

## Where data and finance meet: Dual value production in the gig economy

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Introduction: thin margins, outsized expectations

The platform economy puzzle we attempt to solve in this chapter is how gig economy companies can continue to grow their business despite regularly incurring mind-boggling losses<sup>1</sup>. While the first step toward solving this puzzle is easily made, by bringing into focus the crucial role of venture capital and investment firms, this immediately requires us to confront a more puzzling reality: the fact that these firms have continued to fund loss-making gig companies operating in industries with extremely thin margins. To make sense of this situation, we believe it is necessary to start by asking a deceptively basic question: What kind of work is platform-mediated gig work? Phrased differently, what kinds of value are created through platform labor? To answer this question, it may be strategically useful to momentarily accept the position defended by gig economy companies in various court cases, namely that they merely provide the technical platform on which service providers find access to their customer base (e.g. Tomassetti 2016). From this perspective, these companies provide an “informational service” that is categorically distinct from the service provided by the gig worker and as such they should not – indeed *cannot* – be legally held accountable as employers. In return for this service, the argument continues, gig economy companies charge a commission on each transaction conducted via their platform.

Crucially, however, besides extracting rent from each transaction they orchestrate, platforms also extract data *about* these transactions and usually about a lot more, which means that gig workers can likewise be understood to provide an “informational service” to the platforms they use. The fact that *this* service is neither optional nor remunerated suggests that such data extraction “continues to open up new frontiers for the expansion of the logics of

property and to blur the borders between processes of governance and dynamics of capitalist valorization” (Mezzadra and Neilson 2017: 195). In other words, gig work is, among other things, essentially data work and the gig economy should be understood as one salient phenomenon within the broader framework of financialized platform capitalism (Srnicek 2016; Langley and Leyshon 2017). In our view, the digital platform is one of capital’s “new frontiers” in its fight to counter declining profitability rates, allowing it to expand into previously uncharted areas of life through data- and finance-driven modes of accumulation.

As will be clear, our approach to platform-mediated gig work deviates from - while remaining indebted to - what we take to be the two main strands of gig economy research that have so far shaped this nascent field: 1) labor process theory-inspired scholarship concerned with algorithmic management and information asymmetries (see Gandini, 2019; Rosenblat & Stark, 2016); 2) legal scholarship primarily focused on the social costs of worker misclassification (see Crouch, 2019; Prassl, 2018). Both research strands share a similar analytical scope, insofar as associated studies critically attend to how the precarious conditions of gig workers are enforced through technological and legal means. In other words, gig economy research - including our own contributions - has so far mostly restricted itself to the sphere of the platform as both a business model and work environment. In contrast, here we aim to expand this purview in order to examine the broader political economy of data and finance capital that not only keeps gig platforms open for business but also enforces increasingly strict discipline over how such business is conducted - resulting in progressively worse working conditions and decreasing wages.

To begin solving our platform economy puzzle, then, we introduce the notion of “dual value production”, which describes how platforms capture two kinds of value from gig work: the monetary value associated with the service transaction and the more speculative and volatile types of value associated with the data generated during service provision. We then elaborate on

the construction of data as a specific asset class and consider the nature of the data asset. Shifting our perspective from the platform to gig workers, we subsequently discuss two grassroots initiatives that resist the unbridled data extraction from gig work and attempt to reclaim their data assets. The next section takes another step toward solving our puzzle, as we move up the value chain and examine the role of what we call “meta-platforms”. It is on this level that we are confronted with the true power brokers of the platform economy, and we therefore end our chapter by proposing an ambitious set of regulatory and policy measures that could curb this unprecedented power. First, however, we offer a brief overview of the empirical research that has shaped our thinking.

#### Methodological overview

Our analytical focus follows the contours of our respective research projects, which both examine platform-mediated labor. We have each spent substantial periods conducting (auto-) ethnographic research, during which we not only studied gig workers but also engaged in gig work ourselves. [Author 1] spent two years studying app-based food delivery and domestic cleaning services in New York, Berlin and Amsterdam (spending eight months in each city), also working as a courier and cleaner in the latter two cities.<sup>2</sup> [Author 2] has similarly done food delivery work for two platforms in London over a period of nine months, in addition to doing 18 months of ethnographic research within a grassroots trade-union responsible for organizing gig workers.<sup>3</sup>

Besides our long-term ethnographic studies of gig workers’ everyday experiences, we have also conducted extensive desk research on the institutional, financial/economic, and technological conditions enabling the platformization of low-wage service work across local and national settings. These analyses extended beyond the ‘global north’ purview of our respective ethnographies and allowed us to identify similar dynamics and developments in other parts of the

world. Our shared interest in the political economy of low-wage gig work, crystalized in app-based food delivery, is what brought us together and pushed us to jointly examine in more detail the role that data plays in the daily operations and business models of gig platforms. We focus on data extraction in low-wage gig work because this is a phenomenon that spans several quickly growing global industries, where it serves to increase the rate of exploitation of often vulnerable, migrant workers who have no say over how their data is used and valorized.

### Dual value production

Accordingly, in this chapter we argue that gig work under conditions of platform capitalism is characterized by a process that we call “dual value production”: the monetary value produced by the service provided is augmented by the use *and* speculative value of the data produced before, during, and after service provision. As noted above and further explained below, platforms capture part of this monetary value by charging rent, in the form of a commission, while capturing all of the value produced by gig workers’ data labor. That is to say, using Sadowski’s pithy formulation (2019b: 10), “platforms collect monetary rent and data rent”. Yet whereas the value of this monetary rent can be dynamically determined by the platform, the value of data rent is fundamentally indeterminate insofar as it derives from speculative and performative practices. Platforms engage in constant data accumulation because of the *potential* value this data, once processed by their analytics software, might embody or give rise to.<sup>4</sup> As we will discuss, this value derives in part from data’s expected or actual practical utility in operational processes (i.e. achieving functional goals and systems optimization). Yet captured data also attracts venture capital and grows financial valuations, to the extent that investors expect data-rich platform companies to achieve competitive advantages by creating data-driven cost efficiencies, cross-industry synergies, and new markets. In this way, it becomes possible “to convert data into

money” (Sadowski 2019b: 11), which is then again invested in activities and technologies that increase the capture of data.

While data may at first seem like a supplementary component of the service provided, it is thus actually key to understanding what gig platforms are about. Focusing on datafication allows us to grasp how app-governed gig workers function as pivotal conduits in software systems that combine distributed data generation and centralized analytics, depending on layers of existing (public and private) urban infrastructure – from free Wi-Fi networks to roads and bike lanes (Shapiro 2017). In practice, a courier’s phone and physical labor become a site of translation through which complex urban environments are formatted into machine-readable data streams. These apparatuses thereby produce digital data as a particular asset class (Sadowski 2019a/b), one that is central to platform capitalism “as a mode of accumulation that is simultaneously a system of domination” (Fraser 2016: 164-65).

### Constructing the Data Asset

What kind of asset is captured data? A main distinguishing feature of the data asset is its high value elasticity, meaning that both its operational use value and its speculative financial value tend to increase significantly as it scales. To elucidate this elasticity, it is helpful to return to our notion of dual value production on food delivery platforms. On the level of service provision, a platform company’s “bottom line” (i.e. net income) consists of the rent the platform extracts from each completed food order (i.e. the commission it takes from the restaurant plus the delivery fee it charges the customer, together forming its top line revenue) minus the piece-rate labor costs associated with each order and other expenses. In traditional Marxist analyses, this is the scene of exploitation: “recompensed only for the socially necessary cost of their own reproduction, [food delivery workers] have no claim on the surplus value their labor generates, which accrues instead to the [platform company]” (Fraser 2016: 164). However, as Fraser

argues, the problem with this perspective is that, by focusing on “capital’s exploitation of wage labor in commodity production” (ibid.: 165), it marginalizes another fundamental process that is at once entangled with exploitation and operates as its racialized condition of possibility: *expropriation*, or what David Harvey (2005) has called accumulation by dispossession.

Essentially, expropriation “works by *confiscating* capacities and resources and *conscripting* them into capital’s circuits of self-expansion” (Fraser: 166, emphasis in original), which quite accurately describes the globe-spanning capture of data assets produced by mostly (im)migrant food delivery workers who lack ownership or meaningful control over these assets (cf. Couldry and Mejias 2019). Moreover, data expropriation makes it possible for food delivery platforms to continually optimize their accumulation strategies based on exploitation, for instance by dynamically adjusting – while progressively decreasing – riders’ delivery fees based on aggregated market data in order to increase profit margins. As such, captured data expropriation is a practice characterized by alienation and unfreedom, which forms the condition of possibility for the exploitation of food delivery workers who, as independent contractors, are nominally free to choose when/how much they work and which orders they accept. It is precisely these sequences of decision-making activities from which data assets can be derived, which means that couriers’ freedom of choice can be strategically leveraged as a behavioral “informational service” that can be used against their best interests.

Yet whereas the unit economics of courier exploitation expands in a linear fashion, the captured data assets expropriated from each courier only become actionable once their accumulation “reaches scale”, after which their value grows exponentially.<sup>5</sup> This, then, is what it means to say that captured data is a highly elastic asset class: the value associated with its expropriation is much more sensitive to the qualities of scale than labor’s exploitation. We should be careful here, however, not to naturalize the notion of scale and to avoid conflating it with volume or size. It would be more accurate to say that scale is *an effect* of a platform

company's data analytics capacities. In other words, ownership and control over the computational architecture built for data capture is essential.

This is illustrated most clearly in the IPO filings of established gig-economy companies. For example, Uber's (2019: 155-6) filing states: "Managing the complexity of our massive network and harnessing the data from over 10 billion trips exceeds human capability, so we use machine learning and artificial intelligence, trained on historical transactions, to help automate marketplace decisions. We have built a machine learning software platform that powers hundreds of models behind our data-driven services across our offerings and in customer service and safety." In this constellation, data capturing sensors, machine learning algorithms, and gig workers do not function in isolation. Rather, they form vital interlocking components that converge into one system and allow it to (operate at) scale.

This positive feedback loop, between a data-producing labor process and algorithmic systems that self-optimize as they analyze this data, is at the heart of machine learning's promise of full automation. Importantly, this promise drives the operational practices and investor pitch decks of food delivery startups and other gig economy companies worldwide. In their shared vision, one of the key value propositions of digital platforms is that their data analytics capacity will eventually allow for the automation of all fungible forms of gig work, thus diminishing contracted labor costs to zero. The platform company to first accomplish this goal will subsequently conquer the market and reach monopolistic status. Gig workers – within this speculative vision – will have (unwittingly) contributed to their own inevitable obsolescence.

### Reclaiming the data asset

Not so fast. Gig workers are not the hapless exploitable dupes that Silicon Valley too easily takes them for and their data assets have recently emerged as a new frontier for organized resistance. Fed up with decreasing wages, degrading working conditions, and persistent information

asymmetries, workers are seeking new ways to access, own, and leverage their data in order to win back power in the gig economy. Here we discuss two important and inspiring grassroots initiatives, addressing both their potential and their limitations.

### 1) *The Worker Info Exchange: Weaponizing the GDPR*

The Worker Info Exchange (WIE<sub>x6</sub>) is an initiative led by former Uber driver James Farrar, who is also a lead claimant in an ongoing UK court case against the company's alleged misclassification of its workforce. WIE<sub>x</sub> brings together workers, academics, lawyers, and computer scientists in an effort to not only gain legal access to driver-generated data, but also to build a computational infrastructure capable of mining this data for useful insights. To accomplish this, Uber drivers are encouraged to submit so-called 'subject access requests' (SAR) and then contribute the data they receive to a larger data pool collected, managed, and analyzed by the WIE<sub>x</sub>. Although the computational power available will remain vastly limited in comparison to Uber's capture apparatus, the hope is that the collected data will nevertheless reveal information on topics such as payment, management of driver supply, worked hours, and the company's use of reputational data. This information could then be utilized in court to establish inconsistencies and falsehoods in Uber's claims, thereby poking holes in its legal defense and challenging the contractual arrangement that currently deprives drivers of (collective) power (Holder 2019). The key move here is not just the computational analysis of SAR-acquired data sets, but *the organized collection of these data sets at a scale previously unseen*.

WIE<sub>x</sub>'s efforts, while enabled by Europe's GDPR, are inspired in-part by New York City's pioneering new ride-hail legislation, whose license cap and accompanying minimum wage regulations could not have been accomplished without the city government's sustained pressure

on Uber and Lyft to turn over detailed trip data (Holder 2019). In both cases, data is understood as integral to challenging corporate platform power and ensuring public welfare, especially the welfare of precarious ride-hail drivers who have seen their wages decrease over the past few years. However, as was the case for our first example, a critical limitation of such efforts is their reliance on access and transparency, both of which are dependent on private companies' readiness to accommodate requests and their compliance with existing regulatory frameworks – something these companies do not have a great track record on. Meanwhile, the fundamental power imbalance that subtends (platform) capitalism, predicated on asset ownership, is left intact.

## 2) *Coopcycle: From data access to ownership*

The issue of ownership brings us to our second example. Coopcycle, based in France, describes itself as “the European federation of bike delivery coops. Governed democratically by coops, it enables [these coops] to stand united and to reduce their costs thanks to resources pooling. It creates a strong bargaining power to protect the bikers [sic] rights.”<sup>7</sup> The resources it pools include services such as a software platform (distributed under Coopcycle's custom-made “CoopyLeft” license, which prohibits use by non-cooperative businesses), a delivery app, administrative and legal support, and shared drafting of funding proposals. Whereas WIEx focuses on the piecemeal collection of driver data made accessible by GDPR legislation, Coopcycle moves several steps ahead, taking the production, analysis, and monetization of delivery data into its own hands by building a collectivized computational architecture that could grant durability and scale to associated bike delivery coops. This endeavor begins to address a problem that has so far hindered the success of individual platform coops, namely their struggle to compete with the scaling capacities and seemingly unlimited resources of corporate platforms (Van Doorn 2017).<sup>8</sup>

Sidestepping conditional and/or limited access to private data assets, Coopcycle prioritizes collective ownership of data assets as a means to achieve worker power and autonomy. Such commonly owned data assets can be leveraged in various operational and commercial activities, from the optimization of the delivery process to the negotiation of transactions with clients, funders, and other third parties. At the moment, however, the key challenge is market penetration, given that one large group of potential clients – restaurants – remains tied to API connections and service contracts with corporate delivery platforms. This is further hindered by the continual update cycle of mobile operating systems (i.e. iOS and Android). In short, each time these operating systems are updated, the apps that rely on them need to be updated accordingly. Whilst this is a relatively simple task for companies with large tech teams such as Deliveroo and Uber, it poses a more substantial challenge when sustained access to technical resources is limited. The resulting impact on user experience, combined with a minimal operating budget, are likely to have a negative impact on user retention and growth. Without a growing portfolio of clients that can be served on a daily basis, data assets cannot be accumulated or exploited in the first place.

### From Platform to Meta-Platform

Ultimately, as valuable as Coopcycle's efforts to socialize bike delivery coops undoubtedly are, its development of worker-owned economies of scale and collaborative software synergies pales compared to the kind of massively bankrolled synergetic activities taking place elsewhere, at a scale that exceeds the purview of any individual platform company. To solve our platform economy puzzle and grasp what keeps deeply unprofitable platform companies afloat, we have to move up one tier in the rent-seeking value chain of financialized platform capitalism. This tier is the domain of what we call "meta-platforms": venture capital firms and investment funds looking to exploit the network effects and synergetic possibilities that emerge when managing a

large and varied portfolio of investments in platform companies and other data-centric businesses, each intent on “disrupting” different industries by leveraging their analytics capacities.

We use the term “meta-platform” because the growing power of these financial institutions stems from how they effectively operate as higher-order platforms whose profits are constituted by the rents extracted every time it matches investors, including institutional investors such as pension funds and sovereign wealth funds, with tech companies looking for capital injections that will allow them to continue to scale quickly.<sup>9</sup> Paying critical attention to meta-platforms also moves us beyond a narrow concern with “shareholder value”, insofar as the stakes of our analysis do not just pertain to the influence of shareholder objectives on a company’s daily operations, but demand that we account for the strategic governance of mutually reinforcing monopoly formations across sectors.

The meta-platform par excellence is SoftBank, the conglomerate that manages the \$100 billion Vision Fund, nearly half of which is financed by Saudi Arabia’s sovereign wealth fund. According to SoftBank’s founder and CEO, Masayoshi Son, Vision Fund’s portfolio companies control 90% of the ride-hailing market worldwide (Alpeyev, 2019), which is a percentage that should surely give us pause. Son’s approach, especially since the inauguration of the Vision Fund, has been to “over-invest” in particular platform companies and thereby aim to pre-ordain a winner in various competitive markets. This then sets up Son’s “cluster of number ones” strategy, which revolves around the creation of productive synergies between portfolio companies “whose whole is theoretically greater than the sum of its parts – an added value derived from the partnerships and business opportunities that come with being a part of the SoftBank family” (Medeiros 2019). Such partnerships and business opportunities largely center on finding ways to actualize the potential of immense amounts of data captured from a great variety of sources. As a recent Wired article summarizes Son’s vision:

“a future where every time that we use our smartphone, or call a taxi, or order a meal, or stay in a hotel, or make a payment, or receive medical treatment, we will be doing so in a data transaction with a company that belongs to the SoftBank family. And, as Son likes to say: “Whoever controls data controls the world.” (ibid.)

Meta-platforms seek to control the world, or at least the platform ecosystems that increasingly reshape the world in their image. Having learned expensive lessons in the wake of the dot.com collapse, during which Son suffered a stunning \$70 billion loss (Sherman, 2019), meta-platform executives now aim to construct data-centric architectures of durability that will protect them in case the next tech bubble bursts – a bubble that they themselves will have helped to create. Even in the event that Uber would fold (for instance because governments around the world finally agree that the company is in fact an employer and investors would consequently lose interest in its shares), its IPO has offered SoftBank an opportunity to cash out some of its equity and use these returns to invest in – and thereby anoint – the next Uber.

It seems likely, however, that Softbank would abstain from further investments in risky gig economy companies, instead opting to invest in the next Palantir (Peter Thiel’s data-mining firm), or a startup that would complement its current investee Arm (a British semiconductor and software design company that has become a major player in AI development). While Softbank’s shock-and-awe investment strategy has generated both frustration and marvel among investors and analysts, its recent mis-handling of the WeWork debacle – which resulted in the cancellation of the firm’s IPO – painfully illustrated the fallibility of its model/vision (Alpeyev et al. 2019). Since then, Softbank and its Vision Fund have been under increased financial pressure and scrutiny, as the firm seeks to stay afloat by selling up to \$41 billion in assets at a discount in order to buy back its shares (Nussey, 2020). In this shift “from long-term domination to short-

term survival” (Sherman 2020), Softbank demonstrates its fealty to shareholders at the expense of its startup portfolio, as platform companies are increasingly expected to show a road to profitability by cutting costs, laying off employees, and selling off operating units (Ongweso 2020).

### Regaining control: possible public responses

While platforms come and go, meta-platforms allocating the wealth of nations are becoming too big to fail. It is this massive privatization of public wealth that returns us to the position and plight of gig workers under conditions of financialized platform capitalism. While it is true that finance capital subsidizes a large share of gig workers’ daily wages, it is equally true that it ultimately seeks to render their labor obsolete. Meanwhile, its investment comes with stipulated expectations and constraints with respect to how a platform company can run its business, pushing a high risk/high gain model that has valued rapid growth and limited liability. In times of crisis, as this model becomes destabilized, we see how platforms that cannot weather the strain become expendable in a manner that mimics the disposability of gig workers – just further upstream.

These dynamics demonstrate the need for regulatory measures that likewise have a forceful upstream impact. In order to organize a concerted pushback against the massive power of meta-platforms, we need both regulatory intensification and policy innovations that hit platform capitalism’s investor class where it hurts. Ultimately, this should result in the abolition of the gig economy as we know it, so that from its ashes may rise an economy built on solidarity instead of exploitation and expropriation. To conclude this chapter, we briefly suggest some proposals that should take us in this direction, moving from forms of regulatory intensification focused on *existing* (meta-)platforms, toward public policies and investments that could foster *new* platform-based initiatives.

### *Regulatory intensification*

The first, most straightforward progressive move is to more strictly regulate existing platform companies and to actually *enforce* this regulation across the board. Any rule or law is only as good as its enforcement and, due to a structural lack of institutional capacities and political will, gig economy platforms have for too long been able to determine the rules of the game. While gig worker reclassification and its enforcement will certainly be one part of the solution, it will not be an adequate measure if divorced from a broader set of regulations that seek to curb the widespread commodification of low-wage labor across industries (Van Doorn, Ferrari, and Graham, 2020). Improving wages, working conditions, and social protections for all workers, *regardless of employment or residency status*, will create a redefined and more equitable playing field in which workers (particularly migrants and minorities) have access to better jobs and will no longer have to resort to platform-mediated gigs.

Besides labor regulation, stricter tax legislation is also a crucial weapon in the public arsenal. Here we should not only think of higher corporate taxes for platform companies in general terms, but more specifically consider frameworks for international coordination that aim to close global tax loopholes and end the rampant regulatory arbitrage that companies like Uber engage in (Browning and Newcomer 2019). Countries such as The Netherlands, Ireland, and Singapore should be forced to eliminate their tax havens and stop luring tech companies with tax breaks and other forms of corporate welfare. Moreover, instead of rewarding platform companies for their losses, by tying corporate income taxation to profits, such taxation should instead be based on a company's revenues. Another strategy is to create a special tax on big data-generated revenues (Madsbjerg 2017), although it is notoriously difficult to assign monetary value to data and it would likewise be challenging to ascertain how much data gig platforms sell to third parties or otherwise leverage toward revenue generation.

The topic of data leads us to another area where more forceful regulation is needed, namely data rights pertaining to access, control, and ownership of data by platform workers as well as other end users. We have already seen that initiatives like Worker Info Exchange are pushing this agenda among gig workers, but much more could be done to support these efforts. While the GDPR offers a transnational framework for pursuing the data rights of gig workers, its focus on “personal data” posits severe limitations on its applicability and thus a more comprehensive and synthetic approach is required - one that leverages the most useful elements from various other legal frameworks currently operative within the EU (Gallagher, Li and Gregory 2019). Beyond data rights, we should also regulate for increased transparency and oversight of platform companies’ software systems, in order to foster accountability not only with respect to algorithmic decision-making processes (which data rights legislation would not fix) but to business operations more generally. Here we suggest a combination of company and platform/app audits conducted by elected public officials and due process protocols that grant gig workers the ability to appeal their deactivation and that ensure a speedy and fair arbitration/tribunal review process.

All these measures are ultimately geared toward increasing the operational costs of predatory platform businesses and thereby increasing the risks (which are also costs) of investing in such businesses. In this way, they are likely to have an upstream impact. Yet we could move further up the value chain and think of even more ambitious regulatory schemes that directly affect the operations of meta-platforms. One disincentivizing measure is to increase capital gains tax on the sale of gig economy-related assets, which would make it more costly for a firm like Softbank to sell its shares of a platform company. A similar measure is to tighten financial regulations to raise the costs of investing in gig economy platforms, for instance by more robustly taxing private equity transactions. As Rahman (2018: 249) has argued, “such structural regulations would change the incentives in a way that makes the more problematic downstream

practices less profitable and thus less likely.” Finally, following Rahman, we “might impose antitrust-style limits on mergers and acquisitions” - which could, for instance, block Uber’s pending acquisition of Grubhub - or “prevent the concentrated ownership over multiple [...] platforms and related services into too few investor hands” (ibid.). This type of legislation would effectively make the data empire-building ventures of meta-platforms a lot more onerous.

### *Policy innovation and public investments*

It is important to highlight here that private costs can be public gains. Building on expanded and intensified regulations targeting corporate (meta-)platforms, we should extend this radical ambition to the realm of public policy in order to foster novel and emerging platform-based initiatives, which can be funded by newly obtained tax revenues. Coopcycle, for instance, could hugely benefit from state subsidies, which would be more effective and sustainable than relying on crowdfunding or social impact investors whose support is usually contingent on particular deliverables. Such subsidies could be managed by local governments, which would enable new public-private/common partnerships that encourage collaboration between platform cooperatives, their stake/shareholders, and municipalities that would consequently be reinvigorated after years of budget cuts to social services. This would, however, require an openness to this kind of collaboration on the side of the platform cooperativism movement, whose entrepreneurial and activist inclinations have so far resulted in a DIY attitude and a reticence to depend on (and report to) the state.

Furthermore, local governments could use new tax revenues to initiate “public options” that “would provide alternatives for users [including workers], while also exerting competitive pressure on otherwise dominant [...] platforms, forcing those platforms to take seriously the need to provide services in a different way” (Rahman 2018: 249). One significant advantage of publicly initiated platforms, compared to the nationalization of corporate platforms, is the ability

to build new software architectures and platform ecosystems that are not rooted in exploitation or accumulation by dispossession. Public ownership of Deliveroo does not automatically entail a more equitable platform, given that the machine learning algorithms Deliveroo has developed are trained by data captured from a labor process that is specifically engineered for the purpose of revenue optimization and worker subordination. As such, the decisions that these algorithms execute are not in the public interest nor do they serve the common good, and corporate algorithmic systems should thus at the very least be de- and reprogrammed. It may be preferable, however, to build new publicly governed systems from the ground up.

Ultimately, then, new policies and platform-based initiatives should first and foremost be committed to the affirmation of public values (Van Dijck, Nieborg & Poell 2019). These values are vital for a platform society in which data exists as a public asset that can be leveraged by all stakeholders participating in its collective governance. Truly solving our platform economy puzzle demands that we imagine a future beyond the gig economy and platform capitalism, by embedding labor advocacy within a broader politics of redistribution and social justice.

## Notes

<sup>1</sup> See for example, Hawkins (2019) reporting Uber's \$5.4billion loss in a single quarter or Butler (2019) reporting Deliveroo losses of £232million losses in the same time. Neither company has ever turned a profit

<sup>2</sup> This fieldwork consisted of participant observation on city streets, in homes and offices, and in online spaces (e.g. subreddits, Facebook groups, and Whatsapp groups maintained by gig workers). It also resulted in 158 formal semi-structured interviews, primarily with couriers and cleaners but also with some entrepreneurs in food delivery, cleaning, and adjacent industries in the three cities. Many more informal conversations took place during this two-year period.

<sup>3</sup> This fieldwork consisted of participant observation across a range of digital and urban spaces. Beyond regular informal workplace conversations, 14 formal semi-structured interviews were conducted. Research in the Trade Union allowed for the development of personal contacts with a broad range of workers and afforded a deep understanding of both delivery work and the work of labor organizing. Beyond participant observation and interview

methods, data collection included a mix of video, photography, audio recordings, creating multi-media diary entries that express the complexity of the workplace.

<sup>4</sup> As Sadowski writes (2019b: 10): “the value of data is uncertain; the valuation of data is complex.” Moreover, as he notes elsewhere, “[t]he conditions needed to convert data capital into economic capital may never arrive, but that does not stop the cycle of accumulation” (Sadowski 2019a: 5).

<sup>5</sup> To be sure, “reaching scale” is a constantly moving target. It is a dynamic site of experimentation that is contingent not just on a company’s evolving operational goals but also on environmental variables such as the nature, prevalence, or relative significance of the activity being captured and datafied. Data analytics is not an exact science and although the accumulation of more data generally increases the accuracy and versatility of predictive calculations, it is impossible to predict in advance at which threshold an expanding data set – or combination of data sets – will increase in value by becoming more actionable.

<sup>6</sup> See <https://workerinfoexchange.org/> for more information

<sup>7</sup> See <https://coopcycle.org/en/> for more information.

<sup>8</sup> Coopcycle shares this function and mission with the Platform Cooperativism Consortium, an international “hub that starts, grows, and converts platform coops” (see <https://platform.coop/who-we-are/pcc/>).

<sup>9</sup> For instance, during Lyft’s recent IPO roadshow, the company repeated its assertion that prioritizing data-driven growth and innovation over short-term profits is the right business strategy (Lyft 2019). As long as potential investors can be convinced that a platform company could at one point attain monopoly-like status, it can expect new capital injections that subsidize its ongoing efforts to gain market share and improve its financial performance.

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