wharton School of Business at the University of Pennsylvania (USA), worked at the JP Morgan Bank and later in the financial area of YPF (argentinian oil national company). When they opened the e-commerce company with headquarters in Buenos Aires, Argentina in 1999, at that time, they were competing with DeRemate.com - an online auction company. MercadoLibre also began as an auction platform, but quickly the online sales platform made it possible to sell at a fixed price and its users became sellers that were no longer occasional. In the marketplace, sellers can publish for free or by paying a commission on the value of the merchandise sold, including the cost of using the payment system, and a better location in the search listings. For an additional cost, they can also offer interest-free installment payments to their buyers (Carpinelli, 2017).

Galperín's personal contacts made it possible for the Hicks, Muse, Tate & Furst fund, a very active fund in Latin America, to invest in the development of their project and obtain capital contributions from JP. Morgan Partners and Flatiron Funds. A short time later, in 2001, the pioneer of electronic commerce Ebay became a shareholder, and they signed an exclusive 5-year alliance for all of Latin America. In addition, they added a new investment of US $ 46.7 million by large funds such as Goldman Sachs Entities. In 2002 they acquired Lokau, a Brazilian online business platform that allowed them to incorporate all their respective registered users. In 2003, it launched its Mercado Pago payment platform, which, as we will see later, is one of its critical business units.

The expansion continued. By 2005, they bought Deremate.com, their main regional competitor in e-commerce. With this operation, they took control of that company's activities in Brazil, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela. In 2007, MercadoLibre began trading on the stock market under the name «MeLi» and is part of Holding Meli Inc., thus becoming the first Argentine firm on the NASDAQ.

A year later, in 2008, MercadoLibre acquired 100% of Classified Media Group, Inc. (CMG) and its subsidiaries: tucarro.com, tumoto.com, tuinmueble.com, tulancha.com, tuavion.com. That year, it also acquired DeRemate.com's operations in Argentina and Chile, for which it disbursed $ 40 million. In 2009, it launched its advertising division and multiple acquisitions followed: Autoplaza (2011), Neosur (2013), Portal Inmobiliario (2014), KPL, Metros Cúbicos and Dabee (2015), Monits and Axado (2016); making its presence in the Latin American market robust (See graph). To continue with its expansion plan, in 2014 it issued a convertible bond for 330 million dollars, a financing strategy that it will repeat several times years later.

Argentina, like other Latin American countries, has structural logistics problems.

Logistic distribution for e-commerce firms depends on distribution lines that follow a centralized diagram based on the connection with Buenos Aires metropolitan port that was designed at the beginning of the 20th century. The network of private post companies only covers profitable distribution trails and the public network has been subject to financial stress.

Due to these inconveniencies, in 2013 Mercado Envíos emerged as a logistics solution associated with Mercado Libre's e-commerce division. It was developed to take advantage of economies of scale of existing logistics operators and, of course, reduce capital turnover time. Mercado Envíos is available in Argentina (through OCA, Andreani and Correo Argentino), Brazil (through Correios), Mexico (DHL), Colombia (Servbinetega) and Chile (Chilexpress) and is combined with the Marketplace (Carpinelli, 2017).

In recent years, Mercadolibre supplemented such infrastructures with its own warehouses. In 2018, MeLi announced the opening of a distribution center in the Central Market of Buenos Aires, equivalent to those already installed in Uruguay in 2012 and later in Mexico and Brazil. Since 2019, the firm has been partnering with commercial airlines. More recently, in 2020, MeLi announced major investments in Brazilian logistics to provide constant volume during the lockdown period. The company has a fleet of four aircraft (from different airlines) 100% dedicated to its deliveries in Brazil.

Besides expanding its delivery fleet, these investments also involve the installation of new distribution centers and cross-dockings and the development of new tools to reduce the time and cost of delivery[1]. MercadoLibre also offers their customers financial services. MercadoPago is a digital financial service of the company that overcomes payment barriers. It was in 2017 when MeLi developed its financial division and incorporated an electronic payment system (QR code) available on almost all mobile phones on the market. This compounded on its already strong network effects from the Marketplace, as it incorporated unbanked user segments who found a facility for their transactions in this medium. It also enabled users to use credit cards and to receive credits directly to their accounts and integrate them into a bank account. In 2018, it introduced a tool to make financial investments, through a common investment fund in partnership with Banco Industrial. Towards 2019, it expands its e-commerce division incorporating mass consumption under the launch of «SuperMercadoLibre».

The story in numbers

The company shows very fast growth, in line with the trajectory of the main global platform companies. Between 2007 and 2019[2], its sales in USD multiplied by 27, the number of employees by 10, and the stock price by 21[3],

[1] https://labsnews.com/en/news/business/mercadolibre-launches-meli-air-with-4-delivery-planes-fleet-in-brazil/

[2] All the financial and operations data about MeLi corresponds to the 2007-2019 period, unless otherwise clarified. The source is MeLi's annual report fillings for the United States Securities and Exchange Commision, originally reported in US dolars.

[3] Not reflected in this number, as a consequence of the pandemic, its market value tripled in just one year.

being currently the largest Argentine company according to this parameter. On the marketplace platform, the volume traded multiplied by 9, reaching USD 14 billion, and 380 million items in 2019, while the number of unique buyers multiplied by 8 (going from 5.5 to 44 million), and that of sellers for 5.6, (from 2 to 11 million). The payment mechanism grew exponentially, going from USD 158 million in 2007 to USD 28.4 billion in 2019, and some 838 million transactions.

In terms of geographic segments, the primary market is Brazil (64%), followed by Argentina (20%) and Mexico (12%), in addition to a set of Latin American countries that complete the remaining 4% (Uruguay, Colombia, Chile, Peru, Venezuela, Ecuador, Costa Rica, Dominican Republic, Panama, Bolivia, Guatemala, Paraguay, Nicaragua, Honduras and El Salvador). The evolution by country shows a similar behavior, led by Argentina and Brazil (x40), and in second place Mexico and others (x30). Even so, the trajectories were different: While Argentina shows a linear growth evolution, the expansion in Brazil and especially Mexico resembles an exponential one (in Mexico sales multiplied by more than 5 in the last two years, reaching USD 275 million). For the whole period considered, almost 2/3 of the growth in sales is explained by Brazil, 20% by Argentina, 12% by Mexico and 3% by other countries. For Argentina and Brazil, growth is slightly led by MercadoPago, while in Mexico it is led by Marketplace. In terms of results, and unlike Amazon's trajectory, MeLi has presented consistently high operating margins, oscillating between 25% and 35% of sales between 2007 and 2016. In 2017 it collapsed, and remained negative in 2018 and 2019, but this was due to expenses associated with the expansion strategies in Brazil and Mexico. Beyond this, it is curious that the gross margin (income minus cost of sales, before operating expenses) falls steadily, from 80% in 2008 to 48% in 2019. The dynamics of the cost components are very disparate: General and Administrative Expenses, and Product and Technology Development (which would be expected to follow different dynamics), tend to stabilize at 10% of revenues. In contrast, Sales and Marketing tend to decrease from 32% in 2007 to 20% in 2016, when it expands strongly, reaching 36% in 2019. As mentioned, the cost of sales grows steadily, from 22% in 2005 to 52% in 2019 (mirroring the drop in gross margin). The ratio of costs over employees shows sustained growth, either considering the cost of sales, operations, or total. This may suggest a change in the composition of spending towards greater outsourcing of services and acquisition of assets. Anyhow, despite the number of employees multiplied by more than 10, the average total income per employee has multiplied by 2.6. This means that while in 2007 each employee contributed an average of USD 91 thousand per year, in 2019 they contributed USD 237 thousand.

Analysis of MeLi business

There is a strong argument that the recent extraordinary levels of capitalization of many publicly traded online companies had a lot to do with investors' beliefs that entrepreneurial companies had business models with growth potential that was inherently superior to offline models.

How does the Marketplace work in MeLi?

In Argentina, when a sale is made through the Mercado Libre site, the seller can

choose zero commission with shallow exposure, and commission from 13% to 27% of the published value for products with good exposure. The accreditation is carried out in an account within the system itself after a period of five days from the moment the buyer received their product. When the transactions were paid through funds in a MercadoPago account, the commission drops to 5.5% plus the Value Added Tax (VAT) if the accreditation is immediate. This rate is higher than the one that a business would pay to credit its sales through a traditional commercial bank (2.15% in credit and 1.1% in debit), although in banks, the crediting period ends up being longer (10 business days) and this factor ends up constituting an advantage in favor of the platform (Artopoulos et al., 2019). As the system thus becomes more advantageous compared to credit cards and other means of payment, the platform attracted many consumers and sellers. At the same time, MercadoPago exempts small businesses from tax withholding, contributing to the previous trend. Platform-mediated marketplaces were among the earliest types of internet websites (Kenney et al 2018). The expansion of the marketplace platform in MeLi is expressed in the increase in the number of unique users, both sellers (x5.5) and buyers (x8). The relationship between the two increased by 43%, adding almost an extra buyer for each seller. This implies a relatively greater concentration within the platform, although the absolute level is low (4 buyers per seller). A fundamental indicator is that MeLi managed to steadily expand both the number of buyers and the average spending. On average, each user buys more products (3.2 to 8.6 items), although at a lower price (USD 86 to USD 37), taking their annual spending from USD 274 to USD 316. The average margin received by MeLi for each item increases steadily, almost doubling between ends, going from 4.6% in 2007 to 8.6% in 2019. Consequently, the margin per buyer also increases, although multiplying by 3. Another way to read this number is that its cost of acquiring new buyers has decreased, which constitutes a clear expression of the network effects. From the seller's point of view, on average, the number of items he sells multiplied by 4, while his income grew 65%, reaching USD 1,250 per year.

Although MercadoLibre is known as an e-commerce platform, as we previously argued, it is much more than that, and the data illustrates this.

While the revenues associated with the Marketplace multiplied by 17, the evolution of the Non-marketplace or MercadoPago segment stands out particularly, which in the same period multiplied by 70. Thus, it grew from representing 11% to 48% of sales revenue. While Marketplace's revenues show more volatility, MercadoPago's sales are much more stable and show a constant contribution to growth, with a permanent and robust level jump in 2017.

MeLi's foray into financial services was carried out through its MercadoPago and MercadoCrédito divisions. This has been under the striking slogan “democratize trade and money to impact the region's development.” MercadoPago invoices for payment processing and MercadoCrédito grants credits to MercadoLibre vendors and consumers.

Mercado Pago is an integrated digital payments solution that complements the Marketplace. The tool is designed to

facilitate and formalize transactions between buyers and sellers on the MercadoLibre platform and outside of it, providing a mechanism that allows the user to send or receive money and finance payments. It is currently available in Argentina, Brazil, Mexico, Chile, Colombia, Venezuela, Uruguay and Peru. Its adoption is required for all sellers' publications, except classifieds, while buyers can choose to pay on delivery if the seller grants that option as available.

Mercado Pago is the only digital payment method accepted by Mercado Libre in the Marketplace. Mercado Pago mediates transactions so that the money paid by buyers is retained by the tool until the products purchased are delivered. The commission for using Mercado Pago is included in the sales commission charged to sellers: sellers pay the same value whether they use the solution.

Outside the Marketplace, the service was designed to serve the growing demand for Internet payments in Latin America. It allows companies, businesses, or individuals to send money and collect their sales through different digital channels: their website, social networks, mobile applications, and even through e-mails, in exchange for a commission on the transacted volume. In the last quarter of 2016, small loans began to be offered to Mercado Libre buyers for consumption and sellers for working capital, based on their history of operations on the platform, giving them access to the financial market, and doing so entirely digitally. This initiative, called Mercado Crédito, seeks to help small and medium sellers scale their businesses and give buyers financial tools to make purchases, especially those unbanked.

Like what happens in the Marketplace, in MercadoPago the volume of operations grows steadily, while the average amount progressively falls, going from USD 121 in 2007 to USD 34 in 2019. This verifies a model that aims to capture a high volume of small daily transactions beyond those carried out in the Marketplace. As the use of MercadoPago for Marketplace operations grows, reaching 93% in 2019, the total volume traded in MercadoPagois double that of Marketplace. In terms of gross margin, it has stabilized in recent years in the order of 4% per transaction.

According to calculations by the Bank for International Settlements (BIS), Mercado Crédito managed to place 30% of its loans in Argentina in 2017, which would be classified as High Risk in the banking industry, with a loss ratio that however did not exceed 2, 8%, reaching firms that the traditional banking system does not attract. With its scoring model, Mercado Libre can offer credit and, in turn, financially include these merchants. It is interesting to note that the "high risk" segment's loss ratio is 2.8%, similar to the premium SME segment in traditional banks. These simple statistics indicate that Mercado Libre's internal rating system is more discriminatory than a traditional credit bureau and allows the company to serve suppliers that would otherwise be excluded from credit provision.

However, it remains to be verified whether an internal rating system based on machine learning techniques and data obtained from the e-commerce platform can outperform (ex-post) more traditional models in predicting defaults over a complete business and financial cycle. The accumulation of data emerges as a key advantage of vertical integration: keeping

property operations in house also keeps field data in-house, creating opportunities for analysis and experimentation to ease the inevitable frictions of circulation (Fields, D., 2019).

The financial division of MeLi expanded towards the end of 2019. In that year, the world's leading electronic payment platform PayPal made a strategic alliance with MercadoLibre to integrate its payment services in Mexico and Brazil, for which it disbursed 750 million dollars. Meanwhile, in Argentina it was in charge of launching Point Plus, its debit, credit, and prepaid card reader with which sellers can make all payments directly from the terminal and without the need for a cell phone.

In an overview, we find a feedback between MeLi's operations: at first, Marketplace grows rapidly, generating a high volume of transactions. During that time, MercadoPago primarily acts as a facilitator for these transactions while developing and refining this payment platform. This allows MercadoPago to start growing outside of Marketplace and achieve a sustainable transaction volume, overcoming the «chicken-and-egg problem» (Caillaud and Jullien, 2003). With that business consolidated, the use of MercadoPago in Marketplace began to be universalized, resulting in a vast captive market. Finally, the launch and later expansion of Mercado Envíos further complete this circle: Tighter control of logistics guarantees better customer satisfaction, more control over sellers, and overall more transactions and thus income for MeLi. This is clearly expressed in financial metrics: Although the margins per transaction in Marketplace had already been growing, the joint operation with MercadoPago and Mercado Envíos ensures a 40% higher margin per transaction, expanding a 8.6% margin in the Marketplace to a 12.2% total, in 2019.

Rethinking extraction, e-commerce, and finance through platforms

To conclude, we review the logic within MeLi's expansion through the lens of valorization logics of extraction based on finance and logistics Mezzadra and Neilson (2017, 2019).

The conception of platforms understood as digital infrastructures and key devices for extraction has been presented in various studies on the subject (Mezzadra and Neilson 2017, Fumagalli, 2018, Srnicek, 2018, Vercellone, 2020).

Data is a key resource of the platform economy. It is used to produce monetary value for the large platforms that buy and sell information (Casilli, 2017). For instance, in 2017, the income from selling data to marketing companies amounted to 98% of the revenues of Facebook and 86% of the revenues of Google (Schwarz, 2019, p. 3). Platforms are fueled by their access to «big data» (searches, purchases, and post form participants using their technology) and it also becomes a critical component of FinTech platforms (Dhar and Stein, 2017). In this sense, Neilson and Rossiter (2020) argue that data has become a kind of currency («data is the new oil»). Following Sing (2017), data is directly and minutely about actual social and physical facts: people, behaviours, interactions, machines and other artefacts, and natural things. The more local data is better because that makes it truer to particular facts. Therefore, personal data has one of the highest values (Sing, 2017).

Consequently, the production of forms of

life are increasingly central to capitalist valorization. In this sense, the extraction of communicative and cognitive capital that is at the heart of today's capitalist mode of production (Hardt and Negri, 2009). The idea highlighted is that not only when the operation of capital plunder the materiality of the Earth and biosphere, but also when they encounter and drawn on forms and practices of human cooperation and sociality that are external to them, that we can say «extraction is at stake» (Mezzadra and Neilson, 2019:138) because capital does not directly organize the relations of social cooperation upon which data economies rest.

Vercellone (2020) points out that as big data extraction refers to capturing our identities and the footprints produced by our social interactions on the Internet, the extraction mechanism becomes more powerful as the network effect expands. Moreover, as the volume of data continues to increase, the artificial intelligence functionality for interpreting and acting on it automatically (Dhar and Stein, 2017). So, the economic benefits of owning data in terms of transforming it into a profitable asset increases with the volume of data and this gives an advantage to first movers (UNCTAD, 2018).

Platforms also implement the strategy of constantly epxanding user engagement through user interface and experience design, creating compulsory behavior in consumers. This is done for the ultimate purpose of extracting (more) data from the users. This set mechanisms explains why platform companies enjoy rapid and exponential growth and unprecedented capital accumulation over a relatively short period (Srnicek, 2018). As we have seen, these logics are the basis behind MeLi's operations. MeLi's data extraction is founded on its role as intermediary, where it exploits the networks created, including the cognitive capital from sellers in understanding consumer's preferences and tastes, but also in consumers' patterns of search and buy. All this is possible because of the digital nature of the platform, where all objects and activities are coded and recorded as data. Such as in spaces such as US or the EU the search for buying a product starts directly in Amazon, in most Latin America this role is played by MeLi. As it expands towards new markets, it is increasingly indispensable for everyday life, and becomes an general infrastructure for extraction. Synergetic possibilities emerge when managing a large and varied portfolio of investments in platform companies and other data-centric businesses (van Doorn and Badger, 2020). The incursion into activities in the financial sphere in the case described is closely related to the previously described mechanisms. These types of companies known under the name Fin / BigTech have the advantage of being able to exploit the information provided by their primary business, such as electronic commerce, without the need for additional documentation from users (Frost et al., 2019). FinTech today is often seen as a uniquely recent marriage of financial services and information technology. However, the interlinkage of finance and technology has a long history. In fact, financial and technology development have long been intertwined and mutually reinforcing (Arner et al., 2015). We can think that financial innovations of the past decades are driven by an attempt to «expand the operational space of advanced capitalism» (Sassen, 2010, 20).

Despite treating them as something new, Fin / BigTech derived from communication and the Internet have been developing intensively since the 1980s. First, digitization allowed capital to completely restructure informational work and requalify many activities in the financial world (Miguez, 2008). There was a stage of implementation of these services during the decades of 1980 and 1990, a phase of growing adoption as we advanced towards the 21st century and a stretch coinciding with the current moment in which we can speak of a progressive diffusion of this digitization combined with big data (Carbó Valverde, 2017). Perhaps a more precise term for this type of firm comes from the concept of the name BigTech who benefit from having a large existing customer base and from collecting and analyzing their customer data in addition to having significant resources and the possibility of accessing capital and financing at a lower cost than some large financial groups (Financial Stability Board, 2019).

Buchak et al (2018) points that in the last decade, the consumer finance market has undergone a dramatic change. Intermediation has shifted from traditional banks to shadow banks: non-depository institutions falling outside the scope of traditional banking regulation. In this context, Fin / BigTech companies intensively use machine learning to perform risk ratings and grant credits.

This renewed approach to rating could provide an advantage over traditional banks, where it is common practice to rely heavily on the judgment of the loan officer to approve or reject a potential client.

The increased data resources could open the possibility for BigTech lenders to lend to borrowers who were previously excluded from the formal bank credit market. Such an expansion of the user base could facilitate financial inclusion in market niches where financing opportunities are scarce. Thus, the use of machine learning could have some advantages because the direct and rapid assessment of credit risk improves the underwriting process, is based on information derived from the relationships between customers and could prevent, in some cases, that the decision is made by the actions of a single person (Frost et al., 2019). Fintech lenders may be better able to screen potential borrowers, leveraging alternative sources of information and the big data approaches inherent in technology-based lending (Dhar and Stein, 2017). Machine learning -and also Artificial Intelligence (AI)- use recursive techniques to update datasets in ways that allow them to evolve and improve their functionality within institutional settings (Neilson and Rossiter, 2020). Moreover, by using AI, they achieve a competitive advantage for being able to «predict and modify human behaviour as means to produce revenue and market control» (Zuboff, 2015, p. 76).

Part of this advantage over traditional banks was expressed in the statements of Galperín himself who asserted regarding the latter (the banks): «I do not see them as competitors, since they target different audiences» and «They are anachronistic and inefficient, and they threaten us every day» in an interview reproduced in the book Argentina Innovadora (Editorial Sudamericana).

These ideas clearly express MeLi's vision on how to exploit user data, network effects and market integration to enhance their financial businesses.

At the same time, the company has been able to overcome regulatory obstacles in Argentina in this area. Following Orzanco (2018), while in Brazil Mercado Pago is obliged to allocate 100% of wallet balances in public securities that pay the monetary policy rate (currently 6.5% per year in reais), in Argentina it is released from this obligation by provision of the BCRA (Argentinian Central Bank). In turn, MeLi was able to circumvent a market de-concentration measure given that the Central Bank prohibits financial entities from carrying out operations outside the sector. In these cases, admitting that the two companies that form the same entity (here MercadoLibre, a commercial company with a dominant position, with Mercado Crédito) would require de-concentration measures or a new regulation to suit it.

Finally, another counterpart to this process of financialization and data extraction was the massive investment in the circulation of commodities: large-scale investments in transportation and communication infrastructures by MeLi, especially in its distribution centers. They are strategically installed to accelerate deliveries to end customers and serve as vital levers to promote the accumulation of capital and expand its geographical frontiers.

«Delivering to the customer is an obsession» said MeLi's founder. Rumours that MeLi may be interested in buying the Brazilian state postal network «Correios», for its logistics infrastructure is another example of how this dimension became central to the company.

But the delivery time is not only a main concern of retail companies in Latin America. This formulation has its roots in many Marx's economic writings where the speed, cost-efficiency and flexibility of commodity flows are central to competition and to the accumulation process. Logistics industry facilitates the circulation of capital by enhancing the flexibility, or «agility» of commodity flows (Danyluk, 2018) and has become central to the ongoing transformations of contemporary capitalism (Mezzadra and Neilson, 2015). In this context, capital has now new technology tools for manipulating space and as Cowen (2014, p. 205) notes, «location has been supplanted by a new force in business: logistics».

Recent research clarified how logistics operations are not a neutral mechanism, in other words a simple device to manage commodities in the most efficient way. They are also a site of power and struggle (Neilson 2012; Cuppini, Frapporti and Pirone, 2015) which display an extractive dimension, shaping and commanding heterogeneous productive environments (Mezzadra and Neilson, 2015), a topic that needs further research in Latin America context.

Overall, the marketplace platform allowed the company to extract and generate value from its users' data. Then it introduces financial operations to motorize it. But this quickly becomes a source that further accelerates expansion (with more users). Finally, the financial accumulation allows it to invest in its own logistics developments, which in turn allow it to accelerate its growth again (particularly in Brazil and especially Mexico, today its most critical markets).

As it was suggested by Montalban et al. (2019) the case described showed that the key to their competitive advantage lies with their ability to enlarge the crowd, to

mobilize digital infrastructure and to inter-connect complementary items, its individualized recommendations based on its algorithm and its high-performance delivery system. As Mezzadra and Neilson (2019) marked, the extension of data mining techniques across a diverse range of economic activities and data-driven commerce requires new juridical arrangement and a stretching of old ones. The case also shows what UNCTAD (2018) warns that the high profitability of these incumbent firms also allows for rent-seeking and spending on regulation and lobbying.

As a private governance structure, we conclude platforms define their own rules, and most of them operate at the fringe of the law. If they can convince policymakers that they will operate more efficiently in these areas than would be possible under existing rules and policies, they legitimate their practices and political demands. Instead of being a solution usually analyzed as market failures, platforms are capturing part of the rent from their position as intermediary or market organizer.

The current concerns of policy makers and industry arise not from the technology itself but from who and how is applying the technology and it may be pertinent to explore if data can be considered as a common «social resource». This is a new and challenging frontier in the governance of capitalist valorization.

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CHAPTER 3

CHAPTER 3

A critical engagement with platforms through patent analysis

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The plight of platform workers against platform companies has attracted much scholarly attention in recent years. While some scholars have exposed how race, gender, and class mediate platform labor (Hua & Ray, 2018; Van Doorn, 2017), others have shown how platformization has redefined the very meaning of labor (Casilli & Posada, 2019; Rosenblat & Stark, 2016). Sources of friction between workers and platforms include, among others, issues related to pay, information asymmetries, algorithmic management, and marketplace management (DeVault, Figueroa, Kotler, Maffie & Wu, 2019).

Understandably, most research on platforms has been conducted from the perspective of those most affected by them—platform workers. To gain an understanding of the working conditions on platforms, some researchers interviewed platform workers (Malin & Chandler, 2016; Rosenblat, 2018), while others surveyed online forums for comments made by platform workers (Karanović, Berends, & Engel, 2020; Möhlmann & Zalmanson, 2017; Rosenblat, 2018).

The studies cited above have contributed much to understanding the working

conditions on platforms.

The methodologies adopted by these studies expose the anxieties and grievances associated with platform labor. As Nieborg, Duffy, and Poell (2020) point out, qualitative methods, particularly interviews, remain relevant for studying platforms. However, platforms' growing influence on culture calls for new, or at least updated, methodologies (Nieborg et al., 2020). This article therefore aims to supplement platform research by providing another perspective to the study of these digital infrastructures. The author proposes the use of patent data to view platforms from the perspective of their developers. It is argued that such an angle can help build a more critical engagement with these digital intermediaries that increasingly shape labor and social life. To protect their inventions and maintain a competitive advantage, companies often seek intellectual property protection in the form of patents. In these documents, companies disclose their inventions to the public in exchange for a temporary, state-granted monopoly. Since patents contain ideas about novel inventions and how they may be used in society, they are a valuable resource for critically examining the logic and priorities of those who file them. Scholars from economic, legal, business, and technology environments have long relied on patent documents to monitor innovation (Abraham & Moitra, 2001), track technological development (Tsuji, 2012), and assess firm competition (Jun & Park, 2016). However, since patents are filed with the social world in mind, they are too important to be left exclusively to lawyers, economists, business, and technology practitioners. Patents should also be of interest to social scientists not so much because of their technical contents but because of the social implications of the technologies contained in them.

This study uses patents by Uber and Lyft—two of the most popular ride-hailing platforms in the US—to show how patents may be used for studying platforms. The author selected these companies for two important reasons. First, both Uber and Lyft have been subjects of the ongoing 'techlash'—a term used by journalists to refer to the growing criticism of platform companies (Nieborg et al., 2020). Second, like many companies in the technology industry, Uber and Lyft have been filing for patents to protect their inventions. These two reasons make Uber and Lyft ideal case studies for demonstrating critical patent analysis as a methodology. The following section briefly discusses the notion of platformization and its discontent. The article then defines the methodology of critical patent analysis and refers to other studies that made similar uses of patent data. Finally, the article will reflect on the patent data presented and draw from platform research to conceptualize the platform as a digital panopticon.

Platformization and its discontent

The notion of the 'platform' refers to digital intermediaries that bring together different users such as customers, service providers, advertisers, producers, and suppliers (Srnicek, 2017). At the top of the list in terms of wealth are companies like Apple, Facebook, Amazon, and Google, which Galloway (2017) refers to as the "four horsemen of the data apocalypse" (p.10).

Other popular platforms include Uber, Amazon, and Airbnb in the transportation, e-commerce, and accommodation sectors, respectively. Srnicek (2017) distinguishes

five different types of platforms: advertising, cloud, industrial, product, and lean platforms.

According to Srnicek (2017), lean platforms operate through a hyper-outsourced model to keep the ownership of assets to a minimum. All that remains for owners of lean platforms, Srnicek (2017) argues, is the bare minimum, which is the platform's maintenance. There are, however, some features that most platforms have in common, and highlighting some of them can shed light on what platforms are and the work they do. One of the most defining feature of platforms is their heavy reliance on data. Casilli and Posada (2019), as do many other scholars (Rosenblat, 2018; Fumagalli, Lucarelli, Musolino & Rocchi, 2018), contend that platforms create value by capturing and exploiting their user data. These data are used for various purposes, such as gaining insights on customer preferences, controlling workers, and forming the foundation for new products and services (Srnicek, 2017). Sadowski (2019) suggests that we might think of platforms' logic to extract all data, from all sources, through any means possible as "accumulation by extraction" (p.9). For platforms, data has been likened to oil that must be extracted, refined, and used for various purposes (Srnicek, 2017). On platforms, algorithms crunch through data to find patterns, rank users and content, target specific consumers while simultaneously optimizing the platform itself. The more data a platform has, the more uses can be found for them.

Another defining feature of platforms that is more specific to lean platforms is their firm control over labor. Such platforms are underpinned by algorithms that set working standards, manage workers, and even reward or punish those who go against their algorithmic "managers". The main contention with the algorithmic management of labor stems from the information and power imbalance between platform workers and platform owners (Jarrahi & Sutherland, 2019; Möhlmann & Zalmanson, 2017). Such asymmetries are indeed a feature of the platform and are key for controlling workers (Rosenblat & Stark, 2016). On platforms like Uber and Lyft, algorithms do the work of middle managers by performing tasks such as matching service requestors and service providers, assigning work, and evaluating worker performance (Jarrahi & Sutherland, 2019). Much of the discontent with platforms is that workers do not know how the decisions that affect them are made. In their bid to improve their working conditions, workers have been calling, among other things, for more algorithmic transparency (Booth, 2020). Such transparency, according to Booth will allow workers to "organise and build collective bargaining power over terms of work and pay in a way that is currently impossible."

Uber and Lyft fall under the category of lean platforms. These two companies exemplify the concepts of 'sharing', 'gig', or 'on-demand' economies (Malin & Chandler, 2016). Typically, neither company owns the vehicles, which are the main physical assets used to create value. Also, at the time of writing, neither company officially recognizes its drivers as employees but as 'independent contractors.' According to many observers, platform companies such as Uber and Lyft strategically mislabel their workers so that they are not obliged to provide worker benefits such as paid sick leave, health insurance, and pension

benefits (Fleming, Rhodes & Yu, 2019; Van Doorn, 2017). The classifying of drivers as 'independent contractors' contributes much to their discontent and precarity (Malin & Chandler, 2016). For instance, with severe travel restrictions imposed worldwide because of the global Covid-19 pandemic, many platform workers were left with no work and with no income (Dubal & Whittaker, 2020). The struggle for drivers to be recognized as employees continues.

Despite the push by workers and city governments to recognize platform workers as employees, platform companies have not favored such a move. Instead, companies like Uber and Lyft are aiming to go autonomous in the future. However, to fully automate their ride-hailing platforms, these companies still need to train their autonomous vehicles using data collected from their present users—both workers and customers. Indeed, as Casilli and Posada (2019) argued, platform labor is a prerequisite for automation. The execution of micro-tasks such as liking, posting, or commenting is necessary to train artificial intelligence models using hundreds of millions of human judgments, preferences, and behaviors (Casilli and Posada, 2019).

To make automation possible, platforms recruit hundreds of millions of people to take part as users, customers, or mere participants (Casilli and Posada, 2019). With Uber and Lyft investing in self-driving cars, it can be expected that they will leverage the data they are collecting to train their autonomous vehicles. As Antonio Casilli rightfully points out in En attendant les robots. Enquête sur le travail du clic that AI technologies depend on data extracted from crowds of workers to optimize their code (Picard, 2019). To borrow words from Delfanti and Frey (2020), who also observed worker-enabled automation at Amazon, we may say that Uber and Lyft drivers are the "living appendages" to these platforms since they extend their automation.

Critical Patent Analysis

According to the World Intellectual Property Organization (WIPO), a patent is "an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem" (WIPO, 2019). Once a patent has been granted to an inventor, no other party may benefit economically from the invention. Patents are therefore exclusionary devices and are key to maintaining a competitive advantage for some firms. Anatomically, a patent document comprises several components, including the title of the invention, an abstract, claims about the invention, and a description section.

To conduct a critical analysis of patents is to grapple with patent data in order to question the technology described in these documents and the logic of those who file them. Whereas patent analysis simply looks at the technology described in patents, critical patent analysis is more concerned with the social implications of those inventions. The study by Delfanti and Frey (2020), where they adopt a critical view of Amazon's patents, provides a good example of what is meant by 'critical patent analysis.' Hlongwa (2020) also uses this methodology to examine how the algorithmic city is configured. In short, critical patent analysis is a mode of revealing the politics embedded in the

substrate of inventions.

To retrieve and analyze patents by Uber and Lyft, an online tool called PatentInspiration was used.

A simple search containing the two companies' names was conducted to recall patents filed from January 2010 to September 5th, 2020—the day the search was performed. Figure 1 shows the search query used in PatentInspiration, which returned 2181 patents. Of the 2181 patents, 1860 belonged to Uber and 321 belonged to Lyft.

Figure 2 shows the patent application trends for both Uber and Lyft in the period 2011 to 2019. Based on figure 2, we see that both companies have been increasing their patenting activity in recent years. The increase in patenting activity suggests that both companies are actively innovating to improve their platforms.

Using patent classification codes, it is possible to categorize patents by technology or function. One of the most common patent classification schemes is the CPC system (Cooperative Patent

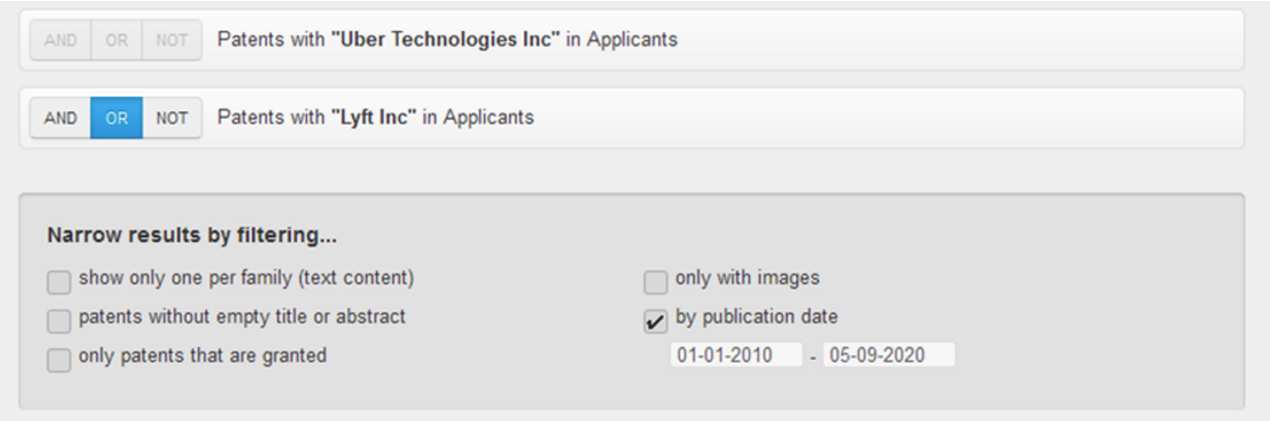

Figure 1: Search query

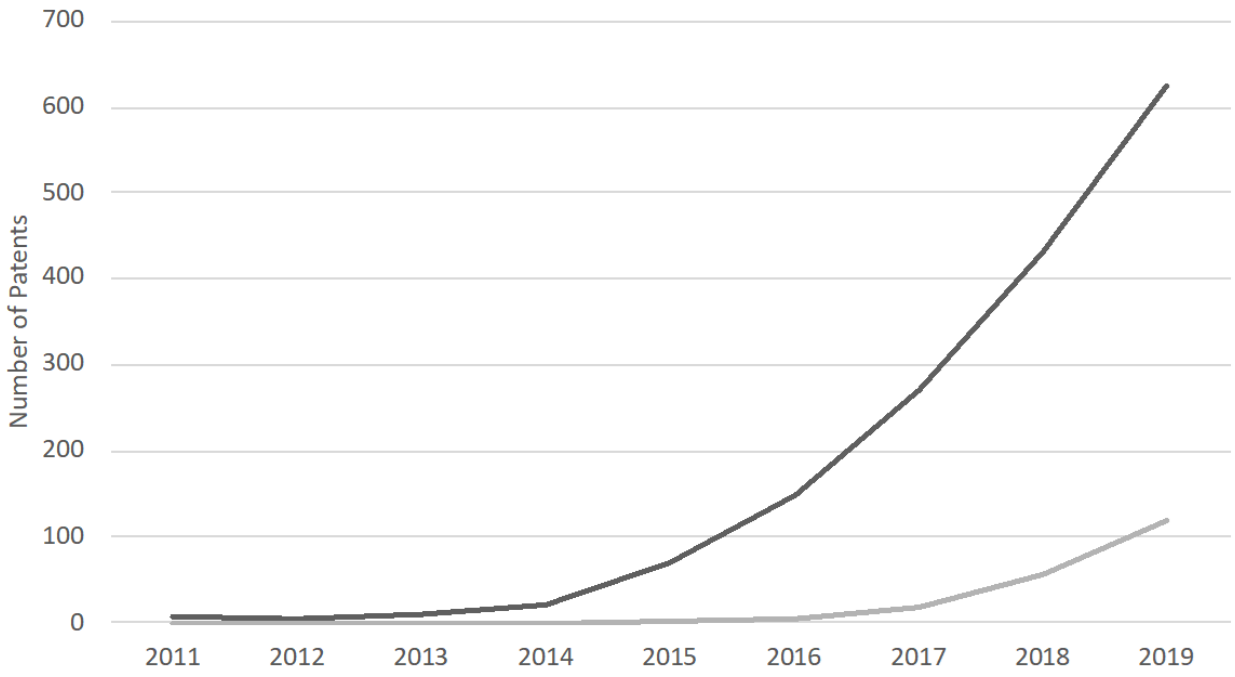

Figure 2: Number of patents by year for Uber and Lyft (N = 2181)

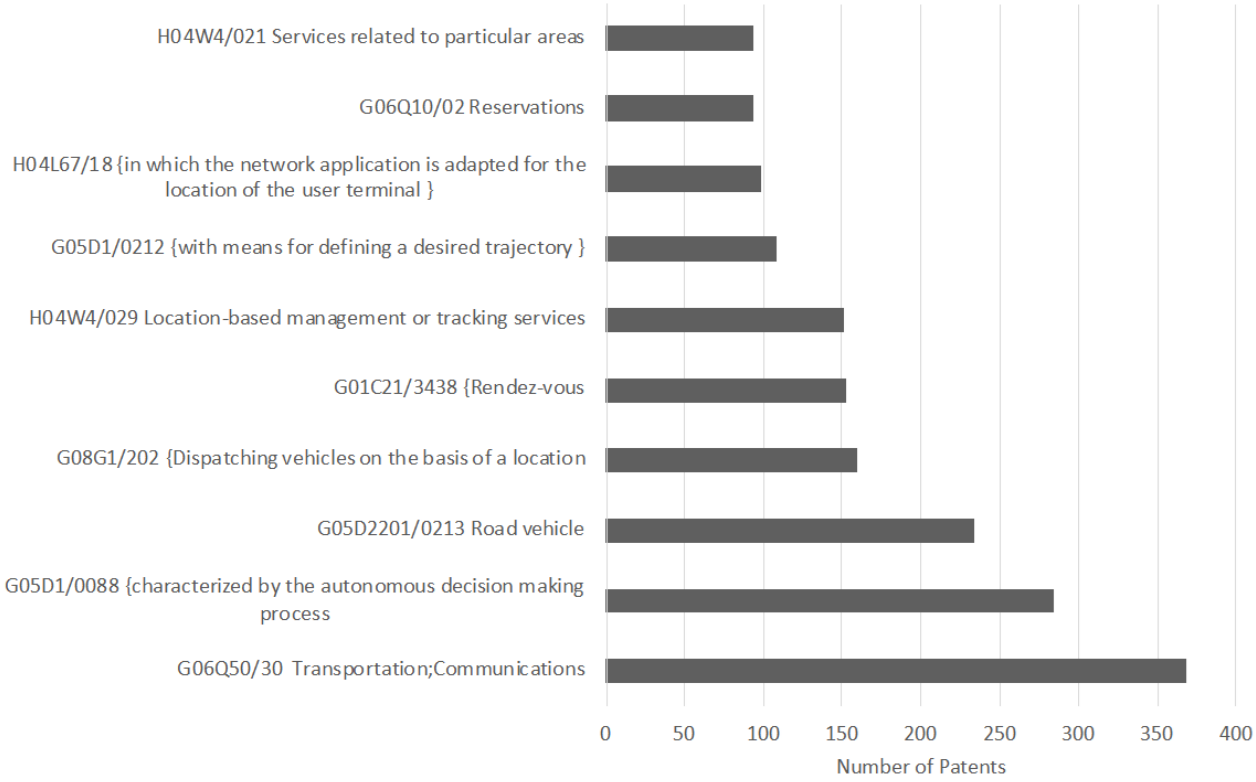

Figure 3: Top ten CPC codes of patents by Uber and Lyft

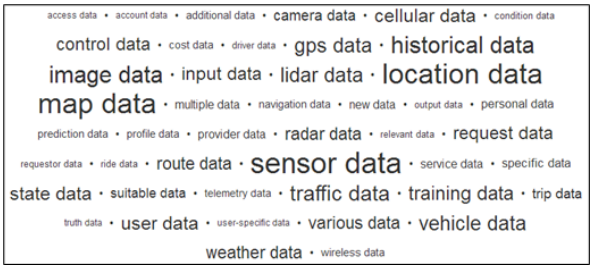

Figure 4: Types of data and information

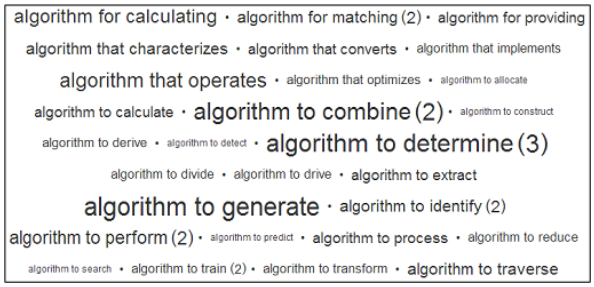

Figure 5: Functions of algorithms

Classification), which was jointly developed by the United States Patent and Trademark Office (USPTO) and the European Patent Office (EPO) in 2010.

Figure 3 shows the top ten CPC codes for Uber and Lyft's patents. Over 350 patents were assigned the code G06Q50/30, which relates to transportation and communications technologies. Second on the list is the CPC code G05D1/0088, which relates to technologies for autonomous decision making. Upon inspecting the patents under G05D1/0088, most appeared to be for autonomous vehicles, suggesting that the future of ride-hailing is indeed autonomous. Although not appearing among the top ten, other codes worth pointing out are H04L67/306 (user profile) and G06N20/00 (machine learning). The former signifies the centrality of user profiles on these platforms while the latter points to the use of a powerful technology to learn user behavior. Figure 4 shows the types of data mentioned by Uber and Lyft's patents. The types of data most mentioned are sensor, map, location, historical, and image data. Other forms of data significantly

Classification	Document No.	Inventor/Title of Invention	Brief Summary
Machine Learning	16/107,986	Lyft Inc Systems and methods for detecting and recording anomalous vehicle events	A vehicle system may collect vast amount of data from any number of sensors (e.g., speed sensors, steering angle sensors, braking pressure sensors, a GPS, cameras, LiDAR, radars, etc.) associated with the vehicle. The collected data may be used in many applications, such as training a machine-learning (ML) model for driving autonomous vehicles or assisting human driving.
	15/851,078	Lyft Inc Personalized ride experience based on real-time signals	A transportation management system, in response to ride requests, may match the needs of ride requestors with ride providers who are willing to use their vehicles to provide the requested rides.
	15/702,734	Uber Technologies Inc Promoting user compliance with adaptive checkpoints	This disclosure relates generally to determining checkpoints along a route, and in particular to using computer models to determine a sequence of checkpoints with which a particular user is likely to comply.
	15/297,050	Uber Technologies Inc Predicting safety incidents using machine learning	A safety system associated with a travel coordination system collects safety data describing safety incidents by providers and generates a plurality of safety incident prediction models using the safety data. The safety incident prediction models predict likelihoods that providers in the computerized travel coordination system will be involved in safety incidents.
	15/859,111	Lyft Inc Assigning rides based on probability of provider acceptance	The present disclosure relates assigning ride requests to providers based on the probability that a provider will accept the request.

Figure 6: Exemplary patents making use of machine learning

mentioned were cellular, training, vehicle, real-time and user-specific data.

As will be shown from the patents later, these data are collected via many sensors from the vehicle or via mobile device sensors of both drivers and passengers.

To get a sense of the functions of algorithms, the search query <algorithm for verb:* OR algorithm to verb:* OR algorithm that verb:*> was entered in PatentInspiration's text analysis function. According to figure 5, algorithms perform a wide range of functions, such as calculating, matching, training, predicting, optimizing, and many other tasks. Having provided a macro perspective of Uber's and Lyft's patents, the rest of this section focuses on specific exemplary patents to show what Uber and Lyft's inventions make possible.

Exemplary patents were identified and grouped into three categories: machine learning, administration and management, and safety management. Figure 6 provides exemplary patents by Uber and Lyft

Classification	Document No.	Inventor/Title of Invention	Brief Summary
Administration; Management	10,645,193	Lyft Inc System for placing drivers in a priority queue and navigating the drivers to fullfill passenger requests	In one embodiment a queue of drivers for a particular area is maintained, wherein the queue specifies an order in which drivers are selected for transportation requests from the particular area.
	14/793,593	Uber Technologies Inc Dispatch system for matching drivers and users	A dispatch system in connection with a transport service is provided. The dispatch system receives pick-up requests from requesting users and identifies a plurality of proximate drivers in relation to each of the requesting users.
	13/837,592	Uber Technologies Inc Providing user feedback for transport services through use of mobile devices	A system and method are described for providing feedback for a transportation service. A rating user interface can be provided after completion of a service. In response to a user's providing a rating for the transportation service, additional rating features can be provided as part of the rating user interface.

Figure 7: Exemplary patents for platform administration and management

Classification	Document No.	Inventor/Title of Invention	Brief Summary
Safety Management	16/530,828	Uber Technologies Inc Implementing and optimizing safety interventions	A network system provides interventions to providers to reduce the likelihood that its users will experience safety incidents. A machine learning model is trained using features derived from service received by users of the network system.
	10,697,789	Uber Technologies Inc Individualized risk routing for human drivers	A transportation management system can maintain a set of driver logs for drivers operating throughout a given region, where each driver log indicates driving characteristics of a respective driver.
	10,654,411	Uber Technologies Inc Detecting service provider state based on received and historic telematics data and service provider characteristics	A network system is configured to facilitate a safe service coordination environment. The network system detects abnormal user states (e.g., sleepiness, inebriation, etc.) and provides corrective recommendations to those users.
	10,417,343	Uber Technologies Inc Determining safety risk using natural language processing	The present disclosure generally relates to determining safety risks of users of a network system, and more specifically to using natural language processing and various types of classifiers to determine the safety risks.

Figure 8: Exemplary patents for safety management

related to machine learning. The first patent titled *Systems and methods for detecting and recording anomalous vehicle events* uses vehicle telemetry data to train machine learning algorithms to drive autonomous vehicles. This patent also mentions the collection of data through other means, such as using driver-facing cameras and microphones to collect contextual data on drivers.

The second patent by Lyft aims to make drivers' vehicles feel less foreign for passengers. The invention uses machine learning techniques to infer what passengers might prefer based on historical preferences on past trips. Although this invention leverages Lyft's knowledge of passengers based on their user profiles, it also collects data on passengers using various mobile device sensors, such as cameras, microphones, and infrared sensors. The third patent by Uber aims to encourage drivers to remain on predetermined routes. Drivers may be awarded points for passing checkpoints and rerouted when deviations are detected. There are several studies that provide more insights into the politics relating to routes (see Rosenblat & Stark, 2016 and Rosenblat, 2018).

Uber's patent titled *Predicting safety incidents using machine learning* employs machine learning techniques to predict which drivers are more likely to be involved in safety incidents. Safety data are collected on drivers and used to generate safety prediction models. This invention thus allows Uber to select and apply interventions for drivers likely to be engaged in safety incidents.

These interventions, according to the patent, reduce the likelihood that the predicted safety incident will occur. Interventions may range from 'low impact interventions' such as electronic messages sent to drivers' mobile devices, to 'high impact interventions' such as dismissal from the Uber platform. The patent by Lyft titled *Assigning rides based on probability of provider acceptance* uses machine learning techniques to assign rides based on the probability that drivers will accept them. The machine learning model used to compute acceptance probability uses data from past accepted or rejected trips. Based on this patent, it is easy to see how a 'just drive' mentality is being promoted on the Lyft platform. Rejecting rides for whatever reason may indeed be factored into the assignment of future rides.

Figure 7 shows exemplary patents related to the administration and management of the Uber and Lyft platforms. The first invention by Lyft is for placing drivers in a certain area in a priority queue. Driver placement is determined by many factors such as their performance relative to others, or how long the driver had to wait in the queue previously. The second patent by Uber titled *Dispatch system for matching drivers and users* clearly shows the valorization of labor on the platform.

The description of the patent reads:

> *The matching module may set a predetermined threshold that a driver must meet before being selected (e.g., a 70% probability that the driver will receive a 5-star rating), and/or the matching module may automatically select the proximate driver attaining a highest optimization score (Truong, Purdy & Mawas, 2017).*

This patent shows why ratings are so important to drivers. The third patent by

Uber provides means for passengers to give feedback after a transportation service. If the passenger provides a rating equal to or higher than a predetermined rating, they may specify the positive aspects of the ride. If the passenger provides a rating lower than the predetermined rating, they will also be requested to specify which aspects of the service were unsatisfactory. This patent provides a good example of how platforms outsource quality control (Van Doorn, 2017). Figure 8 presents patents related to safety management. The first patent by Uber provides intervention measures to drivers exhibiting safety risks, such as poor driving, poor attitude, abusive language, and so forth. The data used to classify drivers may be obtained from vehicle telemetry data, passenger feedback, or from the various sensors on driver or passenger smartphones (sensors include motion, audio, or camera).

The second patent by Uber selects routes for drivers according to their risk value scores. This invention uses machine learning tools to calculate the risk value of drivers based on, for example, how many hours the driver has been on duty and the driver's historical driving characteristics. The patent also mentions that the platform may obtain data from the driver's vehicle or computing device in determining the driver's current or historical driving characteristics. The patent also mentions that the platform may obtain data from the driver's vehicle or computing device in determining the driver's current or historical driving characteristics, indicating a state of tiredness, inebriation, and so forth. The final invention by Uber claims to determine the safety risk of a driver using natural language processing. Using textual feedback from passengers, the invention can analyze textual data to determine drivers' risk value.

The Platform as a Panoptic System

Surveillance systems have long been considered an integral part of the just-in-time economy (Sewell & Wilkinson, 1992). Based on the patent data presented in this study and many other studies on platforms (Jarrahi & Sutherland, 2019; Möhlmann & Zalmanson, 2017), surveillance is also a key feature of the platform. Using the concept of the Panopticon as conceptualized by Jeremy Bentham and later by Michel Foucault, this section aims to highlight the operationalization of surveillance by platforms for controlling and governing platform workers. It is argued that lean platforms such as Uber and Lyft are essentially digital panopticons that control labor by making workers permanently visible while keeping their 'algorithmic watchers' invisible. Because of permanent visibility, workers are conditioned to behave in a way that reinforces the principles of the platform.

In 1791, the English legislative reformer, Jeremy Bentham, published a proposal of what he believed was an innovative prison model—the panopticon (Strub, 1989). The panoptic prison's major features were a circular array of prison cells with a guard tower in the middle. The guard in the tower could observe any inmate at any time without being seen by the prisoners. Aware of being watched, prisoners would self-discipline and behave in a manner which they thought was promoted by the watchers. In Discipline and Punish, Foucault explains how panoptic disciplinary power works.

He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection (Foucault, 1977 p. 202-203).

Bentham thought that such a system could be applied in any establishment where people must be kept under inspection. These include houses of correction, workhouses, manufactories, mad-houses, hospitals, and schools (Bentham, 1791).

The principles of platform surveillance, which are at the core of Uber and Lyft platforms, are much the same as the 'ideal prison' envisioned by Jeremy Bentham. Although, with platforms, the 'power of the gaze' seems to have been largely replaced by the 'power of computation,' the threat of permanent visibility remains. The patents presented in this study revealed that it is entirely possible that drivers are constantly being monitored using a wide array of sensors on their vehicles and the mobile devices of both drivers and passengers. Uber and Lyft vehicles are essentially 'panopticism on wheels.' As Sheridan (2016) accurately points out, the panopticon "has been recast in security cameras and algorithms, police presence, and data trawlers" (p.3). Therefore, in today's digital age, where visibility is more enhanced, the notion of the panopticon appears more relevant than it was in the nineteenth century (Manokha, 2018).

To think of platforms as panoptic assemblages is to recognize not only the surveillance of platform workers but also how that surveillance shapes workers' conduct. However, this is another question altogether that falls beyond the scope of this paper. What can be said, however, is that surveillance, even in its potentiality, has the power to influence workers' behaviors to the benefit of platform owners. Beyond controlling and governing drivers, panopticism on platforms like Uber and Lyft also plays another role—optimizing the platform towards higher levels of automation. We see, for example, how the data extracted from drivers and passengers are used to train machine learning models to drive autonomous vehicles. This human-machine relationship may be referred to as the 'panoptic mode of automation' or 'panoptic-enable automation.'

The goal of platform panopticism is to engineer workers' behaviors through surveillance. Platform owners set the working standards with which workers must comply. These are similar standards upon which future automated systems will be built. Using algorithms and a plethora of sensors, platform owners can observe drivers—turning their every action into machine-readable signals. Aware of being watched, drivers behave 'accordingly', thereby reinforcing the standards of the platform while simultaneously providing plenty of data for future automated systems. This, however, is not to say that drivers are powerless or that they all behave uniformly on platforms. Indeed, some studies show how drivers are building resistance by learning the rules of the platform (Allen-Robertson, 2017).

How then does platform panopticism fit into the larger picture of platform capitalism as described by Srnicek (2017)? In short, platform panopticism is a function of what Zuboff (2019) refers to as

surveillance capitalism. While surveillance capitalism as conceptualized by Zuboff (2019) is an economic model centered on the extraction and commodification of user data, platform panopticism as described here refers to the strategic engineering of workers' behaviors by operationalizing surveillance.

Through performance scores and other quality control measures, workers are aware that they are being watched and therefore behave themselves in a manner desired by platform owners.

Workers' behaviors are then turned into data and form the building blocks for future automated systems. This is the panoptic mode of automation. Uber and Lyft are therefore part of the surveillance capitalists that Zuboff (2019) refers to in her book titled The Age of Surveillance Capitalism.

Conclusion

This article aimed to present a methodological approach to the study of platforms. The article argued that there is a need for more approaches to studying platforms in order to build a more critical engagement with them. The author proposed the use of patent data to study platforms from the perspective of their makers. Using Uber and Lyft as case studies, this article showed how patents could be used to gauge not only the technical underpinnings of platforms but also the politics and possibilities that go with certain inventions. Critical patent analysis was thus shown to be a useful methodology for supplementing existing methods for studying platforms. The article also conceptualized the platform as a digital panopticon for controlling labor. Panopticism on the Uber and Lyft platforms was shown to contribute to the automation of these platforms. This human-machine relationship was referred to as the 'panoptic mode of automation' or 'panoptic-enabled automation.' As a final point, two shortcomings of the proposed methodology are worth pointing out. First, patents contain ideas that may not necessarily find real technological applications. Second, and probably most constraining, not all companies patent their inventions and those that do may deliberately omit certain information. Despite these limitations, the patent data presented in this study correspond to the stories, fears and suspicions reported by Uber and Lyft drivers. In other words, the techniques employed by these platforms, as shown by their patents, match the social reality. Perhaps future studies can consider critical patent analysis as a reinforcement to existing methods for studying digital platforms.

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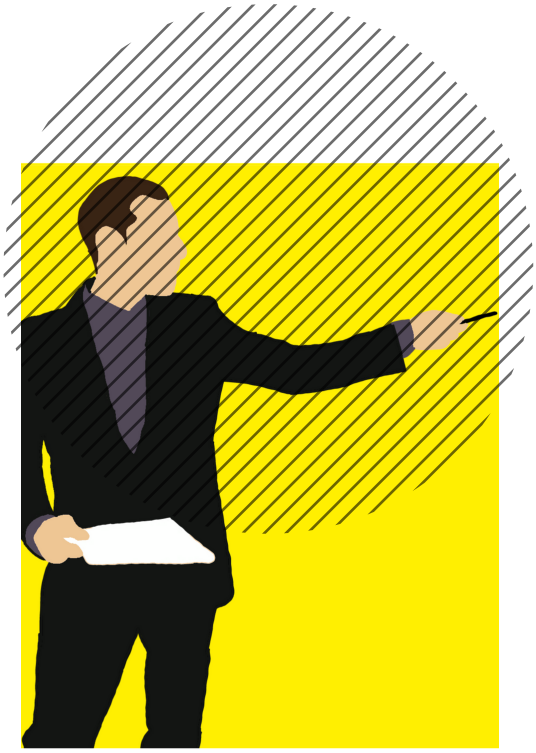
CHAPTER 4



CHAPTER 4

Predatory Pricing and Multiplication of Exploitation in Amazon's Business Strategy

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In *The Social Network*, a 2010 film directed by David Fincher and written by Aaron Sorkin – which among its many merits also has that of clarifying the interlocking between sexism and capitalism in the digital age – the difference between the business model before and after the Dotcom Bubble is explained in a single sequence. Mark Zuckerberg and his friend and Facebook co-founder Eduardo Saverin – who will later sue him for being banned by shareholders – are in New York to try to close deals with advertising agencies.

Here they meet Sean Parker, founder of Napster, who drags them between electronic music and cocktails in the world of Californian Ideology of start-ups and clarifies how for a platform, unlike traditional businesses, it is not essential to generate revenue immediately, but to grow quickly, become "cool", attract more and more users and only then to start to monetize – with the difference that in this case they will earn "billions" instead of merely millions of dollars.

In a single scene, Fincher and Sorkin explain what Nick Srnicek in *Platform Capitalism* defined as "network-effects", i.e., the phenomenon according to which «the more numerous the users who use a

platform, the more valuable that platform becomes for everyone else».[1]

While Amazon definitive consecration as the most used platform for e-commerce came with the transition to Prime and user loyalty (business to consumer commerce), what allowed the corporation to acquire a monopolistic position in the market of book selling has been the aggressive pricing policy that destroyed the publishing market (business to business commerce). An overview of this genesis is offered by the House Judiciary Committee Antitrust Subcommittee Report published at the end of October 2020. From the report we learn that «Amazon is estimated to be the second-largest private employer in the United States, with over 500,000 employees» and that it is «one of the most valuable companies in the world, and its CEO Jeff Bezos, is reported to be the wealthiest person in the world».[2]

Interestingly, according to the Antitrust Subcommittee Report, Amazon's position within the market will remain unchallenged for the «foreseeable future», because of three intermingling factors «(1) network effects, which make it difficult for another marketplace to achieve a comparable number of buyers and sellers; (2) switching costs associated with consumer shopping outside the Amazon ecosystem; and (3) the steep costs of building a logistics network comparable in size and scope to Amazon's massive international footprint in fulfillment and delivery».[3]

Moreover, the COVID-19 pandemic has increased by March 2021 Amazon's profits by $138.8 billion, re-doubling the net income of the year before – so that in a situation of an unprecedented crisis, while small business have failed, the big corporation players have won the entire market.[1]

In the context of the pandemic, Amazon's strategy has been to privilege its own retail instead of «third-party sellers», which, at the beginning of the first wave, have been discouraged from selling their «non-essential products».[2] This snapshot of Amazon's rise and consolidation of power on the market helps us to define platforms' activity as a series of interconnected "operations", which combine the action of extraction of resources, with the infrastructure of logistics, and the financial supremacy in the stock market, towards an increasing concentration of margin and economic prominence.[3]

What clearly emerges from the Antitrust Committee Report is that whether Amazon's strategy is directed to costumers or to B2B commerce or to Cloud, through Amazon Web Services (AWS), its economic behavior results in predation obtained through the increasing of its «market power», the merging of other business activity, and putting into practice a series of business practices aimed toward monopoly. For instance, in the case of AWS, the Report acknowledges that Amazon misappropriated data, offering to third parts «proprietary managed services based on knock-offs of

[1] Srnicek (2016), 27.

[2] Subcommittee on Antitrust, Commercial and Administrative Law (2020), 247.

[3] Subcommittee on Antitrust, Commercial and Administrative Law (2020), 260.

[1] Amazon.com (2021).

[2] Subcommittee on Antitrust, Commercial and Administrative Law (2020), 261.

[3] For a definition of capitalism as a combination of series of operations see Mezzadra & Neilson (2019), 64-74.

open-source code»;[1] it directly harmed «innovation», pushing for proprietary policies; and it used «self-preferencing» in binding costumers and third-party businesses.[2]

All these strategies are aimed to enhance the three intertwined factors that ensure Amazon's prominence on the market, that are: consolidating and monopolizing costumers and sellers, reinforcing the "ecosystem", and compacting on Amazon the entire associated logistics of buying and selling.

Looking at these three factors, in this article, I emphasize that Amazon's general business strategy was established through the litigation with book publishers from 2004 until 2012, when Bezos' company launched the idea to reduce the price of e-books to establish itself as the leader of the entire selling market. Combining specific case with Marx's understanding of the process of intensification in the extraction of value (between relative and absolute surplus-value), I argue that Amazon has combined the practice of predatory pricing with the multiplication of the exploitation of labor-power across the entire supply-chain. In influencing the organizational structure of production, distribution and consumption, a platform intensifies its capacity of extracting and exploiting surplus-value. Finally, I question what kind of political action we would need in a framework in which platforms constitute a new model of intermediation of different segments of economy (and politics).

[5] Subcommittee on Antitrust, Commercial and Administrative Law (2020), 327.

[6] Subcommittee on Antitrust, Commercial and Administrative Law (2020), 328-329.

Becoming the Infrastructure

In his ground-breaking investigative report, *The Everything Store: Jeff Bezos and the Age of Amazon*, the Silicon Valley journalist Brad Stone emphasizes that the turning point in Amazon's strategy happened after 2004 with the launch of the e-books on the market. In the previous ten years, from 1994, when it was founded, until the invention of «Fiona» – the alias used for Kindle device – Amazon, while being largely unprofitable because of its low prices, slowly became the most prominent online mall of books and other goods. After 2004 this strategy was intensified following the principles of what Jeff Bezos called the «Gazelle project», according to which «small publishers» should have been approached «the way a cheetah would pursue a sickly gazelle».[1] The idea – having Amazon become the most important marketplace – was to have publishers accommodate to Amazon's increased cut on books selling by blackmailing them with the threat of reducing their visibility on the «recommendation system». In this framework, pursuing smaller or more "vulnerable" book publishers meant starting from the lowest elements of the publishing food chain. Following the journalist Sarah Gainsforth, we can see this mechanism as a combination of «predatory pricing» and «vertical integration» of different sectors of business aimed at acquiring a monopoly on the market, even with the initial risk of losing profitability.[2]

The question of predatory pricing is even more intriguing because of the changeability and opportunistic behavior of all the participants implied, which are

[1] Stone (2013), 387

[2] Gainsforth (2020), 46-47.

all subjected to the "irony" of a monopolistic conduct.[1]

An example of this mechanism can be found in the series of lawsuits around the «Big Five publishers»: the same Penguin, Hachette, Macmillan, Simon & Schuster that together with Apple Inc. in 2012 were charged with the "conspiracy" of raising prices together against Amazon, have been just recently (February 2021) charged with "fixing" the prices together with Amazon.[2]

Also, according to Stone, this aggressive strategy was not peculiar to Amazon only, since «The company had finally learned the tricks of the century-old trade that is modern retail. Profit margin is finite. Better financial terms with suppliers translate directly into a healthier bottom line – and create the foundation on which everyday low prices become possible».[3] Before Amazon, already Walmart experimented a strategy that linked together the restructuring of the supply-chain through distribution centers – which was at the basis of the logistics revolution –, the pressure on suppliers through lowering the prices and costumers' binding.[4]

While, as highlighted among others by Van Dijck, «building an infrastructural core» is the factor that allowed the «Big Fives» (Meta, Amazon, Apple, Microsoft, and Google Alphabet) to construct their ecosystems and to guarantee their prominence within the market, lowering the prices, not only favored the network effects, but also the enhancement of exploitation of workers – at various stages

[1] Rub (2018).

[2] US v Apple, inc., et al (2012); US v Amazon.com, et al (2021). For the definition of Big Five publishers, see Cain (2021).

[3] Stone (2013), 390-391.

[4] See Cusumano, Gawer & Yoffie (2019); Duhigg (2019).

of production, distribution, and circulation.[1]

Intensifying Exploitation

If we consider the fundamental role that platforms like Amazon had in the fluidification of the process of value realization in the sphere of exchange of the market – through its innovative management determined by the three factors combined with the extraction of data –, we still have to specify how this process occurs throughout a supply-chain in which Amazon is only the last link. Amazon manages through an aggressive policy of price management to force all the companies along the supply-chain to restructure their organization, cutting costs and increasing their own rate of exploitation on labor. In Marxist terms, it is not market exchange per se that can create an increase of productivity but only investment strategies and organizational structures. As it has been claimed by Wiliam Lazonick «costs, however, are not simply imposed on the business enterprise by exogenous technology and factor markets, as neoclassical economics textbooks tell us. Rather, these costs are the result of the innovative strategy of the business enterprise».[2]

That means that a policy imposed by Amazon of cutting the costs of the production process in the company of the supply-chain will inevitably results in a different form of investment. That is because modern enterprises are in fact at the center of a network of enterprises (the enterprises of enterprises).

On the one hand, they are part of a classic hierarchical chain of subcontractors,

[1] Van Dijck et al. (2018), 23-27; Alimahomed-Wilson, Allison & Reese (2020), 1-11.

[2] Lazonick (2016).

on the other hand they are part of an "ecosystem" – the definition is by Eamonn Kelly of Deloitte – where the decisions of the enterprises at the center of the system create consequences, like tectonic shifts, for all the others. More innovative companies, like Amazon, will drive the restructuring of other companies of the supply-chain, which, if they want to remain at their scale of growth, have to cut costs and increase investment in order to increase their rate of exploitation.

Marx showed that in these cases the rate of exploitation can be increased only in two ways, either by increasing the working day, as in the model of the absolute surplus-value, or by a more efficient use of labor-time.[1] Given the already great pressure on salaries – which have been increasingly pushed to the bottom in real terms in the last decades – it is only the latter that can be viable in a situation where the supply-chain is driven by platform companies. When the working day remains the same (or theoretically even decreases given the contemporary increase of reserve army of labor), it is only the increase of relative surplus-value that can compensate the pressure from platforms like Amazon to cut costs even further in order to feed the drive to acquire data of the platform. But how is it possible for the extraction of surplus-value to increase if the working day remains the same?

According to the Marxian argument of the relative surplus-value, if the value of the means of subsistence required to reproduce the labor-power decreases, it means that a larger portion of the working day will have been used to produce surplus-value and less will have been used to reproduce the labor-power. Innovation and pressure on salaries go hand in hand with this process because it is in the interest of a capitalist that needs to offer increasingly cheaper products to the platform to decrease the value of the labor-power in order to increase the amount of surplus-value while the length of the working day (or the size of the working population) remains the same.

For Amazon's perspective, offering cheaper products means, on a systemic level, that the cost of the labor-power decreases not only because the amount of living labor contained in a commodity has decreased, but also because the purchase-power of salaries will have decreased, given that with the same monetary cost of the labor-power it would be possible to buy a larger basket of commodities.

In fact, even an increased purchase-power of salaries can coexist with an increase of the rate of exploitation. In these terms, the problem of the predatory pricing is not only an interesting topic for anti-trust policies with all their "ironic" mechanisms but also for workers struggles and rehearsals of unionization.

Perspectives of Struggles

In the US the Antitrust Judiciary Committee launched some actions against «Amazon's anticompetitive conduct» that, lowering the prices of e-books, superimposes "overcharges" for the retailers, thus violating the Sherman Act; also the European Committee has started, as early as 2019, investigations into Amazon's retails strategy and has examined their use of data and abuse «of a dominant position».[1]

[1] Marx (1990), 643-654.

[1] US v Amazon (2021), 55-61; Antitrust Commission opens investigations into possible anti-competitive conduct of Amazon (2019).

In Europe, at the end of March 2022, «the world's most far-reaching laws to address the power of the biggest tech companies»[1] was propositioned, completing the initiative started with the General Data Protection Regulation approved in 2018. Whereas the already approved (at the end of April 2022), Digital Services Act supervises the management of online content in multiple ways, the Digital Market Act (to be approved, supposedly, in March 2023) aims at regulating the competition for the so-called gatekeeper companies. By contrast, in the US, not only any legislative action was undertaken, yet, but in some state lawsuits, such as the one in the District of Columbia, that alleged Amazon for its anti-competitive strategies towards the third party-sellers, giants, such as Amazon, even won the dismissal.[2] Even though the Senate Judiciary Committee of the US with bipartisan support across all institutions is trying to fill the gap with Europe, by discussing the two anti-trust bills – The American Innovation and the Choice Online and The Open Markets Act –, it seems that limiting by legislation the power of the big tech is a painful and arduous process.

More generally, while legislative actions might limit (at least in theory) the power of Amazon and other digital gatekeepers from above, through the implementation and transformation of regulatory policies, the question of challenging the interconnectedness and pervasiveness of platform networks still remains an open question for workers and social subjects challenging capital extractive practices from below, as bearers of living labor.

[1] Satariano (2022).
[2] Kinnon (2022).

In March 2021, the workers of Amazon's warehouse in Alabama – who are predominantly people of color – had relentlessly pushed toward the unionization, despite the company's well known anti-union practices and campaigns.[1] Even though this campaign failed, in other facilities, such as in the Amazon fulfillment center in Staten Island, the struggle against the corporation sparkled. Here, in April 2022, the independent Amazon Labor Union won, with an unprecedented victory, the majority of votes in favor of the unionization.[2] The famous union-busting practices that qualifies Amazon as «fiercely anti-union»[3] have been temporarily defeated in this autonomous experiment, fueled over time (in particular before, during, and after the pandemic) by walkouts and blockades aimed to denounce inequitable and unsafe working conditions, as well as unjustified firings and labor precarization.[4] All these attempts pushed towards an increase of labor organizing and «circulation struggles», to borrow Joshua Clover's effective phrasing – meaning the interruption of the process of distribution and circulation across various segments of the supply-chain. These two combined strategies of struggles, on the one side, the blockade of the labor process and, on the other, the long-term grassroots unionization within a working unit seem to potentially constitute a counteraction to the power of Amazon's multiplication of exploitation.

[1] Sainato (2021).
[2] McAlevey (2022).
[3] Leon (2022).
[4] An account of these struggles can be found in Alimahomed-Wilson & Reese (2020), 275-281.

Still, a question remains: how to interlock different workers (through struggles and unions) across a supply-chain, which is often transnational and mixes different segments of production, distribution, and circulation – within Amazon, and beyond it.

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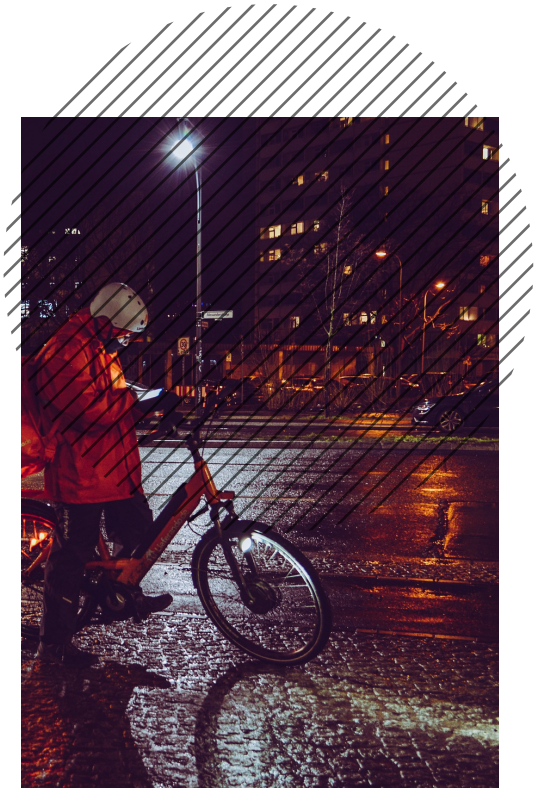
CHAPTER 5



CHAPTER 5

Platforms as assets and as a battleground

Andrea Fagioli

Saturday, 14 December 2019. In the Recoleta cemetery area, a tourist destination and meeting place for many riders, it is a sultry late afternoon. Mario comes from the west of the huge Gran Buenos Aires, has travelled an hour by train, cycled a couple of kilometers and is waiting for the first delivery of an evening that, for date and climate, promises to be tough but good.

After losing his job in a logistics company, he accumulated a lot of experience in the field of platforms. He has been an Uber driver - 'but it doesn't pay off if the car isn't yours' - and has active accounts in three different food delivery apps operating in Buenos Aires: Glovo, PedidosYa and Rappi. Today he works for the latter, because it is not necessary to book a shift[1].

According to Mario, to do this job you have to know the platform, understand it. 'When you call technical support,' he says, 'they take a long time to answer and are often not helpful. They put people on the phone who have never done this work and when you explain to them what the problem is,

[1] A few months later, Rappi implemented the closed zone system, which ties the possibility of logging in certain zones and at certain times to the ranking.

they don't understand' (pers. comm. December 2019).

Natalia is Venezuelan, 21 years old, has been living in Argentina for two years and is studying Medicine at the University of Buenos Aires. She has done many jobs to support herself -baby sitter, call centre, etc.-, but among them, the rider is the one that pays the best and, above all, the one that best fits in with classes at the faculty, especially Rappi, which allows her to connect anytime and from anywhere. She is waiting for her mobile phone to announce the next delivery, in front of the large shopping centre opposite the cemetery. "Technical support never solves any problems," she says with conviction, "I only call them if the customer cancels the order and they give me a debt they shouldn't or when a wrong mileage appears" (pers. comm. December 2019).

The two riders agree that there are cases where the problem cannot be solved without involving the platform, especially when it has to do with the payment, refund and cancellation policy.

However, if the problem concerns the use of the app or obstacles that arise in the daily hand-to-hand with the operating system, riders resort to small tricks they know from experience and avoid communicating with technical support. "We have WhatsApp groups or call a few friends. "Look this happened to me or that happened to me". Above all, the new ones write to a mate or, at the limit, ask some rider they pass on the street' (Mario, pers. comm. December 2019).

My aim here is not to dwell on riders' discontent with the support they receive from platforms in carrying out their tasks; just as I do not intend to analyse the tension between two different categories of platform workers, call centre workers and riders. What interests me is to reflect on the great autonomy that riders have in organising the service that platforms offer and without which they could not offer it. An autonomy that increased even more during the 'social, preventive and compulsory isolation' - in force in Argentina from March to November 2020 - when riders had to manage two fronts: on the one hand, they had to work to avoid having problems with the protocol suggested by the platforms and, on the other hand, to avoid having problems with customers who sometimes rejected that protocol (Elbert & Negri, 2021).

The organisation of labour is a central issue in the framework of reflections on platform capitalism, in particular on the platforms that Nick Srnicek calls lean; those that appear to be 'asset-less companies', insofar as they do not own - in the case that interests me - bicycles, motorbikes or mobile phones, but 'do own the most important asset: the platform of software and data analytics' (Srnicek, 2017: 76).

In the debate on digital labour, riders can be placed, regardless of their relationship with platforms, in the framework of what has been called on-demand digital labour (Heeks, 2017; Casilli, 2019), characterised by the co-presence and articulation of an online and an offline dimension.

Both the former, managed through an algorithm that assigns orders to the riders according to logics that are not at all transparent and in perpetual change, and the extremely material level of the bodies moving through the city streets, entrusted in large part to the great ability of the riders to adapt to different situations, offer important things to consider. This double dimension must be taken into account

because it runs through the entire text.

Firstly, it must be taken into account that lean platforms, such as those of food delivery, could not exist without the separation and articulation of intellectual and physical means of production (see Nicoli & Paltrinieri, 2019). Put another way, on the one hand, platforms depend on physical means of production, owned and maintained by workers - without which the service could not be offered. On the other hand, it seems excessive to say that lean platforms do not possess much beyond their reputation (Hayns, 2016). On the contrary, it can be assumed that, if in Marx (1976) fixed capital consisted of machines, in platform capitalism software and algorithms can be thought of in terms of intangible fixed capital (Terranova, 2014; Vercellone, 2020).

Secondly, it can be argued that these platforms could not function without putting certain generic capacities of riders to work, capacities that they possess as potential beings, endowed with language and able to cope with a routine studded with contingencies of a different nature. And it is on this capacity that the service offered by food delivery platforms depends.

In the following pages, I will first discuss the theoretical framework within which my work is situated; then - as if to analytically isolate a technical dimension and a political dimension of on-demand digital labour - I will develop some reflections on the way in which algorithmic management feeds on what in Marxian terms can be called the general intellect; in the last part I will address the question of the political management of the workforce in food delivery platforms and how the knowledge required of workers can constitute a key element in the subversion of power relations within platforms.

Theoretical Framework

The theoretical perspective from which I intend to tackle these problems is what, broadly speaking, we can call 'post-autonomist Marxism' (or 'post-workerism', or 'post-operaism'), because of the attention that certain authors belonging to that tradition devoted to the technological dimension of capitalism, which they analysed from a political point of view since the 1960s, from the first issue of the journal Quaderni Rossi (Red Notebooks) (see, for instance, Panzieri, 1980).

As Steve Wright (2002: 41) pointed out, in the 1960s the dominant view among Italian Marxists was that "technological progress somehow stood apart from class relation" and workerism can be thought of as the very first attempt to demystify technological rationality. The way of thinking technological innovation from the subjective class point of view, instead of from the objective point of view of capital, marks what Matteo Pasquinelli (2014a: 181) called "the passage from an organic composition to an organic antagonism". In this sense, from the operaist perspective, the will to dominate the rebellious hand of labour plays a key role in technological innovation.

It was mainly through reading the 'Fragment on machines' from Marx's Grundrisse that workerists questioned, in the 1960s, 'the supposed neutrality of science and of knowledge in general' (Virno, 1996: 266). That same text became fundamental, in the 1980s and 1990s - for the now 'post-workerists' - for thinking about post-Fordism and the knowledge

society; today, the 'Fragment on machines' is still useful for "thinking about the level of abstraction of the financial, securitarian, logistical and digital cosmopolis" (Pasquinelli, 2014b: 8) and, we might add, platform capitalism.

In those posthumously published notebooks, Marx (1973) was able to 'foresee' that, in the future, abstract knowledge would become the main productive force, a force that would relegate parceled and repetitive labour to a marginal position, marking the "destruction of the law of value" (Negri, 1989: 146).

While emphasizing the German philosopher's extraordinary capacity for anticipation, workerists filter Marx in the light of the history of capitalism.

Let us see in more detail. With the concept of general intellect, Marx alludes not only to scientific knowledge, but also to workers' knowledge expropriated from the workers and crystallized in the steel of machines. In the pages of the Gründrisse we read that 'the specific mode of working here appears directly as becoming transferred from the worker to capital in the form of the machine, and his own labour capacity devalued thereby [...] What was the living worker's activity becomes the activity of the machine (Marx, 1973: 704).

The reading of post-workerism authors emphasises that in contemporary capitalism there seems to be a reverse movement and, as Carlo Vercellone (2007: 29) indicates, "The principal 'fixed capital' becomes 'man himself'". And this is not because the ownership of work tools is increasingly in the hands of workers - a trend not only affecting riders and which the Covid-19 pandemic has taken to the extreme - but because of the capacities it incorporates.

In the words of Paolo Virno (1996: 270), in the framework of post-Fordist production 'the nexus between knowledge and production, in effect, is not exhausted in the system of machines; rather, it is necessarily articulated through concrete subjects [...] Within the processes of contemporary labour, there are entire constellations of concepts which function all by themselves as productive "machines," without any need for a mechanical body or for a small electronic soul'. It is therefore not knowledge that crystallizes into machines, but constellations of concepts that begin to function as machines.

Two issues should be emphasised here that help these reflections land in platform capitalism. The first is that that social knowledge which, with a particularly eloquent formula, Virno (1996, 2004) calls mass intellectuality is not only put to work in the advanced tertiary sector. On the contrary, whereas in the intentions of Ford-taylorism living labour was to be stripped of all knowledge, in contemporary capitalism labour power is required to fully live up to its definition: 'the aggregate of those mental and physical capabilities existing in the physical form, the living personality, of a human being, capabilities which he sets in motion whenever he produces a use-value of any kind' (Marx, 1976: 270).

The second issue to take into account is that it is not only workers' intellectual and linguistic capacities that are put to work - as cognitive capitalism theorists sometimes seem to suggest - and that labour is anything but disembodied. On the contrary, as the riders themselves demonstrate, "cognitive and affective labour is not isolated to specific organs but

engages the entire body and mind together" (Hardt & Negri, 2009: 132).

Michael Hardt and Antonio Negri (2000: 357) have repeatedly emphasised that labour is "productive activity of a general intellect and a general body". From this point of view, even when the product is immaterial - such as the data that platforms also collect thanks to workers like riders and put to value (see also Fagioli 2021) - "the act of producing remains both corporeal and intellectual" (Hardt & Negri, 2009: 132).

The second aspect that it is important to reread in the light of the history of capitalism is that of the contradiction between a production process based on science and a unit of measurement of wealth based on the amount of labour incorporated in products, which makes Marx (1973: 700) say: "Capital thus works towards its own dissolution as the form dominating production". A century and a half after those pages were written, we can affirm, again using Virno's words (1996: 267), that 'the full factual realization of the tendencies described in the Grundrisse, without, however, any emancipatory-or even merely conflictual-reversal' and that new and stable forms of domination have come into being.

In any case, the reappropriation of fixed capital by living labour opens up horizons where new conflicts can and are in fact arising. On the terrain of platforms, forms of conflict are emerging between capital and labour in which the latter can direct against capital the knowledge it is required to put into work.

Algorithmic Management: putting the general intellect to work

Returning to the case that interests me, it should be noted that one of the main terrains of capital-labour conflict in food delivery platforms is that of the opacity of algorithms. In fact, as has been effectively pointed out in the framework of militant research, which focused on the case of Foodora, "The provisions paid for the order form a substantial part of the couriers' income at Foodora, and because of this, those who get more orders earn more. The courier however does not know how and why the algorithm distributes the orders to one courier instead of another. Apparently, the algorithm distributes orders to couriers it deems 'effective'" (Tammisto, 2018).

Crossing the Atlantic Ocean and the Equator, things are not too different; on the contrary, the dependence on orders is even greater, insofar as none of the platforms pays riders a fixed amount and the remuneration depends exclusively on the deliveries made, the rate of which varies according to logics that escape the workers and over which they have no possibility of intervening.

As Julieta Haidar (2020: 35) pointed out in a research based on riders in Buenos Aires during the pandemic, but extensible to many other realities and 'normal' times, "the large volume of information extracted by monitoring riders regarding the number of deliveries accepted and made, the hours and areas in which they work, the ratings of customers and shops, is used by platforms to evaluate them and place them in rankings that translate into a complex system of rewards and penalties designed to generate productivity-enhancing conduct".

In the debate, the formula algorithmic (or automated) management is used to indicate "the software architectures employed by the platforms allow for the

organisation of the labour process increasingly with little or no direct oversight of human managers" (Niebler, Altenried & Macannuco, 2020: 257). A group of researchers identified "four features of the app, which correspond to four different ways of controlling autonomy in this type of management regime" (Ivanova, Bronowicka, Kocher & Degner, 2018: 12).

Although this research is carried out in Europe, with Foodora and Deliveroo, the ways indicated by the researchers to control work and conduct - control through automated notification; control through monetary incentives; control through internal competition for shifts; and control through information asymmetry - can also be applied to local platforms.

If food delivery apps aim at conducting riders' pipelines or, put another way, at managing the flow of workforce according to their needs, the condition of possibility of algorithmic management is the putting of specifically human capabilities to work. Algorithmic management can externalise a number of tasks and decisions, only because what we have called mass intellectuality includes a certain familiarity with different communication systems, an understanding of artificial languages, but also "local knowledges, informal 'linguistic play,' as well as certain ethical preoccupations" (Virno, 1996: 270).

Let us look at this in more detail. As has been stated from a Turin-based research, "technology-intensive capitalism extracts value from the collective intelligence [...] but also through the continuous valorisation of human labour in both its physical and affective engagements with the social environment of the metropolis" (Rossi, 2019: 1428). It is not, as one might *prima facie* think, a question of valorising a specific skill or prior knowledge, such as knowing how to move in the city where one grew up.

Andrés and Andrés, a Venezuelan father and son working together in the Palermo neighborhood, for Glovo and PedidosYa respectively, seem to confirm this hypothesis. "With GPS, you don't lose a blind person or a deaf person," claims Andrés father. 'If I went to Berlin tomorrow and the day after tomorrow to Shanghai, beyond the language problems, I could work there immediately too,' adds the son (pers. comm. October 2019).

What seems to be decisive is the ability to adapt to situations, to know how to build, fit in and move within a network of human relations, which is fundamental for solving problems.

"When you do this job for a while you know the App, you know what the problems can be and you prevent them," says Mario, "for example, if you don't get to the shop on time the platform sends you a message and 'frees' you, so I don't wait to arrive to let you know I've arrived, 7/800 metres before I already let you know, so I avoid the risk. Another example he gives - and which partially contradicts what Andrés claims, about the little influence of city knowledge[1] - is that of weighting the acceptance of deliveries. 'Here,' he shows the screen on his mobile phone, 'the platform tells me where I have to go to pick up the order. When you have experience in the area you know the distances and times. If you accept the order from Freddo [ice cream parlor chain]

[1] I say partially, because it has more to do with a knowledge that is generated in hand-to-hand combat with the platform than from a real knowledge of the city, such as a native may have.

on Ayacucho Street you arrive immediately, if you accept the order from Freddo Obelisco [another outlet], even if the App says 5 minutes, you know you won't arrive, they release your order and block you an hour. If you know how it works, you don't accept, even at the expense of the acceptance rate and therefore the ranking, but you avoid the problem' (pers. comm. December 2019). These tricks, which allow Mario and the other riders to survive the problems of the computer system, as well as those of another nature that constantly emerge, allow him to continue working, but at the same time make it possible for the platforms to function and meet the delivery times they promise in the advertisements.

On the other hand, it is important to emphasise the centrality of the emotional element, which enters fully into the concept of general intellect. Although for riders in Buenos Aires it cannot be stated sic et simpliciter that "If a restaurant manager decides they don't like you, they can flag your account" (Barker, 2020: 53), nor that "online reputations laboriously built up over months or years" can be "destroyed in a flash by one spiteful customer's unchallengeable low star rating" (Huws, 2016), neither can one deny the vulnerability of riders in this respect.

In the case of Uber, Alex Rosenblat and Luke Stark (2016: 3775) pointed out that drivers are required to 'suppress or contain their emerging emotions to present a placating or welcoming demeanor to customers, regardless of that customer's reciprocal emotional state [...] in exchange for ratings instead of tips'. Albeit at a different level, especially by virtue of the shorter duration of interactions, there are many situations in which riders have to put on a good face to avoid a bad rating or be particularly polite to get a good one. In many cases, riders are called upon to explain a problem with the app or, more simply, to appease the anger of dissatisfied customers. 'You are thieves, I will never buy anything from you again'. writes a customer[1] in a chat to Ezequiel, who is guilty of warning her that the supermarket on Avenida del Libertador where she placed an order, which she has already paid for, is now closed. No matter that Brian, to avoid a negative evaluation, tries to be as helpful and well-disposed towards her as possible and sends photographic evidence of the closure of the supermarket.

The customer's fury, which completely identifies worker and platform, is due to Ezequiel's refusal to look for alternatives; alternatives that would involve extra work that, ça va sans dire, would be unpaid. In cases such as this, which go completely beyond the algorithm, riders are called upon to take over functions that would be the responsibility of the customer service, resorting to argumentative strategies or appealing to the emotional and human side.

Beyond the political management of living labour

Up to this point, the logic of algorithmic management seems to be directed exclusively at efficiency. One aspect that remains somewhat in the shadows is the dimension of the - let's call it - 'political' management of living labour by platforms. This is an aspect that emerges, in an

[1] The screenshot of the chat was posted by the person concerned in the Whatsapp group of riders.

obvious way, in the unilateral suspension of the accounts of riders who have participated in strikes or other demonstrations, and which requires the intervention of some grey official of the Apps, called upon to manually enter into the system the ID number of the rider to be blocked.

But the 'political' dimension is not only manifested by human intervention; it seems that even in the logic of the algorithms' functioning, the neutralization of labour-force is central. Juan Manuel Ottaviano, lawyer and councilor of APP - Asociación de personal de plataformas[1], argues that the algorithm voluntarily favors turnover: 'Obviously there are labour trajectories within the platforms,' he says, 'but this is due to a kind of worker knowledge that tries to oppose the platform ideal, that ideal that refers to the work, therefore to a part-time performance or during a determined period of time'. According to Ottaviano, whose opinion is based on the experience of 'militant' work, not having access to any company data, 'the algorithm is designed so that there is dispersion over the territory and workers do not accumulate in certain places, but it is also designed for a rotation of personnel'. In this sense, 'when a new generation of riders enters the platform, the algorithm tends to assign them more deliveries, more work and therefore more economic revenue. Especially in Rappi, it is very clear that workers make a cycle' (pers. comm. December 2020).

This hypothesis is confirmed today in the anxieties of the many rappitenderos who have been suspended - in their opinion - arbitrarily in recent months. "After the suspension you get a screen that says 'service inconveniences' or 'the products did not arrive in the appropriate manner', but you don't really know what they refer to," says Carlos (pers. comm. December 2020). "It's obvious that something strange is going on,' echoes Camila, with whom he alternates childcare and riding hours, 'maybe they put too many people in during the pandemic and now they want to reduce the number of workers. We wouldn't have been riders ourselves if we hadn't lost our jobs' (pers. comm. December 2020).

But while platforms, through their algorithms, make a kind of class struggle from above, at the same time they constitute a space in which forms of labour insubordination can be generated. Indeed, among the ways in which platforms harness the relational capacity that characterises that potential, non-specialised being that is the human being, is to exploit the communication and enormous flow of information circulating in the numerous Facebook groups and equally numerous WhatsApp chats of riders. Riders solve problems ranging from how to legalise a foreign licence to where to find an open mechanic, from what to do if an order that was paid for by credit card is cancelled to how to get an account that crashes to work. These groups also function as a support network for accidents and safety that in an employer-employee relationship would be the responsibility of the company. In many cases, the groups seem to be an additional training, when not a substitute, to what the platform should provide.

In this sense, it should be taken into account that each rider is a platform multiple-user, not only in the sense that

[1] It is the first union in Argentina that has the ambition of bringing workers together not by sector, but by the fact of working via platform.

many of the riders in Buenos Aires work with more than one food delivery app at the same time (Haidar, 2020), but also that they use different platforms in a coordinated manner to complete deliveries. They use geolocation programs such as Waze or Google Maps to get around in a huge city like this, payment platforms to circumvent debt limits and thus be able to continue working during the hours when the agencies of non-bank payment channels are closed, and also platforms to protect themselves against the risks of the job.

Deep knowledge of the mechanisms of platforms and knowing how to move in the bowels of apps is not only vital for riders to be able to do this work and, in parallel, for food delivery platforms to exist, but it has also allowed for extremely creative forms of struggle. In 2018 in Buenos Aires there was the first strike of riders in Latin America; 'the idea of the strike was to be in one of the places where there was the most orders,' recalls Jorge, 'when an order arrived we would accept it but just before 30 minutes passed, the maximum time available, before the platform blocked us, we would release it and another comrade would take it and do the same. Customers would call because deliveries were not arriving and through the GPS they would see that all the red dots of riders were in the same place' (pers. comm. December 2019).

Although a phenomenon in the manner of the 2018 strike has not been repeated, there have also been international strikes in recent months. Again, the ability to know how to navigate the platforms and the fabric of human relations created was key to the organisation of the mobilisations. The use of other platforms, such as telepresence platforms, allowed workers from various countries to meet virtually and even organise a three-day international assembly (16-18 August 2020) with translation into various languages, which was attended by platform workers from over 10 countries. Some riders intervened from the road, between deliveries, while drivers while waiting for a passenger in the car.

If from the point of view of living labour, it can be said that the problem is not the platforms, but the social relations underlying them, it is also possible to go further and say that they constitute a terrain of struggle where those relations can be subverted.

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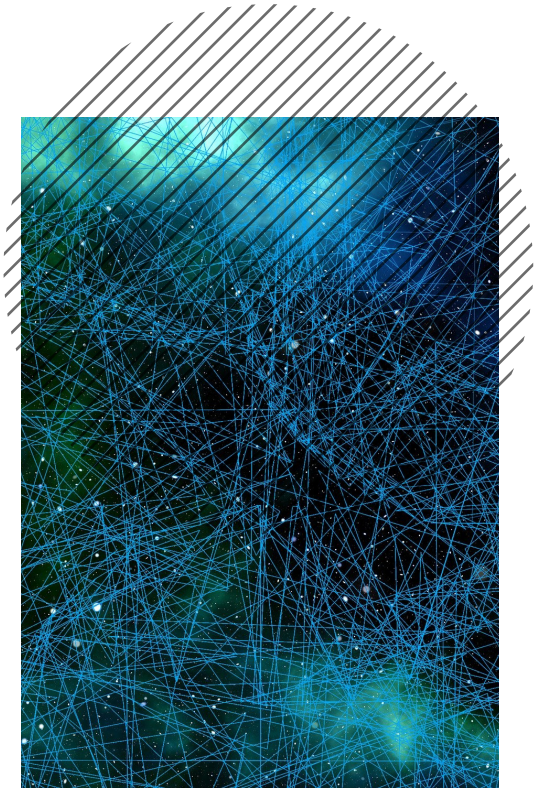
CHAPTER 6



CHAPTER 6

Platform communism. A manifesto for struggling within and against platform capitalism

Into the Black Box

In case you hadn't noticed, we are now in the platform age. The initial explosive impact of platforms has now embedded itself within the social and economic relations of our societies. From Asia to Latin America, from Africa to Europe, it is no longer possible to imagine a day passing without using some app to access a service, checking the web to catch up on the news, posting content on social networks or working in the cloud.

We live in an augmented reality that will soon be swallowed up by the Metaverse, while workers are constantly having their lives expropriated in the form of data. It is no longer a question of if and when, but how: the productive fabric of contemporary capitalism has found its infrastructure in the development of digital technologies and platforms. The point, then, is to politically manage this transformation.

The prophets of business as usual enthusiastically repeat the same mantra: let the market do its thing and the money will trickle down to everyone... sooner or later. Whereas policy makers try to take cover from the fantastic beasts that the Leviathan has allowed to grow up beside it, threatening its supremacy.

Then there is the vast and fragmented family of those who would once have been

called “leftists” – revolutionaries, reformists, red, black, green and any other colours you can think of. Perhaps today some of them would prefer to be called accelerationists because they believe that pushing technological transformations to their extremes would result in the economic and social overcoming of capitalist relations. Others instead suggest a “Socialism 4.0”, calling for the nationalization of the means of production, or rather, of the platforms. Of course we shouldn’t forget the neo-luddites, who want to wave goodbye to the metropolis and its digital machines to return to the enchanted and primitive world of the countryside. We hope we haven’t forgotten anyone… We should mention that spectre Marx talked about, which frequented the pubs but was wary of offering recipes for the future. Does it make sense to speak of communism today? Could there be a platform communism? You won’t find the answer in this manifesto, only a suggestion.

We will try to summarise that real movement in point form, attempting to describe that ongoing transformation that we call platform capitalism – its system of machines and living labour, its accumulation of data and of digital and material value – and see if we can understand how to use its contradictions as a lever for abolishing the present state of things. We are immersed in contradictions: we talk about wages but are at work 24/7; there would be no social media if we weren’t continuously cooperating on digital platforms, but very few people benefit from the wealth that this produces; we can monitor any activity in any part of the world at any time, use software to spy on anyone we like or drop bombs with drones, but we are unable to guarantee health and education to most of the world’s population. It seems there is no alternative to platform capitalism: at most we can carve out our own niche for survival or delude ourselves that one day we will tame the Beast.

If we think of the real as something compact and homogenous, then realism is a conservative political ontology. We prefer to think of the mole exploring underground, digging its tunnels in the earth until the building above collapses. You’d probably like us to tell you a little more about platform capitalism.

We will now summarise in 11 points what we see as the characteristics – and contradictions – of the new era.

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Genealogy

Digital platforms reflect the broad and general transformation of the structures of production which began at least half a century ago and can be divided into five steps. The first began in the 1960s, when the “logistics revolution” expanded production on a global scale and the circulation time of goods became part of production itself. The second took place in the 1980s, when consumption began to dictate and directly condition the rhythms of production: the so-called “retail revolution” in which Walmart was the paradigmatic actor. The third step happened at the turn of the millennium with the advent of the dot-com economy, in which the World Wide Web became the terrain not only of expanding social relations but also of new forms of enterprise. The fourth coincided with the 2007/2008 economic crash: dozens of

platforms were set up (from Airbnb in 2007 to Uber in 2008) and the capitalist productive model moulded itself around their development. The fifth step arrived with the Covid-19 pandemic. The need for social distancing and smart-working combined to reshape the concepts of mobility, sociality and work, accelerating the substantial platformisation of society.

In short, the centrality of digital platforms now seems to be uncontestable. On the one hand, they are the forms of enterprise best adapted to the new relations of production in which everyone is at the same time a worker and a consumer within diffuse and fragmented spaces. On the other hand, the new structures of production give them a political and economic power that benefits them in the race to tomorrow's world, a physical-digital hybrid incarnated in Mark Zuckerberg's Metaverse project.

Power

Power is today also embodied in digital platforms. Part of this power comes from the fact that the general

platformisation of society, its self-definition on and through digital platforms, ends up favouring the increasing overlap between digital infrastructures, processes of accumulation and social cooperation. These platforms determine political choices, condition public opinion, and sometimes increase the emergence of anomalies such as the "Arab spring", or, more recently, the protests in Chile or Hong Kong. They have a logistical power that allows them to extract and manage data flows, thus determining regimes of mobility and forms of inclusion and exclusion. A tangle of non-state actors has grown up alongside the Leviathan. They interwine, overlap and collide, shaping new geographies of power. So the platforms are not themselves the new Leviathan, but they are a powerful part of the structure of the new technology stacks within which contemporary governance is embedded, and which also contain state sovereignty. The rules laid down by the algorithm sit alongside the laws fixed by codes.

Infrastructure

Marx wrote that capital is a social relation between people mediated by things. We would add that, in today's generalised regime of "things", infrastructures take on a particularly important role: they are the skeleton that holds up the multiplicity of social interactions, it is along them that the flows of goods, capital and services run. In platform capitalism a decisive part is played by the digital infrastuctures that are owned and governed by Big Tech. Companies like Google, Amazon and Tencent (the operator of China's WeChat) make up the social-but-not-public fixed capital of a society which sees the merging of the material and the virtual in one "reality".

Since the economic crisis of 2007/2008, all kinds of platforms have 'infrastructured' the digital space, appropriating social cooperation and expropriating the libertarian imaginary that had seen in the web a land without masters. Like material infrastructures, the platforms establish a certain mobility regime, connecting but at the same time also restricting and compelling movement. It is difficult to travel in Europe today without booking an Airbnb, to have access to a "community" of users as large as that of WeChat in China, or to have as wide a choice of restaurants

in Latin America as that offered by the app Rappi. These businesses own nothing – not a house, a restaurant, or any content – apart from a digital and material infrastructure that they make available to their users.

Although the previous "alternative" channels are not going anywhere, the current hegemony of the new platforms/infrastructures has become clear.This dominant position means platforms inevitably gain political power of a governmental kind: they control, anticipate and determine our behaviour. While the state bases its notion of sovereignty on the occupation of a determinate territory, the platforms construct their power through governing the cloud. Thanks to their capacity to "extract" data, they have the power to bargain (if not to compete) with the state itself, a power that is perhaps greater than ever before seen in capitalism's long history. At the same time, as infrastructure, they are a contested battleground within which new and unprecedented forms of struggle could arise.

SpaceTime

Platforms are not simply technological tools, but a constantly evolving result of social relations. They act on a planetary scale, feeding themselves on the heterogeneity of the different metropolitan contexts, continuously being shaped with and by them. They are ecosystems engaged in the consumption of human and environmental resources that determine multiple spatial-temporal regimes. They have a reductio ad unum ability based on who has ownership over algorithms, data and other means of production. Platforms represent the tendency of modern geographical scales to collapse. By their very nature, they cross national scales, reproducing themselves trans-locally, creating urban local hybrids, and opening up new spaces of accumulation aiming at new projects of colonisation – from the interplanetary space of the universe to the digital space of the Multiverse. The telluric motion with which platformisation has crossed, decomposed and recomposed spatiality means it is no longer possible to understand social, political and economic phenomena by starting from predefined scales. Unlike other "technological" innovations in the history of capitalism (such as the scientific organization of labour) or the long and laborious construction of infrastructure such as railways and motorways, the "platform form" has developed circulation almost simultaneously across the globe. Platforms weave together plural historical times, recording the past to anticipate the future, and allow for the overcoming of the dichotomy between the virtual and the real. In other words, they generate space-times that not only continuously lead back to different types of infrastructure (transoceanic internet cables, data centres, click farms, cloud computers, etc.) and concrete assemblages of labour power (crowdworkers, prosumers, drivers, riders, programmers, etc.), but which should be fundamentally understood as existing in the interweaving of digitalization and material processes.

Metropolis 4.0

The process of platformisation is an urban process that, within a more general collapse of geographical scales, acts simultaneously on a global and local scale.

This should be seen as involving two processes be read on two levels.

The first refers to the mutations caused by the digital platforms on the urban, which has multiple effects: firstly, urban agglomerations are the ideal terrain from which platforms can extract value – in them they find vast pools of available labour, data mines and considerable potential for innovation that can be subsumed; secondly, platforms have a profound infrastructural effect – just as in the last two centuries cities were broken up and redrawn by railways, motorways and airports, platforms now decompose and thoroughly redefine urban flows; thirdly, the platforms further globalize the urban, affecting its forms of property and command, as well as its imaginaries and the ways it is crossed; and fourthly, high tech urbanism develops its own architecture and specific regimes of habitation that increasingly resemble navigation practices.

The second concerns the platforms as a form of urbanization of the internet. Just as happened historically with the urbanization of the countryside and other non-urban spaces ("infrastructur-ation" plus political power), platforms already started urbanising the space-time of the internet after the first wave of the World Wide Web at the end of the 1990s. Their partitioning into apps managed by smartphones, their closed and proprietary nature, and their political power and infrastructural activity make them into the urban actors of the internet. The conjunction of these two processes means we can speak of a Planetary Metropolis 4.0 in the making.

Geopolitics

There is too often a tendency to separate digital entities from territorial entities, platforms from the state, the space of flows from the space of places, the network from institutions. But the internet and the socio-economic actors that inhabit it are not neutral, and neither do they move in an ethereal space completely separate from the different physical geographical scales. On the contrary, today digital innovation's primacy is geopolitical, within a more general process of the redefinition of globalization. If, on the one hand, platforms have an effect on state territoriality, imposing norms and forms of life through their power to manage flows, on the other hand, states are working on building alliances with digital companies or on creating autonomous infrastructures for the control and use of data. The digital colonialism of platforms – that penetrates urban spaces to subsume their productive and social forms – is counterbalanced by the digital sovereignty of states, who attempt to impose the power of the Leviathan on these new infrastructures. So, rather than exalting states as the enemies and regulators of digital platforms, we need to understand how laws and algorithms, the Leviathan and the platforms, build and stratify relations, sometimes working against each other and sometimes collaborating.

Mythological machines

Platforms are not simply economic actors that affect political forms and social relations; they do not act exclusively on the material plane of production and extraction. They are also mythological machines that produce a symbolic and

value imaginary which legitimises their actions and fortifies their operations, creating a narrative about the type of work, societal model and collective values we should strive for. It is no surprise that the platforms themselves are the product of a specific neoliberal imaginary, the so-called Californian ideology, combining hippy creativity with yuppy careerism. In this vision, internet and technological innovations are the perfect tools for enhancing humans' entrepreneurial character, towards the creation of a freer and richer society thanks to the full automation of production and the support of artificial intelligence.

This narrative not only legitimizes the power of the platforms through a particular set of values, but also has concrete material effects on the capacity to force living labour towards its own self-valorisation within the labour dynamics activated by the platforms. What's more, it attracts the financial investment that digital companies need to survive within an economy of promises pledging boundless profits to those who manage to gain a monopoly of the market. Thus these mythological machines both conceal power relations and reinforce their grip on reality through their ability to activate a complex set of affections, emotions, values and aspirations.

Finance

The intertwining of digital platforms and finance develops on a number of distinct but intersecting levels. On the one hand, finance supports the development of the platform model, which began in the global economic-financial crisis triggered in 2007-2008 and further accelerated with that generated by Covid-19. As is widely known, the platform model is based on the decline of the company-paradigm and on the speculative logic that allows actors like Uber, even in their early days, not to generate dividends but to have high value on the stock market motivated by an economy of promises of future profits.

However, there is another side to this intertwining of finance and platforms: the devalorisation of work on which the platform model is based, and its "capture" within digital infrastructures, are increasingly based on the production of indebted labour. Again the case of Uber is emblematic: while workers are attracted to the platform with the promise of increased autonomy, many need to go into debt in order to buy the means of production to be able to work. Thus the mirage of "free" and independent work is substituted with the reality of workers immobilized by debt and by economic dependence on the platform. La boucle est bouclée. There is also the way that digital platforms, algorithms and blockchains are changing finance: from micro-trading to NFTs and cryptocurrencies, finance itself is now becoming platformised. There is a new push towards the
financialisation of society, with the promise that anyone can become an investor and anything can be a token to be traded.

Work

Digital platforms make it possible to incorporate social cooperation processes within the logic of valorisation and finance. This mechanism isn't new, but the platform model allows it to develop at unprecedented levels of intensity and on wider geographical scales. Within it, the erosion of the traditional relationship of

wage labour does not imply a reduction in work, but its extension to and redefinition in new places and tasks, making the distinction between work and life increasingly blurred. In particular, the acceleration of the commodification of social reproduction (understood here in the broad sense of activity allowing for the reproduction of the life of individuals) that the financial crisis generates – and the resultant erosion of social spending and decline of its socialization through national welfare systems – finds a new impetus and outlet in the platform model. Mobility, food, care and domestic work are just some of the new frontiers in the platform model's expansion.

Algorithmic subjectivities

If capitalism is a social relationship mediated by things, then platform capitalism produces algorithmic subjectivities through digital devices, transmission protocols and standards, and applications and software. Platforms are governmental actors moulding our conduct and stimulating collective behaviours and passions. Cyborgs are no longer the political horizon of a world to come, but are already here, produced by the power of the algorithm and the pervasiveness of digital technology. We are cyborgs when we aren't able to find our way without Google Maps, or when we speak to a voice assistant in order to locate a package.

Algorithmic subjectivities are constructed in the augmented metropolis, from when we are crossing the infosphere to when we are working in the cloud, from artificial intelligence to bioengineered implants. There is a blurring, if not the complete disappearance, of the borders between human and machine: today we live machinic lives, standardized and manipulated by new computers, big data and apps. Machines "come alive": through machine learning, artificial intelligence and VR visors they replicate creative activities and construct parallel realities, mastering some of the functions of living labour, especially in the management field. Yet we are not condemned to live like automatons or to pursue the neo-liberal dream of being your own boss on this or that platform.

We don't believe that we must analyse the digital simply in terms of domination. There is a proliferation of autonomous subjectivatisation in the web of the network: flaneurs who roam the city trying to enjoy the services provided by new technologies without being caught in the hunger for profit; digital nomads who move from one platform to another, following their own personal strategies; tang pingers who refuse to work at all; and the "social workers" framed by the Italian operaismo that reveal the power hierarchies behind the algorithms.

Battlefield

Digital technologies and platforms cannot be framed simply within a dynamic of domination; sabotage is not the only resistance possible. Their development creates a battlefield between subjects and antagonistic forces whose result is not given and whose stakes are capitalism in its totality. If digital platforms aspire to a world without bottlenecks or conflicts but only flows connecting commodities and people, living labour constantly throws a spanner in the works in order to defend itself from constant labour, initiating resistances that contain a different vision

of the use and organization of digital machines and which challenge the power of the algorithm and the concentration of wealth in the hands of those who own the codes.

Platform capitalism's strength lies in its extreme resilience, which comes not simply from its capacity to shape its operations according to the specific context in which it is rooted, but from its ability to constantly incorporate that which is generated outside and against its action, transforming anomalies into variables integrated into the evolution of the algorithm. This oscillation between inclusion and subtraction, standardization and turbulence, demonstrates not only the power of the platforms but also the irreducible power of living labour. The latter is the real driving force of platform capitalism, without which its standards and predictions would not be able to get a grip on reality. And so, given this, how can we subtract ourselves from the resilience of the algorithm and, at the same time, take control of it?

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And so we return to our initial and most important question. How can we act politically in the face of these transformations? Or better, what alternatives do the contradictions of these transformations give us? Is it enough to take control of current power relations or do these power structures themselves need to be radically rethought? We won't try to write our own recipes. Yet you probably hoped to find not only a description of the present state of things but also a starting point from which to change them.

We would thus like to have a go at engaging in a bit of political imagination, beginning from the real in order to get to the possible. Let's take a company that is a symbol of platform capitalism, a Big Tech company like Amazon, let's think about its logistical capacity to coordinate and manage flows across the globe, its computing power that allows it to locate any package instantly, and the number of products and services that it offers and innovates. Now let's think for a moment about what we could do if these IT, logistics and production capacities were organized collectively, not for the profit of the few but to allow everyone to work less. A slogan comes to mind, we're not quite sure where we heard it, but we liked the sound of it: soviet power plus electrification. We could change it to: peer-to-peer plus digitalization.

Perhaps we can activate the contradictions of our present towards a platform communism that begins from these two principles. If the digital infrastructures of platforms are centrally managed, we can also imagine overturning their potential in a management that is extensive but localized, under coordinated and general control. Blockchains show there are many different types of network. The point is to remove them from processes of centralization and monopolization by taking them over and sharing their ownership with everyone until we abolish the regime of private property. Some platforms have become so infrastructural that they are now essential to our societies. However, it is not enough to take control of them, we also need to change the organizational principles that determine the hierarchical and asymmetrical power

within them. How? By democratizing them. Peer-to-peer!

We have been made to believe that we live in a sharing economy, and so let's take them at their word, let’s demand collective property until property is abolished. This implies a third programmatic point: we need a universal guaranteed income rather than a wage. We have

seen that data is today the most coveted commodity. We are constantly producing data wherever we go, and platforms are continuously using it to adjust their calculations and their management and control processes. The centrality of the wage and its measurement by labour time are long gone. We have no nostalgia for Fordism, we prefer automation that relieves physical effort and expands creative possibilities. The most important thing is to remove ourselves from the blackmail of employment. Besides, looking at the assets accumulated by some venture capitalists, we don’t seem to be living in an age of scarcity.

Towards a world of plenty for all!

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