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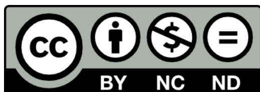

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JAMIE WOODCOCK

THE FIGHT AGAINST PLATFORM CAPITALISM

An Inquiry into the Global Struggles of the Gig Economy

The Fight Against Platform Capitalism: An Inquiry into the Global Struggles of the Gig Economy

Jamie Woodcock

Critical, Digital and Social Media Studies

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Contents

Acknowledgements ix

1. Introduction 1

Understanding Platforms 5
Structure of the Book 9

2. Digital Workerism, a Framework 11

Workers' Inquiry 12
Workerism and Class Composition 15
For a Digital Workerism 19
The Practice of Digital Workerism 23

3. Transport Platform Workers 27

Food Transport Workers 29
Technical Composition 31
Social Composition 38
Political Recomposition 41
Private Hire Drivers 44

4. Online Workers 53

Origins of Online Work 53
Automation 55
Technical Composition 57
New Forms of Political Composition 60

5. Understanding Platform Resistance 67

Forms of Resistance 69
Solidarity and Organising 70
Building Worker Power 75
Making Sense of Platform Struggles 80

6. Conclusion: Why Struggles Against Platform Capitalism Matter 85
Why Does This Matter? 88
Where Next? 91
Notes 95
References 97
Index 111

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at demonstrations, and on de facto picket lines. I was lucky enough to spend time in the US, South Africa, and India as part of previous academic projects, and speaking to workers there provided the starting point for this book. This book is an attempt to pull together the large and small bits of research, the conversations, the meetings, and strikes of platform workers that I have witnessed. I would also like to thank the IWGB union. Both elected officials and members have taken the time to explain the dynamics of platform work. How far things have come since the summer of 2016!

Finally, this book is dedicated to every worker fighting against platform capitalism: you have a world to win.

CHAPTER 1

Introduction

This book is about the struggles of platform workers. The ideas for it began in London in June 2016 when I met a Deliveroo rider. I had heard the name Deliveroo before, but did not know much about it. As is often the case with these things, I then started to see riders across the city. I saw them waiting at traffic lights or outside restaurants. The green and silver uniform became a common sight across the city. At the time, I had just finished writing a book about call centres. These Deliveroo riders seemed to be another category of so-called 'unorganisable' workers. There were arguments from universities and the labour movement that many workers could not be 'organisable'. For example, the Labour MP Siobhain McDonagh argued that Deliveroo workers 'are not in the same workplace and there is not the same unity of cause. There is always somebody who will do it if you don't want to' (quoted in Osborne and Butler 2016). In a similar vein, Alex Wood, who studies the gig economy, argued that 'there's a high turnover of people and there's low market bargaining power. If they go on strike it's not going to bring the economy to a halt, unlike coal miners or rail workers' (quoted in Osborne and Butler 2016). Commentators blamed precarity, youth, the nature of the work, technology, or a combination of these factors. These were all arguments I had come across with high-volume sales call centres in London. This was not the first – and would not be the last – time I would hear that platform workers such as those at Deliveroo could not organise.

Then I met Tim and we discussed what it was like working for Deliveroo. In many ways, Tim was typical of the cyclists working for the platform. He was university educated and did not have much work experience. Tim was first attracted by the idea of earning some extra money while riding around the city. Working for Deliveroo fitted around another job in the evenings. He also found that the work gave him a lot of time to think, both while cycling and between deliveries. One of the things he spent time thinking about was organising at work.

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Tim wanted to start organising with other Deliveroo workers. He had found some people interested in organising, but it was proving hard to get people to commit. So far he had spoken to drivers who worked in the same area of London. What he wanted to do next was meet drivers from other 'zones' and start building a network. We met on a sunny afternoon in central London and set off to find the meeting points for other zones. We started off at London Bridge and walked down the south bank of the river Thames. Along this walk there are many clusters of small restaurants. They include independent restaurants and franchised chains such as Nando's, Wagamama, and Pizza Express. We soon found a meeting point. As Tim explained, Deliveroo originally set these 'zone centres' as locations for workers to wait between deliveries. These were supposedly determined by an algorithm to be the best places to wait, keeping delivery times down.

We stopped at one meeting point. It had a range of restaurants and space to park mopeds. There was even an archway to provide cover from the rain – luckily not needed that day. Over a couple of hours there was a steady stream of moped riders who passed through. Unlike Tim, most of these workers were migrants, and particularly Brazilians. We spent our time chatting with workers. We compared notes about different zones, heard complaints, and shared stories about the work. Far from coming across as 'unorganisable', these workers were already in contact with each other. There were networks across the zone. I remember asking one driver if he was in touch with anyone in other zones. He was sitting on his moped, smartphone secured to the handlebars. He started showing me the WhatsApp groups that he was part of. One of these had hundreds of workers from the surrounding area. He explained that workers used these to share information: the best places to wait, the busiest restaurants to get orders from, warnings about traffic or the police, as well as general information about the work.

Workers invited us to join large and active WhatsApp groups. We found that there were already overlapping groups with lively conversations. Many of the workers we spoke to were angry and there was already talk of protesting against the conditions. The in-person meeting points were like an office watercooler. These WhatsApp groups became digital watercoolers, connecting people during and outside of work. The meeting points and overlapping WhatsApp would become central to organising. They played a key role in publicising the first wave of strikes in 2016.

This experience is one that was repeated, both with workers in London and also in other countries discussed later in the book. The meeting points and use of WhatsApp are an important reminder that workers are not passive actors. Workers engage with and respond to the contradictions of work. To paraphrase E. P. Thompson (2013, 8), platform workers were present at their own making. They had a history before signing up to work for platforms. They bring this with them to the work: the experience of working and resisting elsewhere, existing social networks, politics, and what they wanted from the work.

This book draws attention to these moments of solidarity. It looks at the new ways that workers are finding to resist and organise in the context of platforms. In particular, the book focuses on three dynamics that are driving struggles in the platform economy:

1. The increasing connections between platform workers, showing that they are not isolated.
2. The lack of communication and negotiation from platforms, leading to escalating worker action around shared issues.
3. The internationalisation of platforms, which has laid the basis for new transnational solidarity.

Each of these stems from the new technical composition of platform work. The first example, of increasing connections between platform workers, can clearly be seen in the example at the start of the book – Deliveroo workers in London. Platform workers are increasingly connected to each other, often via WhatsApp.

The second dynamic involves a lack of communication from platforms. Increasingly platform workers are taking wildcat strike action over similar issues. I noticed this when meeting delivery drivers in Bangalore in 2018. It was a hot day in the city, with heavy traffic. I had set off with researchers from a project I was working on at the time: Mark Graham, Pradyumna Taduri, and Mounika Neerukonda. We wanted to speak to food delivery platform workers. There is no Deliveroo in Bangalore, but Swiggy and Zomato operate on a similar model. We started by looking for places that could serve as meeting points. This meant searching for busy restaurants with space outside. After struggling to find any good locations, we decided to ask an Uber driver. After all, they spent their time driving around the city. At first, he thought it was an odd request. After all, it was not exactly one that you could put into the app. He then called over another auto rickshaw driver and they drove us to a popular meeting place. Of course, given that they spent much of their time on the roads they already knew where to find these spots.

This meeting spot was a row of restaurants at a busy junction. Between the entrance of the restaurants and the road there was a wide flight of stairs. This provided ample space for drivers to gather and sit. At the bottom of the steps was a thick row of motorcycles. Each had either the orange Swiggy or red Zomato bags waiting for food. I was particularly struck by how similar the working conditions were to those of drivers in London. Despite the different surroundings, Pradyumna and I began talking to one group. Pradyumna translated parts of the conversation, switching between Kannada and English. As I have noted in another account (Woodcock and Graham 2019, 74–75), the drivers' wages had fallen from 60 rupees for a delivery to 30 rupees. The platform told the drivers of these changes when they happened. As with other examples, there was no space for negotiation. We had heard no stories of platform strikes in Bangalore from the news. Yet these workers told us they had taken wildcat

strike action recently. After a strike of 300–400 workers, they had won concessions from the platform on a local level. I asked what issues they had with the work. We discussed the usual things such as safety equipment, the danger of the roads, insurance, deactivation of workers, and so on. All agreed that what they wanted was 'more money' from the platform. Wages were the key issue.

These were the same demands I have heard from platform workers in different countries over the past four years. For example, I discussed issues with Deliveroo riders in Islington in early 2020. These focused on pay in relation to the recent death of a driver. As one worker explained:

> I spend my whole life on this bike. What kind of life is that? For £2.80 a delivery? I go home, shower and sleep, back out driving all day, seven days I week. I've been working since 2014, now I can barely make any money. It has to change … a rider is killed working for £2.80 a delivery, to risk your life for so little money.

The strikes in 2016 opposed changes in payment rates, which were also the target of later strikes. There is a pattern of food delivery platforms putting pressure on wages. First platforms move to pay only for deliveries, then further reduce these fees. These changes are not negotiated with workers. Workers are only notified through the app once the changes have gone through. This means there is little opportunity for negotiation with the platform. Workers have few, if any, channels through which to express their concerns. Instead, complaints escalate fast. This often results in wildcat strike action becoming the preferred method of protest for drivers. In London and Bangalore, as well as many other cities, drivers use this method to voice their concerns.

The third dynamic is the internationalisation of platforms and the experience of work. Workers having shared conditions or concerns is nothing new across national borders. However, the internationalisation of platforms means that there is now a shared focus for these grievances across countries. I first came across an example of this in the back of an Uber in Cape Town. After landing at the airport, I ordered an Uber to take me into the city. The driver who picked me up was, like most Uber drivers in Cape Town, keen to talk. We chatted away as we made our way into the city. Fighting back the jetlag, I brought the conversation around to working conditions. In my experience, drivers would be open about their conditions and issues with Uber. Once we had discussed what it was like to be an Uber driver in Cape Town, he asked how it was for Uber drivers in London. We compared the kinds of cars, the minimum fares and rates for distance, the way Uber operated, the kinds of jobs that were common, and so on. The driver then asked about the protests of workers in London. It was clear that this was something he had heard about before. We compared these with protests in South Africa, discussing issues such as employment status. At the time, this conversation felt like a normal discussion about working conditions. Yet after the journey, it left me thinking that something interesting

was happening. I thought about whether I would have had a similar experience before Uber. Would a local cab driver in Cape Town have wanted to hear about the conditions of a minicab driver in the east end of London? From this first encounter I had the same experience in more cities: Bangalore, San Francisco, New York, São Paulo, Toronto, and so on. As the waves of protest and worker actions increased, these discussions became more frequent too.

The argument of this book builds on these three examples and the dynamics they involve. Each of these show new tendencies that are emerging with platform work. The first example shows how connected these workers are, despite the surface appearance of isolation. Digital (as well as face-to-face) communication is bringing workers together. The second example shows the lack of communication from the platform. This prevents the mediation of grievances about work and leads workers to escalate protest action. This has particularly taken the form of wildcat strikes. The third example is an important illustration of the global features of this work. The international scope of platforms has laid the basis for new kinds of transnational solidarity. Taken together, these three examples provide the basis for the argument of this book. Rather than being 'unorganisable', these workers are participating in the start of a global struggle against platform capitalism.

Understanding Platforms

Platforms have become a well-worn metaphor for how our lives, work, and culture are being transformed. As Marc Steinberg has argued:

> platforms are everywhere. As digital objects we have social media platforms … chat apps are platforms … e-commerce platforms … streaming platforms … and smartphones. As places we have bookstores as platforms, storefronts as platforms. We have educational platforms, political platforms, business platforms. As we have gone from the era of platform shoes as a distinct genre of footwear to platform everything. And this list does not even scratch the list of what is called a platform, or what is retroactively redescribed as one. The greatest success of *platform* within our language ecosystem is to have become something of a universal translation device. Almost anything can become a platform, if one merely calls it such. (2019, 1)

Steinberg traces the roots of the platform economy to its emergence in Japan. This has gone on to have an impact far beyond work. Yet as Tarleton Gillespie (2010, 360) explains, 'we do not have a sufficiently precise language' to unpick the effects of platforms. As Gillespie continues, 'the discourse of the "platform" works against us developing such precision, offering as it does a comforting sense of technical neutrality and progressive openness' (2010, 360). If

'platforms are eating our world' (Moazed and Johnson 2016, 17), they are having a particular impact in work. Another definition can be useful here. As Steinberg (2019, 2) explains, in Chinese the term *píngtái* is used, meaning a flat platform or a stage. In the context of digital technology this can mean the software on which other things run. Yet the different meanings of *píngtái* are also useful for thinking about how the platform can also be a stage. Platforms involve a range of actors, including workers, capital, customers, regulators, and so on. We can think about how these actors have different interests. They have different motivations, dialogue, and even fight scenes on the stage.

This book focuses on one actor in particular: the platform worker, whether Deliveroo riders or online workers, whether on the streets of London or across the world. It starts with a critical analysis of the organisation of platform work. The aim is to try and better understand the struggles of workers against platforms. I have chosen to focus on this kind of work because it provides a platform – to push the metaphor a little further – upon which we can make sense of other changes, those happening across different workers' struggles and sectors of the economy.

It is also worth pointing out here that much of the work that happens on platforms is not new. Instead, platforms are a new way of connecting workers and employers. They introduce 'tools to bring together the supply of, and demand for, labour' (Graham and Woodcock 2018, 242). Before Uber we had taxis. There was takeaway food delivery before Deliveroo and cleaners before SweepSouth. Care workers existed too before care.com. Freelance work precedes Upwork. Transcription happened in a different way prior to Amazon Mechanical Turk.[1] What is different now is how the work is undertaken and completed.

Platforms are a novel organisational form. They use digital technology to position the company (or 'platform') between the worker and consumer. This means they mediate the relationships between them. Yet there is a risk in seeing the newness of digital technology as making a clean break from the past. Work has involved both technology and mediation before. For example, in the UK there is a long history of taxi services, going back to the seventeenth century. Legalisation of horse-drawn carriages started in 1635, and they were offered for hire by innkeepers. The first taxi rank was outside the Maypole Inn on the Strand in 1636. The stand provided a way to mediate between drivers and potential passengers. There was a queuing system so that the longest waiting driver would be available first. In 1654 there was a legal intervention to limit the number of drivers, which was restricted to 200 'hackney-coachmen' in Westminster (Firth and Rait 1911, 922). Over time, new technologies have transformed the distribution of taxi work beyond the customer having to go to the taxi rank. For example, call boxes at taxi stands allowed drivers to contact a despatch office. From the 1950s, radio despatch provided two-way communication between the taxi and the operator. Since then there has been an increasing

digitisation of communication, including mobile phones, GPS tracking, computerised despatching, and so on. Historically, data collection has been an important part of taxi provision, for example using meters to calculate the cost of journeys.

It is no surprise that the private hire taxi industry has become a focus for platforms. From the start, transportation involved the problem of how to connect the people offering the service to the customers who want a journey. It has also involved a range of different ways in which capital organised drivers, from operators that charged drivers commission or upfront fees to lease a vehicle, to those that employed drivers and paid them a wage. It is a highly regulated industry, with many, many regulations having followed the restrictions introduced in Westminster in 1654. The predecessors to platforms were also somewhat resistant to technological change. For example, when Uber started operating in London in 2012 there was a choice of either trying to flag down a black cab or calling a minicab office. I rarely used taxis at the time, even though I could see a minicab office from the window of my flat. The booking process involved calling the office. This was then often followed by calling back to check, as the cabs were always later than promised, with the repeated reply that it was 'just a few minutes away'.

The latest application of technology involved a smartphone interface for customers and drivers. This made the process of using the service much easier. Drawing on Silicon Valley expertise with user experience (UX) design, platforms make booking a taxi quick and easy. They provide the impression of transparency, with a countdown timer and predicted fare. I say this not to evangelise about how great the Uber app is, but instead to highlight that this did offer something new to customers. It opened up the market both to people frustrated with previous offerings, but also to people who otherwise might have taken public transport. This is not because it did something new. People paying for transport has a very long history. Instead it provided a new way to effectively mediate the exchange. So, Uber 'has neither invented the role of the driver, nor the need of the passenger, but rather a new way to connect them' (Woodcock and Graham 2019, 46). This process has even produced a verb: 'to Uberize'.[2] Indeed, many later platforms have positioned themselves as the 'Uber for X' (Srnicek 2017, 37).

This is the 'platform' aspects of these companies. They provide a way for two groups (in this case the driver and the customer) to easily connect with each other. As with the taxi industry, there is a long history of other kinds of platforms to connect customers with sellers. For example, shopping centres provide a platform for companies and their products. Newspapers feature adverts and often have classified advert sections. Local shop windows have long placed adverts in their windows, and lamp posts carry tear-off contact numbers. What is different is the 'digital' part of platforms. Instead of having to go to the shopping centre or have the newspaper delivered, digital technology allows these

adverts to be hosted online. For work, digital job boards provide a way to find jobs, or for workers to post their CVs. These platforms did not change the kind of work, but provided a new way to advertise and recruit. Early analysis talked of a new 'sharing economy' emerging (Sundararajan 2017). The reality was quite different and quickly came under sustained criticism (Slee 2015).

Nick Srnicek's analysis of 'platform capitalism' was an early critical account of platforms. Particularly important for this book is his identification of the 'lean platform economy' (Srnicek 2017, 91). Srnicek focuses on the way that low-wage work is being reorganised through platforms. This involves triangular business models between workers, customers, and platforms (Roy-Mukherjee and Harrison 2020). As I have written with Mark Graham, platform work represents a shift in the organisation of work. Three key factors are driving this. The first is a set of changes in the economy often attributed to neoliberalism. Broadly, these entail a general attack on working-class organisation and the deregulation of capital. The second is technology. New forms of connectivity have facilitated capital recruiting and managing workers at scale. The third is flexibility. This is important for many workers searching for different ways to work or to escape their local labour market. Capital has also sought to exploit increasingly precarious workers (Woodcock and Graham 2019). It is in this context, across different regions and countries, that platforms become established.

Platform work (and the broader gig economy) has become a popular site for research, much more so than other forms of low-paid work. As Ravenelle (2019) notes, many academics can find access through their own use of platforms or within easy reach of the campus. Uber is a prime example of this. It has been the focus of a good deal of critique (Hill 2017; Scholz 2017). Uber has become a brand name recognised across the world. It operates in an increasing number of countries, both in private hire and food delivery. But it is important to note here that its visibility can hide other kinds of platform work. For example, Hunt and Samman (2019) argue that the focus on transportation platforms reflects the gendering of platform work. This has meant that care, cleaning, and domestic work receive much less attention (see Anderson 2000). For example, there has been much more published on Uber than on domestic work (see Hunt and Machingura 2016; Ticona and Mateescu 2018).

With the focus on Uber, the role of the algorithm has taken centre stage (Lee et al. 2015; Rosenblat and Stark 2016; Scholz 2017; Rosenblat 2018). Driving is one form of work that many think automation could take over, whether in the near or far future, depending on who you believe. Transport platforms are a site of struggle over algorithms at work. This ties in with the broader rise of algorithms across society (Pasquale 2015; Schneier 2015; Kitchin 2017; Cheney-Lippold 2017; O'Neil 2017; Turow 2017; Eubanks 2018). Algorithms play an important role in platform work. This does not mean that algorithms are fundamentally changing capital and labour relationships. For example, some accounts argue that algorithmic control takes away the possibilities of

work agency, solidarity, and collective action (Veen et al. 2019; Mahnkopf 2020). There is a risk of reading only the surface relationships on many platforms. Platforms have an interest in claiming that platform workers are self-employed. This frees the platform from many requirements of employment law and regulation, minimising the risk of having a large number of workers on record, and making the company look attractive to investors. I take the position that regardless of the employment status that platforms claim, the people doing the work on platforms are workers (see Aloisi 2016; De Stefano 2019; De Stefano and Aloisi 2019).

Workers provide the services that platforms claim to be disrupting. No matter how complex the algorithms or well developed the apps, workers still do the work. They drive the vehicles, deliver the food, clean the houses, and categorise the data. The claim of self-employment status is an attempt to deflect attention, hiding workers behind the app or screen. The reality of the dream of automation is that the need for online workers will increase. Even with the threat of technological mass unemployment, in the here and now there are platform workers. Their experience of work matters for making sense of these changes. This book contributes to the growing literature in this area, particularly building on attempts at worker writing including Waters and Woodcock 2017; Fear 2018; Briziarelli 2019; Gent 2019; Cant 2019; Leonardi et al. 2019; Cant and Mogno 2020; Tassinari and Maccarrone 2020.

Structure of the Book

The first chapter details the framework of digital workerism that underpins this book. It outlines the threefold framework of class composition developed by *Notes from Below*, involving the technical (the organisation of work), social (the organisation of workers into class society), and political (the forms of workers' resistance and self-organisation) composition of work. Building on this, it outlines an argument about workers' inquiry in the context of platforms, particularly focusing on new labour processes and the potential for new forms of struggle.

The second chapter focuses on the struggles of transport workers on platforms. It discusses food delivery workers, starting with the strikes of Deliveroo riders in London in 2016. This draws on the longest-running project that has contributed to the book. The dynamics of these struggles are analysed through the framework of class composition, unpicking the changing technical, social, and political composition of this work. It then moves through examples of subsequent waves of strikes across Europe, as well as the formation of the Transnational Federation of Couriers. This analysis is then developed through an increasingly global network of food delivery driver organisations (including both unions and networks), reflecting on the successes and limitations of

different models of resistance and organisation that drivers are experimenting with. The chapter then moves on to discuss private hire drivers, focusing on the coordinated strikes and protests in the run-up to Uber's IPO. These went beyond the coordination of days of action or alignment of strikes, leading to the formation of international networks, with two conferences having been held so far.

In Chapter 3 the focus shifts towards online workers. It first differentiates between microworkers and online freelancers, discussing the role of automation and the technical composition of these kinds of work. The chapter contrasts the challenges of organising in this kind of work with transport platforms, particularly the lack of opportunities to meet face-to-face. The chapter draws attention to the digital networks that form around this work in response to the challenges of the labour process. Recent struggles involving Amazon Mechanical Turk and Rev (transcription) workers show the potential for these workers to coordinate and build shared subjectivities through online communication. This case study is explored as an example with a significantly more challenging technical composition, yet shows how new moments of struggle are still coming to the fore.

The fourth chapter draws back from the examples to consider resistance against platform capitalism. It shifts the analytical lens to consider these issues in a wider context, including considering how workers build power in different situations. This involves developing the three parts of the book's argument: the role of technology and the technical composition of work, the importance of social composition for understanding how workers engage with work and resistance, and the varying forms of struggle that constitute political composition.

Finally, the conclusion draws together each of the examples of platform work and the analysis, emphasising and reiterating the key argument of the book: that rather than undermining worker agency, platforms have instead provided the technical basis for the emergence of new global struggles against capitalism.

CHAPTER 2

Digital Workerism, a Framework

I met Facility Waters shortly after getting involved with Deliveroo riders in London. Facility Waters, it may not surprise you to discover, was not his real name. When we discussed writing together about working at Deliveroo, I suggested he chose a pseudonym. Facility (who found the name particularly amusing) was a recent graduate who, like Tim, had found that working for Deliveroo provided the opportunity to make money while cycling. He greatly preferred this to the other service jobs that he had had previously, particularly because it meant dealing with a smartphone app rather than a manager. The first thing that we did together was an interview. We then visited Deliveroo zone centres together. We met again on the picket lines of the Deliveroo strike in London. In our second interview it became clear that Facility had many, many things to say about his work. He already understood the work far better than I did – or any of the people writing about the so-called gig economy at the time. Of course, this is hardly surprising. Facility spent his lunchtimes and evenings cycling for Deliveroo. He joined WhatsApp groups with other workers, chatted with them at meeting points, and spent time in between deliveries thinking about work.

This thinking about work was not based on an abstract set of research questions or in preparation for writing something. Instead, it began from the needs of the work processes: How can I get these deliveries completed? How can I make enough money to make this worthwhile? What are the parts I can change? These sorts of questions emerge as people try to get by at work, particularly in platform work, which often limits training and support to a bare minimum to avoid giving the appearance of being an employer. The strike also brought to the surface questions about how they could fight their employer: What did they want changed? How were they going to get it? What did it mean to organise? These kinds of questions are being discussed by platform workers across the world. Mostly they are of the former type, but often they spill over into the latter.

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This chapter starts with Facility Waters as an important reminder that researchers should not engage with work like explorers venturing into uncharted territory. Work is not unexplored, much like the places that explorers claim to have discovered. There are already detailed understandings of work that have been developed and redeveloped by workers. This knowledge serves a practical purpose. It is needed for workers to engage in their work, to get through it, and to struggle against it. This book draws on a range of attempts to engage in co-research with platform workers. While this book has a single author, it also tries to draw out the experiences of platform workers, not only because they shed light on platform work, but because the experience of platform workers matters.

Workers' Inquiry

Workers' inquiry is a militant process of trying to understand work in order to fight against it. It taps into a process that workers go through whenever they enter work: trying to understand how it is organised through their own daily experience, searching for the rules and norms that govern it, figuring out the problems with it, and how they can (or could) respond. In this sense, workers' inquiry is already implicitly happening when workers complain about the tasks they are given or how they are being managed. It is also there when workers find some moment of resistance that works. Therefore, workers' inquiry is not just another method in the academic toolbox. It is not a novel form of participant observation or a clever interview technique. Instead, it is a search for how organising and research can be used together. The aim is not to produce abstract research, but something that can be useful for the struggle. The idea is to discover how research can be part of, and contribute to, a movement against work.

In terms of this project, of which this book is one part, this has meant thinking through what workers' inquiry involves in the context of platform work. I am developing an argument here that I have made previously with Sai Englert and Callum Cant (see Englert et al. 2020), who I also collaborate with on the workers' inquiry project *Notes from Below*.[3] This project is focused around an online publication:

> that is committed to socialism, by which we mean the self-emancipation of the working class from capitalism and the state. To this end we use the method of workers' inquiry. We draw our methods and theory from the class composition tradition, which seeks to understand and change the world from the worker's point of view. We want to ground revolutionary politics in the perspective of the working class, help circulate and develop struggles, and build workers' confidence to take action by and for themselves.

> We argue that an understanding of 'class composition', that is to say, how the classes within society are formed and operate, is an essential task for contemporary socialist militants if we are to develop strategies adequate to our moment without relying solely upon the past for guidance. [*Notes from Below* n.d]

The approach of *Notes from Below* is inspired by Marx's (1880) call for a 'workers' inquiry'. For Marx, this was an attempt to connect the critical analysis of *Capital* to the lived experience of workers. Published in *La Revue Socialiste*, a French newspaper, Marx introduced the project and provided a list of 101 questions. Marx explains that:

> We hope to meet in this work with the support of all workers in town and country who understand that they alone can describe with full knowledge the misfortunes from which they suffer, and that only they, and not saviors sent by Providence, can energetically apply the healing remedies for the social ills to which they are a prey. (Marx 1880)

He notes that the questions do not all need to be responded to – which is good, considering that there are over a hundred – but asks for contacts with workers. As the editors of the *New International* (Marx 1938) noted on the republishing of the call, it provides another version of Marx: not the 'metaphysician spinning out a deductive picture of society from the depths of an Hegelian imagination'; instead 'we see from this series of questions how Marx's decisive point of reference was not a set of abstract categories but the concrete incidents in the daily lives of the workers'. (379)

There is also a clear statement, repeating that of the International Workingmen's Association (1864), 'that the emancipation of the working classes must be conquered by the working classes themselves'. This is a well-known aspect of Marxism, but is too often forgotten – or at least sidelined. It is at the core of workers' inquiry. Marx was attempting to connect theory to practice. However, Marx was by no means an isolated academic writing from afar. He was a militant, ending up in London after being expelled from Germany, France, and Belgium. As a journalist he found ways to support emerging labour movements, as well as later becoming the leader of the International Workingmen's Association – the 'first transnational organization of the working class' – and defending the Paris Commune (Musto 2018). As Immanuel Wallerstein notes, 'he had an extraordinary role in the International, an organization of people who were physically distant from each other, at a time when mechanisms of easy communication did not exist' (quoted in Musto 2018). Therefore, Marx's call for workers' inquiry should be placed within not only his theory but also his practice. It was an attempt to connect research to organising. After all, before workers start organising they need to know what they are organising for and against. As Haider and Mohandesi (2013) argue, Marx 'granted a

strategic role to research'. After receiving a letter in 1881 from a young socialist discussing calls to refound the International Workingmen's Association, Marx responded that the '"critical juncture" had not arrived, and attempting to form one would be "not merely useless but harmful"' (Haider and Mohandesi 2013). Therefore, as Haider and Mohandesi (2013) conclude, 'in this specific conjuncture, inquiry was a more appropriate measure than launching an organization, and was perhaps even its precondition'.

From this initiation by Marx, workers' inquiry was not developed until much later. The ideas were rediscovered by the Johnson-Forest Tendency in the USA and Socialisme ou Barbarie in France. This involved experiments with worker writing, and the longer history has been covered effectively elsewhere (cf. Haider and Mohandesi 2013; Woodcock 2014a). These experiments fed into the development of Italian workerism or *operaismo*. Many of the American and French inquiries probably had a wider reading through the Italian workerists than in their original language. For example, Danilo Montaldi translated *The American Worker* (Romano and Stone 1946). This connection with earlier attempts at inquiry was introduced by Montaldi (2013) as a text that:

> expresses with great force and profundity this idea, practically forgotten by the Marxist movement after the publication of the first volume of *Capital*, that the worker is first of all someone who lives at the point of production of the capitalist factory before being the member of a party … and that it is the productive process that shapes his rejection of exploitation and his capacity to build a superior type of society.

The workerist 'reading of Marx wasn't only against Marxism, but in a certain sense critical of the limits and the blind alleys in Marx himself, stretching and forcing his words to make their ambivalences explode, looking for weapons with which to attack the factory-society of contemporary capitalism' (Roggero 2020, 3).

In the context of Italy at the time, this meant trying to understand the experience of young workers, many from the south of Italy, entering the factories in the north. These were high-tech factories, involved in automotive, chemical, and other industries. The struggles of these workers were increasingly removed from the existing unions and political parties such as the Italian Communist Party (PCI). A key flashpoint was a revolt of young factory workers – 'who became known as the "striped T shirts" [*magliette a righe*]' (Englert et al. 2020, 133)– outside the conference of the neo-fascist MSI party in Genoa in 1960. These struggles entered the workplace too, leading to a series of wildcat strikes. In 1962 one of these strikes was ended by the UIL union (which was close to the Italian Socialist Party) at the FIAT factory in Turin. The union negotiated a return to work without consulting the workers. In response, workers gathered outside the union's offices, leading to three days of strikes that became known

as the Piazza Statuto revolt [*La Rivolta di Piazza Statuto*]. The rift between these workers and the established/establishment left became a focus for workerists now gathering around a journal called *Quaderni Rossi* (Red Notebooks). Rather than condemning these young workers, they sought to understand the process taking place from the perspective of the workers themselves (Wright 2017). It is from this context that their workers' inquiries began.

Workerism and Class Composition

Workers' inquiry provided a way to understand, relate to, and organise with this emerging group of workers. Through this process, the workerists identified a shift in class formation and relations. Instead of discounting these workers as lacking traditions, experience, or organisation (something that still happens with groups of workers today), they attempted to understand how work was being organised in these factories. Unlike older workers in more skilled positions, the application of scientific management was deskilling factory work, with new technology being used to control it. This work differed from that of those more likely to hold union positions – both within the factory and beyond it. This new composition of work was creating the conditions for what the workerists termed the mass worker. It was these mass workers who took wildcat strike action in the factories, and protested against political parties and trade unions. Instead of seeing this as something to be controlled, it was identified as a rupture that could challenge capital in new ways. Potere Operaio, a workerist party active after 1967, would later claim that 'Piazza Statuto was our founding congress' (quoted in Milburn 2019, 27).

This discussion about striking young workers in Italy formed the basis of the analysis of class composition. While these struggles were no doubt exciting:

> Italian operaismo didn't glorify workers and proletarians: it wagered on the possibility that there was a force in them that they could mobilize against themselves, not to extend but to destroy their own condition. It was therefore a workerism against work, refusing a naturalized subjectivity imposed by the capital relation. It was a workerism based on the irreducible partiality of the point of view, on an autonomous partisan autonomy that needed to be built. (Roggero 2020, 3)

Here, workers' inquiry developed from accounts of workers' experience – like the narratives of the Johnson-Forest Tendency – into an investigation of the balance of class forces. In periods of transition, like that of 1960s Italy or the current moment of platform work, it provided a way for Marxists to connect theory to the realities of working-class struggle that were already underway.

Although not used in this way at the time, we can therefore think of class composition as the framework through which workers' inquiries can be

understood. If an inquiry is a spotlight on a particular set of experiences and struggles, class composition is the analysis that places this within a broader context. For the workerists this was a 'question of subjectivity, or rather – as Alquati called it – counter-subjectivity. This was a subjectivity that wasn't only against capital, but also against the capital within us' (Roggero 2020, 3). Rather than the traditional Marxist understanding of false consciousness – that workers have had the wool pulled over their eyes in some way – this was about finding new subjectivities against capital. This meant that the new ways workers were finding to resist and organise were important – there was not already a plan held by party members that just needed to be brought to the workers.

The theoretical core of workerism is an inversion of orthodox Marxism. As Mario Tronti argued, there was a need to 'invert the problem', rather than starting from capital, and to 'change direction, and start from the beginning – and the beginning is working-class struggle' (Tronti 1971, 89 quoted in Negri and Hardt 2009, 291). This was a 'Copernican revolution' against the existing orthodoxy of the time (Turchetto 2008, 287). Roggero further argues that this:

> inversion must be understood in light of the irreducible partiality of the viewpoint: first the class, then capital. Capital is not the subject of History, it is not that which does and undoes, that which determines development and the conditions for its own overcoming. Rather, history is non-teleological, and at its center is class struggle, its power of refusal and its autonomy. (2020, 3)

There is one word of warning to add here: while workerism involves searching for and developing new subjectivities against capital, it is not the search for a new vanguard 'subject'. The composition of the mass worker was specific to the period. Many workerists who became part of the so-called post-*operaismo* became obsessed with searching for a new revolutionary subject. For some, this meant an obsession with digital technology – in which the immaterial worker (Hardt and Negri 2004), cognitive capitalism (Boutang 2012), or the cognitariat (Berardi 2005) would play a central role. However, this attempted reading of class composition misses the process of inquiry with workers, connected to the actual shifting composition at the workplace and beyond. This reminder is particularly important when talking about platform workers: this is not an argument that platform workers are the new vanguard, or indeed that other forms of work no longer matter. Instead, it is an examination of new potential subjectivities.

To avoid falling into this kind of trap, it is therefore important to be clear about what class composition involves. As Roggero argues, 'subjectivity – the base and the stakes of class composition – is not consciousness. Subjectivity isn't revealed, it is produced. Capital produces it, and so can struggles' (2020, 6). This means that inquiry must involve understanding struggles, not just changes

in capital and technology. For the workerists, class composition involved two elements. The first is the technical composition of the working class. This involves the way in which labour power is organised by capital at work, including the labour process, conditions of work, use of technology, management techniques, the degree of cooperation between workers, the relationship to other kinds of work, and so on. This covers the experience of work, something that workers go through on daily basis. However, this should not be read as just a sociology of work, but rather 'as sanction of the relations of force between classes'. For example, the introduction of Fordism and Taylorism into factory work was an attempt to eliminate worker and union resistance, not just a matter of stopwatches, white coats, and assembly lines. Therefore, as Matheron (1999) continues, 'it makes sense then, to analyse the labour process and its modifications in detail in order to understand what "class struggle" means: there has never been more Marxist "evidence"'. Technical composition creates the basis for a leap into resistance and organisation, termed political composition. Workers struggle against capital, capital responds, workers struggle again in a new context. Political composition is therefore 'the self-organisation of the working class into a force for class struggle' (*Notes from Below* 2018). It entails a continual process of political recomposition, with capital responding via new technical compositions to overcome worker resistance. Workers' struggle drives capitalist development, but also poses the possibility of a rupture from capital.

Like the gap between Marx's original call and the Johnson-Forest Tendency, Socialisme ou Barbarie, and then Italian workerists, there was another lull in the practice of workers' inquiry. In the last two decades, however, there has been a resurgence of interest in workers' inquiry. German workerists around the journal *Wildkat* undertook inquiries, as did the Kolinko (2002) project with call centres. The Italian history reached a wider audience with Steve Wright's (2017) *Storming Heaven*, which published much of this material in English for the first time. Keir Milburn (2019) has argued that the wave of struggles following the financial crisis of 2008 was formative for a new core of Marxists who were searching for ways to read the shifting class composition, many becoming influenced by workerism. These became a key part of what Milburn has called 'generation left'. Radicalised students from this movement then entered the workplace, becoming involved in waves of worker struggles (Woodcock 2019a).

The theoretical resurgence of workerism can also be found in the range of new groups and publications, including a special issue of *Ephemera* (see Woodcock 2014a), *Viewpoint* magazine in the US, *Notes from Below* and AngryWorkers World in the UK, *Ankermag* in Belgium, Plateforme d'enquêtes militantes and Acta in France, *Into the Black Box* and *Officina Primo Maggio* in Italy, Invisíveis Goiâna in Brazil – many of which are active in the Workers' Inquiry Network, as well as others including AngryWorkers and Fever, a joint project on class

struggle under the pandemic. Despite this interest in workers' inquiry, it is worth heeding Roggero's warning that 'in recent years workers' inquiry and coresearch have been much talked about, perhaps even too much, in the sense that it would be better to talk about them less and do them more' (2020, 5). However, many of these groups are now experimenting with workers' inquiry, finding ways to update both the theory and practice.

In particular, I want to draw attention to the recent contributions of *Notes from Below*. The project has been running since 2018, including inquiries on manufacturing, education, videogames, supermarkets, healthcare, outsourced workers, higher education, housing, the tech industry, recycling, and transport, both in the UK and internationally – as well as focusing on platform capitalism. Much of this has involved encouraging workers to write about their experiences and struggles, as well as publishing co-writing and analysis. The website also features workplace bulletins that have been used to intervene in struggles. In the first issue, the editor of *Notes from Below* (2018) argued that 'we do not just want to apply the concepts of Italian workerism again today. It provides an important inspiration and a powerful set of tools, but to use these effectively they also need to be updated. We believe, like Alberto Battaggia, that "the best way to defend workerism today is to supersede it."' The updating of workers' inquiry has involved testing the method in practice, as well as developing the class composition framework. This introduced an understanding of class composition as:

> a material relation with three parts: the first is the organisation of labour-power into a working class (technical composition); the second is the organisation of the working class into a class society (social composition); the third is the self-organisation of the working class into a force for class struggle (political composition). (*Notes from Below* 2018).

The addition of social composition came about through the concrete engagement with workers' struggle in the run-up to the launch of *Notes from Below*. We found that the way that workers are socially composed, including 'where workers live and in what kind of housing, the gendered division of labour, patterns of migration, racism, community infrastructure, and so on' had an important impact on class composition (*Notes from Below 2018*). This is, of course, not to argue that technical composition is not important, but rather that 'in all three parts, class composition is both product and producer of struggle over the social relations of the capitalist mode of production. The transition between technical/social and political composition occurs as a leap that defines the working class political viewpoint' (*Notes from Below* 2018). This framework provides the backdrop to the analysis that follows in this book, while workers' inquiry is the method.

For a Digital Workerism

In the context of this book, 'digital workerism' means thinking through and experimenting with the methods and analysis of workerism in the context of work organised via digital technology. It is not intended as a replacement for some sort of 'analogue workerism', but rather to think through the challenges and opportunities of work that involves digital technology. This is also not to say that these workers are some new kind of vanguard, with other workers being asked to fall in behind their struggles. It does not involve staking a claim in the 'digital labour' debates, during which the term has, as Gandini (2020) comments, become an empty signifier. Instead, the 'digital' is intended as part of the critique of this book: returning to the experience of workers, the workers' perspective, and analysing platforms and other digitised parts of capitalism from this viewpoint. Instead of calling for an acceleration or rolling back of changes, this is about reading the struggles of workers on platforms and building an analysis from this point.

As the workerists studied the changing composition of factory work in Italy in the 1950–60s, this book is an attempt to make sense of what is happening with a new composition of workers on platforms. However, as Roggero reminds us, what the workerists found was different to the established left, who were abandoning these workers:

> On the contrary, they were a potential force, bringing with them new behaviors and cultures of conflict foreign to the traditions of the workers' movement institutions, which now comanaged exploitation in the factory. Enough with the tears, with talking about the needs of the victim, with the culture of the left: the revolutionary militant searches for strength, not weakness. (2020, 6)

The focus on platform workers here is an attempt to search for new moments of strength – potential or otherwise. Digital technology is not foregrounded here, but instead tied into the framework of class composition.

This follows on from Marx's understanding of technology at work, an understanding that is too often missed today. No matter how complex digital technologies are – including computers, software, algorithms, fibre optic networks, and so on – they are part of the material world and shaped by it. They are not neutral, but instead designed, made, used, and reused by people within particular social relations. Marx argued that 'it would be possible to write a whole history of the inventions made since 1830 for the sole purpose of providing capital with weapons against working-class revolt' (1867, 563). Here we think of the introduction of technology as the response of capital to working-class struggle. Platforms and the different technologies involved in their use can therefore be understood as a response to working-class activity, rather than

the usual narrative about innovative start-ups as the agent of change. As Marx argues elsewhere:

> In England, strikes have regularly given rise to the invention and application of new machines. Machines were, it may be said, the weapon employed by the capitalist to quell the revolt of specialized labour. The self-acting mule, the greatest invention of modern industry, put out of action the spinners who were in revolt. If combinations and strikes had no other effect than that of making the efforts of mechanical genius react against them, they would still exercise an immense influence on the development of industry … Of all the instruments of production, the greatest productive power is the revolutionary class itself. (1847, 38)

Digital workerism is therefore an argument about the role of technology within platform work. Rather than seeing the worker as an atomised figure who is unfortunate enough to end up working in this way (or indeed, no longer even a worker, if the bogus claims of self-employment are to be believed), workers are an active force that plays a driving role in the changing composition of class. Platform work is a response from capital to workers.

This involves emphasising the class nature of technology. Information is not just data, and algorithms are not just mathematics. Panzieri (2005), a founding editor of *Quaderni Rossi*, argued that the 'development of technology takes place wholly within this capitalist process'. From his analysis of the factory, he critiqued 'objectivist ideologies' of technology, particularly those that could be found in discussions of automation. Automation, whether in the factory or that purported to be on the horizon for transport workers, is not just another step in the development of technology. As Noble (1978) demonstrated in a factory context, it was not the forms of automation that were the most technically superior that became widespread. The forms of automation that better suited the imperatives of capital, such as numerical control, became dominant, as they took control away from the factory floor. Other approaches were cast aside. In the process, the different possibilities of technological progress become hidden, while those that align with capital's interest are followed. As Panzieri (2005) argued, this process involves an attempt to expand capitalist planning 'from the factory to the market', and then 'to the external social sphere'. This is a process that we can see intensifying with digital technology, as capitalist rationality through digital technology is pushed into more and more of our lives.

The framework of digital workerism builds upon Nick Dyer-Witheford's arguments about the 'cyber-proletariat'. His work covers rare mineral miners, factory workers, call centre operators, and software developers, deliberately choosing 'proletariat' as a recognition that 'now, as in Marx's era, proletariat

denotes the incessant phasing in and out of work and workless-ness, the inherent precarity, of the class that must live by labour, a condition raised to a new peak by global cybernetics' (Dyer-Witheford 2015, 13). This is not to say that there is a new precarious class – or 'precariat' to use Standing's (2011) formulation – but that there continues to be a class of people who live by selling their labour power. Instead, drawing on workerism, Dyer-Witheford argues that 'the class struggle, the struggle that continues, always, is the friction and fluctuation at the border of these bands between factions of the proletariat' (2015, 29). The motion of the capital vortex also, however, incessantly alters the strata of which it is composed. That not only capital but its human workforce has a changing 'composition' was the insight of *operaismo*.

Class composition, discussed above, is an important innovation of workerism. This is the first of three concepts that Dyer-Witheford develops from workerism. The second is the understanding of different 'cycles of struggles', or the response of capital to workers' struggles. In the case of industrial workers, this resulted in a decomposition of workers. However, as Dyer-Witheford notes, 'such changes could become the basis for working class "re-composition"' (2015, 30). The third concept is the 'circulation of struggles', which 'entailed the connection of resistances against the extraction of surplus value, which, either by inadvertent knock-on effects of strikes and other actions or by intentional solidarity builds an ever greater mass of opposition to capitalist accumulation' (Dyer-Witheford 2015, 30). While these provided a basis for Dyer-Witheford's development of a 'post-post-*operaismo*' (2015, 12), particularly in conversation with communisation theory, digital workerism takes inspiration from these three concepts of workerism, updating and refreshing them in a new context.

Digital workerism is an attempt to understand how technology is part of class struggle, as well as the cycle and circulation of struggles. Rather than believing the claims of platforms, it starts from a reading that Mario Tronti put forward: that the 'political history of capital' is one of a 'history of the successive attempts of the capitalist class to emancipate itself from the working class' (Tronti 1965). When Uber talks of self-driving cars, this is a new fraction of capital attempting this once again. It is therefore necessary, as Panzieri (2005) argued, to 'comprehend' capitalist technology. The task is not just for us to trace out how digital technology is being used. Instead, the task is to 'subject it to a new use: to the socialist use of machines'. However, before getting to this, technology needs to be understood within current class composition, identifying the strengths and weakness of its capitalist use.

From the discussion above, the introduction of digital technology – whether in the factory, the call centre, or on platforms (Woodcock 2020a) – is understood as a response to working-class struggle. This new composition of work did not emerge by accident or from the clever thinking of a start-up founder. Roggero points out how:

> For example, capital responded to the struggles against salaried work and workers' and proletarians' flexible autonomy with increased precariousness. Starting from the 1980s and 1990s, in the height of neoliberal development, there was, on the one hand, those who called for the return to the shackles of a permanent job, forgetting that these shackles were something which workers and proletarians had previously refused and fought against, and that the new situation bore the marks of this conflict; and on the other hand, those who mistook innovation for revolution, fantasizing that social cooperation had become fully free and autonomous, leaving capital as nothing but a parasitic shell. Neither saw the continuity of and the possibility for antagonism, and thus both assumed the separation between the two classes had already happened: for the former this meant the impossibility of liberation, for the latter that liberation had already taken place. Both are ideological positions, both are impotent, forgetting the problem of revolutionary rupture. And neither see the central issue of class composition as a process that is continuously crossed with conflict. (2020, 7)

The rise of platform work follows on from this recomposition of precarious work. As many workers struggled against the constraints of rigid employment, capital was able to shift the balance of flexibility in its own favour. New forms of work emerged that allowed workers to engage in work in less rigid ways, but only by taking on increased risk. As will be discussed later, platform work is pitched as a new way of working – often even pitched as self-employment – with flexibility at its core. As Roggero warns, responses to precarious work (such as platform work) can be caught between two ideological positions: either the clock has to be somehow turned back and workers returned to forms of work they fought against, or these new forms of work represent some sort of revolutionary change in capitalism. Digital workerism involves developing an understanding that pays attention to the actual changes in the work and workers' struggles.

This means starting from an analysis of the labour process on different platforms. Digital technology is part of the changing technical composition of this kind of work. This means the platform, the software, the smartphone, data collection, the algorithms and so on. Rather than making this the focus of the analysis, instead these are understood in relation to the labour process and the worker. All kinds of technology have to be used in practice and there is often a significant gap between how they are advertised and how they are actually used. Understanding technology within the technical composition of work means situating it within social relations, drawing out the different interests of capital and labour. Digital technology does not have its own agency but is wielded by capital against workers. It is this struggle that the analysis of platforms must focus on.

The Practice of Digital Workerism

A wide range of traditional – and much less traditional – academic research has gone into writing this book. In particular, it draws on three long-running research projects. The first is a project with Deliveroo and Uber drivers in the UK, which has been ongoing since 2016. In a sense this has been an ethnographic project, engaging with workers in their own context, in the back of cars, outside restaurants, on the street, in meetings, at protests and strikes. It draws on four years of accumulated conversations, chats, opinions, perspectives, and so on. At points, it has also meant formal interviews, surveys, and other elements that might be found in more traditional academic research – as well as co-writing (see Waters and Woodcock 2017).

The second is a more traditional academic project. While based at the Oxford Internet Institute, I worked on a series of research projects that focused on comparing working conditions on platforms in South Africa (mainly in Johannesburg and Cape Town) and India (Bangalore). This involved extended periods of fieldwork with platform workers in those three cities, carrying out structured formal interviews that were closer to surveys, as well as semi-structured interviews. Part of this also involved interviews with platform operators and managers. This fieldwork also provided the opportunity to engage in less formal academic practices, providing the opportunity to speak with workers and worker organisations in both South Africa and India. The projects also involved international travel to a range of other countries, which provided the opportunity to do this research elsewhere, including in the US, Canada, Germany, Argentina, Brazil, Belgium, Switzerland, Greece, Italy, and France.

The third is a collaborative project with the IWGB (Independent Workers Union of Great Britain), building upon the previous two. In conjunction with the union, we successfully secured funding for a project on 'Transnational Organising Strategies for App-Based Drivers'. Starting in September 2019 and running until February 2020, this involved developing a two-day international conference for app-based drivers. This provided an opportunity to connect the drivers and organisations from the other research projects through a face-to-face meeting. I contributed to the project in two ways: supporting outreach with drivers and assisting with the design and organisation of the conference, held in January 2020 in the UK.

All of this research is in the background of the book, whether drawn on explicitly or not. However, the research also involved looking across each of these projects, trying to identify the dynamics, contradictions, tensions, and tendencies emerging in platform work. It takes in the findings of these conventional projects, but also looks for other moments of research and co-research with platform workers. This has taken the form of joint writing at some points, but also many conversations with platform workers. It is these experiences of work that provide the foundation for this book. The argument that builds in

this book is not just a matter of reflecting a patchwork of different stories and experiences. It is an argument about how platform work is – and will continue to be – transformed by platform workers themselves.

There is, of course, a paradox in writing this down in the format of a book. This is that platform work is continuously mutating and developing – particularly under the pressure of new forms of worker power, the counter-offensives of capital, and new regulation. The dynamics outlined in this book are subject to continual change. There is no doubt that things will have shifted by the time this book is published. The main argument in this book, however, relates to digital workerism – how and why workers' struggle matters. Some of this matters for academic debates (some of which are directly addressed and criticised in the book), but most of it is significant beyond these limited and often self-referential debates. After all, the debates that platform workers are having across the world are much more useful and interesting.

This builds on the longer tradition of workers' inquiry: that workers' experience matters, not only for understanding capitalism, but also for how we fight against it. As Marx (1845) reminds us, this is not about interpretations, but about trying to change the world. The practice of digital workerism is also about what research can do, in and against the university, to support platform worker struggles. This means thinking about what research means in the contemporary university. A large part of this involves fighting against the current way of thinking about research: that it must produce a certain number of journal articles and a measurable 'impact'. It means challenging the university ethics review boards that actively discourage this kind of research process (while simultaneously allowing all kinds of corporate consultancy) by emphasising legal liability or the need to separate the researcher and the 'subject' that emerges from the reams of forms needed to do research (Badger and Woodcock 2019). Instead we need to ask: what is the point of doing research about work? And if the answer is not to support workers in struggles to change their own conditions, then we have already picked the wrong side. This does not mean that academics should become some species of ivory tower Leninists, but it does mean thinking about how the resources and materials of the university can be put into the service of workers' movement – with, of course, academic workers as part of those movements themselves. There are powerful examples of how academic interventions can do this, for example Lilly Irani and Six Silberman's Turkopticon project (2013) with Amazon Mechanical Turk workers, which will be discussed later. Digital workerism begins from the intervention, working backwards in the case of this book, rather than starting from research. This is also why this book is published in a format that is free to read.

Digital workerism is therefore intended as a correction to other ways of approaching platform work. For example, as Englert et al. argue:

> The rapid growth of the gig economy and platform work has provided a focus for new forms of digital workerism. As discussed previously, platform work has become symbolic of many of the far reaching – and potential future – changes in work. Too often, the focus is not on new forms of class composition this entails, but becomes narrowly concerned with technologies and algorithms. (2020, 136)

Instead, this book builds on a growing set of militant practices. These include Callum Cant's project with Deliveroo (2019), my own project with videogame workers (Woodcock 2019b), as well as an increasing number of workers' inquiries from *Notes from Below* and other publications. These are experiments about the possibilities of digital workerism. They start from the detailed analysis of class composition, in which digital technology plays a role, shaping and being shaped by class struggle.

Digital workerism provides a basis for the analysis that follows. This book starts from the stories and experiences of platform workers. It is inspired by the workerism of the past, of contemporary practices of workers' inquiry, as well as Roggero's powerful arguments for what this means:

> Those who choose the individual path will die alone. That which distinguishes the militant is the hatred for that which they study. The militant needs hatred to produce knowledge. A lot of hatred, studying the core of that which they hate most. Militant creativity is above all the science of destruction. So political practice is either pregnant with theory, or it isn't political practice. We need to study in order to act, we need to act in order to study. And to do the two things together. Now more than ever, this is our political task. (2020, 19)

The hatred here is driven by hearing platform operators who claim that they are not employers. From those enriching themselves on the labour of others, exploiting legal loopholes, forcing workers to take on the risks of the business, immiserating them with false promises of something better. It is about finding moments of strength about how the current state of things can be destroyed. As Nick Dyer-Witheford reminds us: 'Cybernetics was from its start the creation of war' and 'future proletarian struggles should adequate themselves to wartime' (2015, 204). It is to this that we now turn.

CHAPTER 3

Transport Platform Workers

This chapter focuses on the struggles of transport platform workers. Before getting on to discuss different examples, it is first worth noting that there are significant regional and national differences in the way that platforms operate. While there are, as this chapter will argue, tendencies that build connections and collective subjectivities across this kind of work, important differences remain. As I have argued elsewhere (Woodcock and Graham 2019), the emergence of the gig economy has been shaped by nine preconditions that involve different combinations of political economy, technology, and social factors. This is again to stress that technology is not the determining factor, but rather that the following preconditions have an important impact on the form of this kind of work: the strength of 'workers' power' and 'state regulation' (political economy); the 'desire for flexibility for/from workers' (political economy and social); 'gendered and racialized relationship of work' and 'consumer attitudes and preferences' (social); 'mass connectivity and cheap technology' (social and technology); 'digital legibility of work' and 'platform infrastructure' (technology); and 'globalization and outsourcing' (technology and political economy) (Woodcock and Graham 2019, 21).

It is important here to consider the relative strength of workers' power across the different national examples. These shape the forms of political composition, and while not determining them, they provide context. As an example, in South Africa there is a history of militant and politicised trade unions, with connections to anti-apartheid struggles. There have also been recent breakaways to the left of the COSATU union federation. Despite this background, the existing trade union movement has only had limited engagement with platform workers so far. In India, which also has a long history of politicised trade unions (with many unions linked to political parties), there are more examples of existing trade unions attempting to organise in new industries such as IT or

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platform work. The focus in both cases has been on private hire transport, with less connection between the existing trade union movement and food transport workers. In the US, with a very different trade union context, there have been some examples of connections with existing unions. For example, the New York Taxi Workers Alliance (NYTWA) has organised with Uber drivers in New York, but elsewhere there is a more complicated picture. In the case of the formation of the Independent Drivers Guild (involving the International Association of Machinists and Aerospace Workers), Uber paid 'an undisclosed sum to the guild' (Scheiber 2017) reportedly for not engaging with the issue of employment status. Other examples are driver networks such as Rideshare Drivers United, particularly in California, or advocacy campaigns such as Gig Workers Rising funded by trade unions. Again, these have focused on private hire drivers rather than food delivery. However, in the UK there is a long history of organising across both sectors. At Uber, this began in 2014, starting with worker networks, then involving the mainstream GMB union, then the alternative union IWGB (Independent Workers Union of Great Britain). The IWGB also organises with Deliveroo workers following the strikes in 2016, while workers have also formed courier networks and some have organised with the IWW (Industrial Workers of the World) (Cant and Woodcock 2020).

If the existing political composition has an effect on the forms of resistance and struggle that emerge, so too does the role of the state in shaping the technical composition of platform work. While platforms attempt to evade and avoid government regulation wherever possible, there remain aspects of this that they have to adapt to in particular jurisdictions. For example, mirroring some of the discussion above, both South Africa and India have comparatively strong labour laws, although there are significant problems with the implementation of these. In South Africa, the application of these laws in transport work is limited. However, in India there are significant regional differences. In Bangalore there are strict limits on how much taxis can charge for journeys. This means that while it is quite straightforward to start driving for Uber, there are wage caps for drivers, as the cost of journeys is limited by regulation. Unsurprisingly, Uber is lobbying for these limits to be raised, pointing to this as a source of low wages, rather than the choices made by the platform regarding how much of a cut it takes. In the US there are also significant differences by state. There have been a range of recent legal interventions in both New York and California, while in many other states there has been little attempt to regulate. This is exacerbated by the large investment in lobbying by platform companies, many of which are headquartered in San Francisco. Most recently, this has focused on the question of employment status. In the UK, drivers require licences from bodies such as Transport for London (TfL) to work for platforms such as Uber. This means that there is the potential for regulation, but in practice these licensing bodies have done very little to intervene around conditions of work or employment status. For both kinds of work, there are ongoing and

long-running legal cases around reclassifying employment status to the intermediate category of 'worker status', between employment and self-employment.

Each of the nine preconditions plays a role on shaping the specific form of platforms in the gig economy. However, while this framework (Woodcock and Graham 2019) sought to provide a basis for understanding the contours of the gig economy internationally, attention here is drawn to the role of workers' power, not just as one factor among others, but as the key factor. However, drawing attention to other aspects remains important, particularly those that shape the technical and social composition of platform work or provide alternative points of confrontation for workers, such as regulatory bodies. Across these different national contexts there is a drive towards similar models of operations. Transport platforms, as Nick Srnicek argues, are examples of 'lean platforms' that 'operate through a hyper-outsourced model, whereby workers are outsourced, fixed capital is outsourced, maintenance costs are outsourced, and training is outsourced. All that remains is a bare extractive minimum – control over the platform that enables a monopoly rent to be gained' (2017, 76).

Food Transport Workers

Food delivery platforms build on a long history of takeway food. Over two thousand years ago, Ancient Romans could visit a Thermopolium, where there were specialised shops that sold pre-prepared food. In the late eighteenth century, naengmyeon (cold noodles) could be ordered for delivery in Korea. The first recorded delivery of pizza was to the palace of King Umberto and Queen Margherita in Naples in 1889. Dabbawalas started in 1890 in India under British colonial rule. This was a system of lunchbox delivery and return, using both bicycles and trains, to provide a way to feed the increasing workforce in the city. During the Second World War, the British government briefly tested a system of food delivery for people displaced from their homes. However, the largest shift towards food delivery followed the Second World War. With new patterns of mass media consumption – sitting in front of the television – people also changed how they wanted to consume food. Instead of visiting restaurants, many people began to follow the royalty in Naples, albeit much later, having the pizza brought to them. Today, with further shifts in media consumption, it is now possible to buy that very same pizza through a smartphone app.

Throughout this long history there have been people making food and others consuming it. The ways in which this has been mediated have become increasingly complicated. Take, for example, the role of the server in a restaurant. While it comprises a whole range of tasks, at its core it involves bringing food out of the kitchen and to the customer. While we might think of the roles as quite different, there is a similar interaction between a delivery driver and the food commodity. The delivery driver has much further to go, but has less

interaction with the customer. From this basic commodification of food, capital has sought out new ways to profit, beginning from getting workers to make the food and then deliver it to the customers, whether in a restaurant owned by the capitalist or for the customer to eat elsewhere.

When looking at food transport, it is worth remembering what Marx argued: the 'value of a commodity is, in itself, of no interest to the capitalist. What alone interests him, is the surplus-value that dwells in it, and is realisable by sale' (1867, 437). This realisation of value is at the core of food delivery platforms. Neither Deliveroo nor Uber Eats, the dominant platforms in the UK, start off by making food. Instead, they provide a service that connects restaurants to customers, arranging the delivery of food. Like their relationship to food, these platforms also try to distance themselves from the delivery drivers. Drivers are not employed by the platform, but are considered as self-employed independent contractors. The platform attempts to act as an intermediary between restaurants, customers, and delivery workers. In an alternative world, you could imagine how a service like this would be beneficial to every party: restaurants could more easily sell their food, customers could see the range of options available, and delivery workers could work for more restaurants at one time. However, the platform does not enter into this arrangement to facilitate the existing relationships between the actors. Instead, it becomes a mediator that charges the restaurant a fee (as much as 30% of the order total in some cases), charges the customer for delivery (as much as £4–5), and distributes the work and the payment (as little as £2.80 a delivery) to the driver. This represents a concentration of capital, sweeping away the smaller operations of drivers tied to individual restaurants, while attempting to monopolise the market for food delivery – since restaurants want to register with a popular platform, customers have more options, and delivery drivers cannot find sustainable work elsewhere.

This economic model sounds straightforward. Platforms become intermediaries and profit from both the restaurants and the drivers. However, in practice (like almost all economic models) this has proven not to be the case. As Ranjan Roy (2020) notes, 'if capitalism is driven by a search for profit, the food delivery business confuses the hell out of me'. Roy provides a fascinating example of the way these platforms burn through venture capital on a scale that is frankly astonishing. A friend of his ran a pizza restaurant in the US. This restaurant did not deliver pizzas, instead focusing on selling food to be eaten on the premises. However, the owner started to receive calls complaining about their pizza deliveries. The owner found that the Google listing for the company now had a delivery option fulfilled by Doordash (a US food delivery platform), though no consent for this had been given. Although being pulled on to the platform was weird enough, this began to cause problems. Doordash was listing pizzas at significantly lower prices than the restaurant charged, for example with a $24 pizza listed for $16. As Roy explained, this could have been due to Doordash 'artificially lowering prices for customer acquisition purposes' – a common

practice with platforms – but also 'Doordash scraped restaurant websites'. As Roy (2020) and his friend investigated further, 'it was clear that the way his menu was set up on his website, Doordash had mistakenly taken the price for a plain cheese pizza and applied it to a "specialty" pizza with a bunch of toppings'.

This could have been the end of the story; however, Roy decided to engage in some platform economy trolling. Given that they could pay Doordash $16 for a pizza, and that Doordash would then pay $24 to the restaurant, there was the potential to pocket $8 in arbitrage. So Roy and his friend decided to try it out and ordered ten pizzas. A worker from the Doordash call centre called the restaurant, placing the order, then a Doordash driver arrived and paid with a credit card for the pizzas. This transaction cost around $7 for each pizza and its box, meaning that Roy and his friend paid $230 ($160 + $70) and received $240 from Doordash, making $10 in arbitrage – enough for a free lunch. Not content to leave it there, they tested again with another ten pizzas. However, this time they only put dough in the boxes, which at restaurant scale cost almost nothing. This resulted in '$75 in riskless profit' and it went through with no problem. As Roy (2020) concludes, 'was this a bit shady? Maybe, but fuck Doordash.' After all, in 2019 Doordash lost $450 million on $900 million in revenue. As Roy continues: 'Uber Eats is Uber's "most profitable division" … Uber Eats lost $461 million in Q4 2019 off of [sic] revenue of $734 million. Sometimes I need to write this out to remind myself. Uber Eats spent $1.2 billion to make $734 million. In one quarter.' He concludes by noting that 'the only viable endgame is a promise of monopoly concentration and increased prices'. It is perhaps no wonder then that platforms emphasise how important digital technology is to their operations.

Beyond these overall contours, the focus is often on the role of digital technology in facilitating the emergence of the platform model for delivery. This is both on the side of the platform – with the infrastructure to organise the purchase and distribution of food and the widespread use of algorithms – and on the side of the worker – accessing the work via smartphone, with the labour process being controlled algorithmically. There is often little, if any, discussion of the effect this has on the restaurant and the workers – as if, as Marx (1867, 437) argues, 'the value of a commodity is, in itself, of no interest to the capitalist', or the researcher. The next section will focus in on food delivery in London, mostly with Deliveroo, to unpick the experience of the work itself.

Technical Composition

It is first worth noting that the technical composition of the work at Deliveroo has undergone many shifts and transformations since I first started talking to workers in London in 2016. There have been different rates of pay (with an hourly pay rate at first, then a per drop fee only), the introduction of so-called 'Dark Kitchens',[4] shifting balances between cyclists and moped drivers (as well

as cars later), changes to contractual terms, different calculations in the algorithm, and so on. These are all modifications to the overall technical composition of the work.

Before getting into the specifics of the management of the labour process, it is important to outline what is happening with labour power on delivery platforms. Taking food delivery as an example, the platform takes an order from a customer, charging them for the food and the delivery. This could involve separating the price of the food and the delivery, or combining the two. The platform purchases the food from the restaurant, either taking commission or charging the customer a higher price. In order to realise the value of the purchase, the food needs to be delivered within a reasonable time frame to the customer. The platform is selling commodified food delivery, realising value from the restaurant's food (at the same time allowing the restaurant to realise value from the food being produced) and extracting value from the production of the food delivery. As Marx reminds us:

> capitalist production is not merely the production of commodities, it is essentially the production of surplus value … If we may take an example from outside the sphere of production of material objects, a schoolmaster is a productive labourer when, in addition to belabouring the heads of his scholars, he works like a horse to enrich the school proprietor. That the latter has laid out his capital in a teaching factory, instead of in a sausage factory, does not alter the relation. (1867, 644)

Therefore, while delivery drivers are not producing a physical commodity, the social relation involves the platform laying out capital in a similar way.

In the simplest terms, the platform extracts value from the delivery labour process by charging the customers more than they pay the workers. In the case of the factory worker or the schoolmaster, this extraction of value stems from the difference between the value produced for capital and the wage paid to the worker. In many cases, for delivery platform workers this difference is not spread throughout the day, but is instead represented in the piece-work rate paid for a delivery. Capital has attempted to refigure this relationship as one of discrete tasks, rather than employing the labour power of delivery workers for a set length of time. With food delivery, this is because there are peaks of demand from customers. The move away from hourly rates is about trying to remove payment for stretches of unproductive time. However, it is important to point out that while labour power is not directly utilised during the gaps between deliveries, this capacity is required for the service to operate effectively. Having delivery drivers available to meet demand is an important part of the platform offering. This is also the case with private hire drivers, to be discussed in the next section, ensuring that there are available drivers nearby to pick up customers. Moving away from regular hours of employment breaks up the work process into discrete parts. As Marx observed in another context:

> The capitalist can now wring from the labour a certain quantity of surplus-labour without allowing him the labour-time necessary for his own subsistence. He can annihilate all regularity of employment, and according to his own convenience, caprice, and the interest of the moment, make the most enormous overwork alternate with relative or absolute cessation of work. (1867, 687)

This same process can be observed outside restaurants or at other meeting points, as workers wait, unpaid, for app notifications that capital now has use for their labour. There is also a huge pressure, as noted by Roy (2020), to reduce labour costs.

To return to Marx again, the use of piece wages does not transform the underlying relationship. After all, piece rates have been common in factory work. As Marx notes, 'wages by the piece are nothing else than a converted form of wages by time, just as wages by time are a converted form of the value or price of labour-power' (1867, 692). However, in the first footnote of chapter 21 of *Capital*, Marx critiques a position put forward by John Watts that 'piece-workers are in fact their own masters, even whilst working upon the capital of the employer' (1867, 692). Rather than altering the relationship, Marx argues that:

> they furnish to the capitalist an exact measure for the intensity of labour. Only the working-time which is embodied in a quantum of commodities determined beforehand, and experimentally fixed, counts as socially necessary working-time, and is paid as such … since the quality and intensity of the work are here controlled by the form of wage itself, superintendence of labour becomes in great part superfluous. (1867, 692)

This point is worth raising here, as Watts's claims have been restated by both platform capital and others. The platform – so the claim goes – is just bringing together the supply and demand for food delivery. The drivers are not workers, but instead micro-businesses ('in fact their own masters') and even have to pay for their own transport and so on. This is an aspect that Callum Cant has addressed: 'while I was working at Deliveroo, there was one thing I couldn't work out. I provided the bike, the phone, the electricity, and the mobile data that I needed to work. How did that change things?' (2019, 65). He explains that it had become popular to say: 'I basically own the means of production, apart from the app.' However, as Cant details, this is not the case:

> Instead of representing any underlying shift in the deep rhythms of capitalism, platform capitalism is just a change in its surface arrangement. It is important to understand these shifts in composition, but that doesn't entail rewriting the rulebook. The situation facing platform workers is the same as the situation facing the cleaner who has to bring

> their own spray, the chef who has to bring their own knife, or the carpenter who supplies their own tools. They don't profit off the exploitation of their own labour – they are forced to buy stuff in order to work … We didn't own capital – instead we were forced to include tools used in the production process in our 'means of subsistence' – the stuff we buy with our wages to reproduce ourselves and our labour-power. (2019, 67)

From this analysis, the contours of the technical composition and the exploitation of delivery workers can be clearly seen.

Platform capitalism involves a series of technical changes that seek to immiserate and intensify delivery work. As 'just-in-time' methods transformed logistics to significantly reduce costs, so too do platforms as they attempt to drastically lower costs by trying to pay only-for-the-time. This means trying to strip out any unproductive paid time, with workers only paid for moments of productive time: the journey from the restaurant to the customer. Wells et al. (2020) have captured this with the spatial logics of Uber through the understanding of the 'just-in-place' worker. Similarly, the contractual tricks involved in this work attempt to shift the costs increasingly on to workers, allowing the platform to profit even further at workers' expense. On the question of self-employment, Cant is equally clear: 'the claim that workers are self-employed, whilst it might be viable in court, is obviously rubbish to the workers themselves' (2019, 69).

In the piece I co-wrote with a Deliveroo driver (Waters and Woodcock 2017), he summarised the overall technical composition:

> Deliveroo uses a legal arrangement similar to Uber to employ drivers on the platform. Technically, the drivers are categorized as independent self-employed contractors. Deliveroo uses this status to claim that their drivers come from a broad network of entrepreneurs, rather than entering into traditional employment relationships. This implies that drivers are free to offer their services to a range of companies and can even send someone else to complete the deliveries. It is part of a process of 'digital black box labor' in which the labor component of platforms is deliberately obscured. Yet drivers have to pay a deposit to receive their uniform and are expected to wear them while completing pre-arranged shifts. It is an attempt to divest the company from the fiscal protections – minimum wage, holiday pay, sick pay, and so on – afforded to and won by workers. Increasingly, the prevalence of 'black boxes' in society is hiding work and the experience of workers.

In response, we 'tried to peel back the black box, emphasising that work on Deliveroo is not seamless, but rather it takes place in specific geographic locations in the city' (Waters and Woodcock 2017). This meant trying to understand the role of the city, as well as understanding how algorithms

were used to manage the work. Much of this focused on finding the limits of algorithmic control.

As I have noted before, there has been much emphasis on the role of algorithms in the organisation of this work. When I first met Deliveroo riders, the algorithm was often mentioned. However, discussion of the 'algorithm' was often vague, covering anything from how the work was being distributed, the 'thing' collecting data and evaluating performance, or a whole range of other interactions that workers had with the company. At first, this was something that clearly differentiated this work from many other forms of work – both previous forms of delivery, as well as other kinds of work that people might have done before. As one rider explained to me, comparing it to call centre work, where 'you know your boss is breathing down your neck, you don't have that'. Or as another put it:

> I guess that it's this sort of illusion of freedom or something that its, yeah, you just, it's not customer service basically, and you're also not selling anything, if you're as nice as possible you're not going to get a tip, they've already decided before you get to the door if you're going to get a tip or not so there's no reason to be extra nice to people like you're not selling anything, you're not selling yourself so there's no emotional labour in it and I think that's why it's been like a job that I've stuck at longer than other shit jobs because I find it a lot easier to not do that sort of selling yourself side of things.

This 'illusion of freedom' was a result of the contractual arrangements that have become common in platform work. Rather than relying on the coercion of managers and supervisors, the platform has to find other ways to encourage workers. As one driver explained 'you don't have a manager that's sort of going to be expecting you, you're very separate from the company'. This separation meant that there was very little training, leaving workers to figure out many aspects of the work for themselves. As another worker explained, the process of distributing work was often discussed:

> I was told when I was hired that it was based on the person closest to the restaurant but sometimes we are all in a big clump, there's like a central meeting point where everyone comes together and it seems pretty random. There will be like a restaurant down the street and somebody on that side of the clump will get the order. But when somebody is not in the clump you don't see them so you don't know they get an order.

As another worker explained, this sense of being managed by an algorithm, despite its opaqueness, had some positive benefits:

> The work itself is really good … because it is the algorithm and that's the boss … you do get that kind of a sense of freedom even though it's

> not really. Because … the algorithm has rules and we're the ones who, knowing that, the guys in the office are data driven, and we're the ones who make the data. So on my app, when I swipe, I'm making the order change from one step of the order to the next. It's been good in the fact that … once you get into the mindset that you have no interaction with Deliveroo. Other than equipment yeah, I have had no interaction with Deliveroo. You get the emails, the newsletter things, but that is about it. You get the orders and phone calls about orders, but Deliveroo as management, actual Deliveroo people rather than call centre or operations, people who would be employees of Deliveroo, just no, not at all, other than recruitment.

This process meant that the experience of management is very different to other kinds of work. In the interviews I did with cyclists, this often came up in comparisons to call centre work that many had done before. In the call centre, supervisors would walk up and down the aisles, physically observing workers, as well as being able to listen to live and recorded calls (Woodcock 2017). In contrast, physical supervision is missing from platform work. However, like the call centre, large quantities of data are gathered on transport workers. As I found in the call centre, the actual use that this data is put to is unclear, other than being used to discipline and fire workers (Woodcock 2017). Also, in the case of platform work, the data is being collected via the smartphone and away from any kind of formal workplace. As the previous quote about guessing who will get the order shows, many workers developed rival theories about how the algorithm operated, using these to help them make sense of the work.

The algorithm is clearly important for understanding platforms such as Deliveroo, but focusing on the algorithm misses the relationships between the workers, the platform, and the customer. As one worker explained to me: 'They work on the algorithm, we work on the algorithm, they just interpret the numbers that we come out with.' This is an important point to keep in mind in relation to transport platform work. The labour process involves moving something from one place to another – for example, pizza from a restaurant to a customer. However, it also involves generating data about that process: which pizza was ordered, at what time, by whom, how long did it take to get delivered, much did the customer pay, etc. The generation and capture of this data at work is not a new phenomenon.

As Romano Alquati previously argued, information has historically played two important roles at work. The first is 'control information', relating to the capture of information that can be used by capital to effectively control the labour process (quoted in Wright 2016, 114). This can be seen in Taylor's scientific management, with the precise timing of tasks in order to better exert control over workers in the factory. As Braverman (1998) argued, this breaks up the labour process, allowing capital to deskill and degrade work on

the basis of management's control of information. There are clear examples of this at Deliveroo and similar platforms. On the one hand, huge quantities of data are generated through the workers' participation on the platform, while only just enough information is provided in return for the worker to complete the task. Although there have been changes on some platforms, the practice of only providing the details of the journey one step at a time is a good example of this. This prevents workers making an informed choice about which deliveries to accept, making it impossible to reject those that cover further distances. The use of GPS mapping also prevents the worker from deciding on the optimum route, which reduces the choice of how to complete the delivery.

The second kind of information that Alquati discusses is that which 'constitutes the collective legacy of the working class … productive information tout court' (quoted in Wright 2016, 4). This involves the information that is generated, communicated, and shared by workers. In the labour process, capital attempts to subsume and then transform this information into something that can be valorised at work. In a factory, this might involve knowledge of materials, use of machines, ways to improve efficiency and so on. With platforms, this involves the attempt to valorise data, which 'enters the cybernetic machine and is transformed into a sort of machinic knowledge' (Pasquinelli 2011, 5). This is where much of the obsession with the role of data in platform work can be found. No longer is this the obvious knowledge theft of the white-coated Taylorist scientific manager watching over the shoulder of the worker. Instead, it is integrated into the smartphones, software, and GPS tracking of the workers' day-to-day (or perhaps millisecond-to-millisecond is more accurate) activities. Pasquinelli continues to argue that this is a process, which builds on Alquati's much earlier analysis, to 'encode workers' knowledge into bits and consequently transform bits into numbers for economic planning' (2011, 5). Data is, indeed, extracted from workers as part of the process of work on platforms (van Doorn and Badger 2020).

There is an important question regarding how central data collection is to the operation of food delivery platforms. For example, while in South Africa I came across a delivery platform that took a different approach to the use of data. While it has become common sense in research on platforms that they must be collecting and using huge quantities of data, the reality for this platform was different. It collected the data necessary for the running of the platform, including trip data to ensure payment and so on. The algorithm that it developed set the rates for the work, taking into account a changing number of factors. However, beyond this the platform did not store granular data. After all, as they explained, data storage can become very expensive for a start-up company and there was little additional benefit to storing all this data. Here, we can see the 'lean platform' (Srnicek 2017, 91) in effect. Data is used to manage a platform workforce, extracting value from the labour of delivery

drivers. When considered in these terms, it is worth considering what platforms claim they are using the data for.

Deliveroo, in a presentation to investors (Panja 2018), put forward its vision of how digital technology would be used in the future. Deliveroo claimed that one of its key objectives was to 'create its own food offerings, personalised for customers'. This could be a use case for data: with 'hyper-personalized [*sic*] food produced by Deliveroo; lower price of food; create daily use case; greater margin due to supply chain savings and automation'. So Deliveroo can use all the data it has been collecting to know when you are likely to order takeaway food (probably in the evening, maybe at lunchtime) and predict what foods will be in demand. However, in terms of extracting large quantities of data from workers, the picture is less clear. There is talk of automating kitchens that could bring the cost of making the food down to £1, and automating delivery to £1 per order. As of 2018, the average order on Deliveroo was £24.20, and it wanted to reduce this to half 'in the coming years'. Part of this involved a claim that in 'Deliveroo's vision of the future, restaurants will be limited to "special occasions" and people will only cook "as a hobby"' – robots making and delivering food for people who no longer want (or know how) to cook. As with Uber, the long-term plan for the platform is to simply replace workers – despite the huge technical challenges and costs this would involve.

The automation of some functions of the platform has already happened. As Duggan et al. have argued:

> app-workers are typically managed via tracking mechanisms and customer ratings, thus forming one of the fundamental principles of the gig economy in that most core HR processes (i.e. the assignment of tasks and performance evaluation) are fulfilled by one of the two groups of users, the worker or the customer. (2020, 6)

A key aspect of the technical composition of this kind of work is the removal of the physical managerial or supervisory layer. There is no person standing over the worker – or indeed even regularly interacting with them – to increase the intensity of the work. Instead, in trusting the algorithmic methods, an important part of capital's control over labour is lost. The lack of communication means that capital cannot head off the concerns of workers or offer small changes (Cant 2019). This means that even small grievances continue to build with no outlet. Anger stemming from the labour process therefore begins to boil over as workers search for a way to express it.

Social Composition

Given the dream of automation, it is no surprise that workers on these platforms are treated as though they are some sort of temporary inconvenience.

Workers are pushed further into the background through the use of technology. For customers, meeting the worker is just one point in the interaction of getting a food delivery. Most of the time the customer sees only a representation of the worker, waiting to collect the food, moving across the map and so on. Each of these stages appears as already automated. However, behind the screen there is a worker finding a waiting point, meeting other drivers, managing the difficulties and challenges of the work, trying to make ends meet while bearing the risks of the platform.

Workers might appear isolated from each other, particularly as their labour process does not require direct cooperation. It only takes one worker to deliver a pizza to a customer. However, across the city, workers collaborate as part of this distributed logistics network, sharing the same roads and fabric of the city. As discussed before, whether in London, Bangalore, Cape Town, or elsewhere, workers find ways to connect with each other during the work. This is often a result of the lack of communication from the platform, providing a way for workers to share knowledge and tips with each other. The main method workers use to communicate is WhatsApp, developing from the way that many workers already connect with friends and family. In the UK, WhatsApp has become the dominant smartphone messaging system, and is widely used too in India and South Africa. In some cases, workers use alternative methods such as iMessage, Telegram, or Signal. Given that workers use a smartphone as part of the work process, they have regular access to it during work. As one worker explained to me:

> I suppose that the thing about this industry is that it kind of maybe dug its own grave [laughter] it requires everyone to be on a smart phone and people will bring their own networks out and so everyone was so easily contactable once you sort of enter a network its, as I said, I don't take that the fact that its isolating, but I suppose all it takes is someone to say oh we're all in this WhatsApp group, join, and there's a hundred and fifty other people in it.

WhatsApp provides a very cheap method of communicating. However, it is worth noting that WhatsApp was not designed as an organising tool. Anyone who is a member of a few large WhatsApp groups has probably come across the challenges of using it. The pace of messaging can be very high, meaning that if you are not regularly engaging with the group it can be quite difficult to catch up. Once a group becomes sufficiently large, it is challenging to have a conversation. Instead, it becomes more of a broadcast list, providing a way to send out information to large numbers of people. However, it also allows another important feature: the membership lists of WhatsApp groups are available to participants, so it is possible to peel off a smaller group and start discussions. The use of WhatsApp by platform workers has developed from its existing use outside of the workplace. People share updates about their lives, promote things they are

passionate about, complain about things, make plans, and so on. It formalises networks and provides ways for people to stay in contact. Many workers are already parts of networks mediated by WhatsApp, particularly migrant workers, who can use it to communicate with friends and family across the world. This means that layers of networks can be reached through WhatsApp.

These networks – and the way that workers relate to them – are an important part of the social composition of platform work. Rather than isolated workers, many platform workers come into this work through social networks, often involving migration. There is a long and well-developed tradition of migrant worker organising that existed long before platforms. As platforms have rapidly expanded, capital has quickly drawn in workers – often attempting to mobilise these pre-existing networks through special offers and bonuses. When I first met Deliveroo workers in London in 2016, patterns of migration were clear to see: cyclists were predominantly British or European, often students or recent graduates, while moped or motorbike riders tended to be racialised migrants. In different parts of London there are large communities of Brazilian, Bengali, and Algerian and Eastern European workers, for example. Over the past few years these dynamics have shifted, with increasing numbers of migrant workers (and second-generation migrants) also working on bicycles. These existing migrant networks form an important part of the 'invisible organisation' of workers, as Callum Cant (2019) has described it at Deliveroo.

These patterns of migration bring with them traditions of struggle that shape how workers make sense of and respond to the working conditions on platforms. For example, Brazilian workers in London brought with them a community and traditions of self-organising. This has involved forming self-defence groups against motorbike thefts, as well as engaging in strike action and organising. Like communities of Latin Americans working as cleaners in central London (Woodcock 2014b), this has involved radical politics as well as lively traditions of engaging in action. It has also been complicated by splits over support for Bolsonaro in Brazil. In South Africa, many platform workers are migrants from the surrounding African countries, including Zimbabwe, Malawi, Mozambique, and the Democratic Republic of the Congo, as well as internal migrants into the large cities of Cape Town, Johannesburg, and Durban. Many of the migrant workers I spoke to in South Africa were working on platforms in order to save money to return with, or to send money back as remittances. In India, the majority of platform workers who I met in Bangalore were internal migrants, often moving from other cities or the countryside. Bangalore is comprised of large numbers of migrants, as reflected in the wide variety of languages spoken by workers. There were also significant numbers of young workers from Bangalore, drawn into the work by promises of high bonuses. In all these examples, migration, as argued by Papadopoulis et al., has been 'a creative force within … social, cultural and economic structures' (2008, 202). Rather than seeing migrant workers as 'unorganisable' – as too many

people have – this can be reconsidered as bringing new traditions and forms of struggle to platform work.

Political Recomposition

As discussed earlier, the first Deliveroo rider that I met in London was Tim. We walked around central London together talking to other workers, discussing the prospects for getting organised. As we talked about the process, a new moment of political composition was underway. This had been facilitated by the WhatsApp groups and other networks that already existed between workers. Tim had found out about a small trade union on Facebook: UVW (United Voices of the World). At the time, they predominantly organised with Latin American migrant cleaners. As he explained, 'I'm not much of an activist or anything like that, but I just found them quite inspiring, and wanted to go along, just found out about it on Facebook.' They were organising with cleaners at Topshop, and Tim turned up to support them. At the protest, he met an organiser from the IWGB (Independent Workers Union of Great Britain), a similar small union, also not part of the mainstream Trades Union Congress (TUC).[5] The IWGB supported Deliveroo workers on strike in London in 2016. The IWGB is a grassroots union with a membership of predominantly precarious and migrant workers (Però 2019). Workers organising with the IWGB had won in campaigns against courier companies in London, including a 28 per cent pay rise at eCouriers, 17 per cent at CitySprint, and improved terms and conditions at Mach1 (Woodcock 2016).

These victories in a related sector had provided inspiration to some of the workers to start organising. Upon meeting one of the organisers, Tim explained how he remembered seeing the IWGB flag and associating it with the CitySprint strike: 'So I just sort of went over and said "Oh can people from Deliveroo join your union?" And she was like: "Um yeah?!" [laughter]. And I think at that point two other people had approached them as well, so from there we met.' This small group of Deliveroo riders then started attending meetings of the Couriers and Logistics Branch of the IWGB. Tim explained how he:

> got more practical advice about talking to my other drivers and I got a bunch of membership forms and stuff like that. And then from there I sort of started every time I saw someone I'd sort of try and stop and talk. So my performance went down a little bit (laughter) but it was kind of a case of flagging people down as and when I went past them.

Our walk around central London – which would later be followed up with street stalls and many conversations – developed from this.

The strikes played a key part in forming networks of workers. They provided a physical focus point, bringing together workers in groups much larger than those outside restaurants or on street corners. They allowed for debates on tactics and strategy, with mass meetings and the opportunity to meet workers from other parts of the city. Outside of London and with Uber Eats workers, the IWW Courier Network experimented with different ways of supporting workers' struggles. As one organiser explained, the looser network model was 'driven by a perceived need to include as many couriers as possible in collective action whilst recognising that most of them aren't necessarily going to join the union' (Fear 2018).

These strikes were widely shared across social media. In the same way that Tim had found unions in London through social media, workers in other cities reached out to offer solidarity to strikers in London. The struggles were circulated across networks, then reshared, with new strikes taking place across Europe. As Callum Cant (2018) has argued, a transnational wave of strike action started in August 2017. Cant argued that a connection could be seen across Europe, starting in the summer of 2016, then followed by spring 2017 and winter 2017. Across these strikes, Cant pointed out three important trends:

> First is an increase in incidents over time. Second is a sporadic month by month but consistent quarterly increase in the total number of workers mobilised. Third is an increase in the synchronicity of mobilisation across all seven countries. Together these trends confirm that a transnational wave of worker resistance has taken place. (2018)

New forms of organisation began to unfold across Europe during these waves of strikes. As documented in *Notes from Below*, these involved differences and similarities with what was happening in the UK. For example, as Arthur Hay (quoted in Cant, Hay, and Bouvier 2018) in France noted, their organising began in 'September 2016, just after the London strike. I remember we were talking a lot about what you were doing in the UK, that movement was the inspiration. It showed us it was possible to get organised, and we decided to do the same.' As strikes spread in France, there was an attempt, as Bouvier (quoted in Cant, Hay, and Bouvier 2018) explains, 'to make a national union of all the riders, but it has been difficult to organise everyone to do everything at the same time. There is local reality to contend with. Sometime you're alone, sometimes there are a lot of bikers who want to fight, who want to struggle.' There was nothing automatic about strikes leading to forms of organisation, with many challenges along the way. A similar dynamic to the UK was identified in Belgium by Kyle, who described how, when they started organising, it involved 'the courier community. You know, fixie people who love cycling. Within that community you have very precarious and non-white workers. But there are a lot more who work on mopeds' (Cant, Sepulchre, and Kyle 2018). This meant trying to find ways to overcome differences within the workforce,

moving beyond the distinctions created by the organisation of the work. While in some cases alliances were developed between moped riders and cyclists, this was more challenging elsewhere. For example, Kyle reflected on how their success with cyclists came from creating 'a community at first, that's how you organise a movement – by talking about hobbies and shared interests with people was a way to start'. This proved more challenging with workers who did not have the same shared interests around cycling.

Although there are clearly differences between national contexts – as well as those between different groups of workers – a new political composition of workers was beginning to form across Europe. Digital communication allowed for experiences to be widely shared, providing a way for workers in one country to learn about what was happening elsewhere. As Cant and Mogno have argued, this 'communication took on the form of collective inquiry, through which workers thrown into an unfamiliar composition of capital began to understand their contexts' (2020, 405). In the European context, this was strengthened through in-person meetings of organisers. On the back of the strike waves, an international meeting of food platform workers was held in Brussels in October 2018. This brought together workers from 12 different countries, including Austria, Belgium, Finland, France, Germany, Holland, Ireland, Italy, Norway, Spain, and the UK – representing 34 different worker organisations. The meeting founded the Transnational Federation of Couriers. As Clara Mogno (2018), one of the organisers of the meeting, explained:

> The appeal has been launched from Brussels, and the projected struggle immediately takes on a transnational character. Platform capitalism operates across the globe, but differentially. Now more than ever, it is essential for all workers in the so-called 'gig economy' to be able to access inquiries on the many local forms of exploitation. This would allow for the prediction of possible transformations in each country. At the same time, workers must prepare a counterattack which does not limit itself to Europe, but which can fight in the same weight-class as the platforms themselves; that is to say, on a planetary scale … The abolition of competition between workers fostered by gamification and piecework. The creation of transnational and transcontinental alliances. Help and guidance for all who seek to struggle against digital exploitation. The formation of an open and solidary federation which advances an intersectional struggle. These are the aims of the first Transnational Federation of Couriers.

As can be seen from this explanation, there are shared grievances and demands that emerge from the organisation of platform work. As these platforms, including Deliveroo, Uber Eats, Glovo, and Foodora, spread across Europe, they have attempted a new technical composition of delivery work. In response, workers have developed shared responses and, in the process, coordination across borders has begun to develop organically.

These processes have not been limited to Europe. There are increasing connections being formed between food platform delivery workers across the world. This includes networks of food delivery platform workers emerging in India and China as well as Hong Kong, Taiwan, and Japan. In early 2020 an organiser from Hong Kong visited the IWGB in London, meeting Deliveroo riders and sharing similar stories about grievances and the actions that workers have been taking. At some points, this is facilitated by common platforms – with Deliveroo operating in the UK, Europe, and Hong Kong, while Uber Eats increasingly operates across the world – but where the platforms are different, there remain shared aspects of workers' struggles. The conversations between workers in different countries are comparatively easy to facilitate, particularly through the widespread use of software such as Zoom.

These connections can also be clearly seen in the wave of coordinated strikes in Latin America in 2020. These involved strikes against Uber Eats, Glovo, Rappi, and iFood across countries including Costa Rica, Guatemala, Brazil, Mexico, Ecuador, Chile, Peru, and Argentina. The strikes were called in protest at working conditions, particularly following the global Covid-19 pandemic. These built on demands being made in different countries that demonstrate a familiar pattern: higher wages (including a minimum rate), protective equipment for workers, improved terms and conditions, lack of accountability and deactivation by the platform, as well as justice for workers who have been attacked or killed. In Brazil, which has been greatly affected by Covid-19, the strikes were particularly large. For example, during the strikes of 1 July 2020, thousands of workers participated in São Paulo. Pictures of the protests on Paulista Avenue (a key street in the city) were widely circulated on social media. Migration between the UK and Brazil meant that drivers began to connect over the strike, sharing solidarity messages and videos.

From 2016 to 2020 there were waves of struggles that organically forged connections on a local level and then reached out transnationally. This emerging political composition has been shaped by a shared technical and social composition that means that many workers relate to their work in increasingly similar ways. The demands raised by a delivery worker in London, São Paulo, Paris, Bangalore, Cape Town, and so on increasingly align. The patterns of migration and experiences of other kinds of work and struggles feed into this new composition. This raises important questions about forms of successful and sustainable organisation, but it demonstrates that food platform work is far from isolated, and is alive with resistance.

Private Hire Drivers

As the example of food delivery workers shows, an understanding of the changing technical and social composition of the work can provide important

insights into the forms of struggle that emerge. There are many similarities between food delivery and private hire drivers. Uber is perhaps the most studied example of this kind of work – and, as noted before, one in which the obsession with algorithms is most pronounced. As I have argued with Cant (Cant and Woodcock 2019):

> What has taken place is a huge attempted decomposition of workers by capital. Taking Uber as an example, drivers who may have previously worked for a local taxi company now find themselves as bogus self-employees engaging with a multinational platform. Along with many other workers drawn onto the platform due to the promise of flexibility – or lack of employment options elsewhere – they are now part of a workforce that is estimated to be around three million. As Uber has sought greater amounts of venture capital, it has also savagely driven down wages and tested and refined new forms of algorithmic management. Unlike the diverse and disconnected taxi companies, this decomposition has also created shared conditions among many workers logging onto the Uber app. These have forged new international connections through which tactics and strategies are being shared, laying the basis for a powerful new recomposition of platform workers.

Before getting on to discuss this new political composition, it is first worth briefly reflecting on the key dynamics of the technical recomposition that has taken place.

Uber has become an important focus for this kind of work because of how widespread the platform is. This means that when discussing platform work, Uber often becomes a stand-in for the diversity of different forms of work that this can involve. Ravenelle (2019) has noted this with academics, as many may already have experienced this kind of work as customers. However, there are some important differences from food delivery. The first is that unlike the process of buying food from restaurants and selling it to customers, private hire involves a more straightforward relationship. The platform sells a commodified transportation service, providing a customer with a journey. As noted earlier, this is not a new offering. What is new is the way in which the work is organised. The platform takes the booking from a customer and then distributes this to a worker. Taking Uber as an example, this involves a claim that it is not employing these workers, but instead only providing the technology to connect customers with drivers as independent contractors. For Uber, this is a hugely beneficial arrangement. It means having a large pool of potential workers to call upon when needed, only paying them for the time when they have a customer in the car, not having to meet any existing employment regulations, all while forcing workers to take on the risks of the work by paying for their own 'means of subsistence', as Callum Cant (2019, 67) referred to it.

This means that platforms such as Uber can lay out their capital in a way that is attractive to venture capital investment. After all, large wage bills and commitments to benefits look like more of a risk. Huge investment has poured into Uber, allowing for rapid expansion across the world. At first, this offered strong incentives for drivers and customers as the platform aimed to become a monopoly. Competition with rival platforms meant that many workers were able to make good money at first, particularly when venture capital money could be spent to pay drivers more than the cost of the trip. However, platforms are not able to run at a loss long term, even if the plan is to automate drivers away. The core business model is therefore one that is familiar from many other forms of work: Uber aims to pay drivers less than it charges the customer. Although this percentage differs between cities and regions, it represents a period of unpaid work for drivers. The platform also benefits from having drivers waiting around unpaid for the next job. After all, one of the selling points of these services is that waiting times are very short, something that can only be achieved with a large surplus of workers.

In a similar way to food platforms, the new technical composition of this work relies on data collection and algorithmic management to control workers. However, it is worth drawing attention to the differences from private hire transport. For example, in London the majority of the vehicles used by Uber drivers are leased Toyota Prius cars. This means that many workers are locked into high weekly payments, through having to choose a car that is acceptable on the platform. Workers need to hold a specific private hire licence, issued by Transport for London. While theoretically drivers have the freedom to work whenever they want, the cost of the 'means of subsistence' (Cant 2019, 67) means that this work is only practical full time and has to include busy periods such as weekends and evenings. The costs are significantly higher than working in food delivery with either a bicycle, moped, or motorbike. This kind of work is also often racialised, with many migrant workers. In London, for example, private hire transport is split between the traditional black cabs (which can pick up passengers from the side of the road) and minicabs (which have to be ordered in advance). The majority of black cab drivers are white British, and entry into the work involves passing 'the knowledge', a memory test of London's geography. In comparison, the majority of minicab drivers are racialised and migrant workers. Uber recruited heavily among minicab drivers, with many firms closing as workers switched over. This meant that, like food platform work, these workers did not enter platform work as isolated individuals.

This is different to the composition of the work in the US, where many of the barriers to entry on platforms can be much lower. For example, in some parts of the US workers do not need a licence and can use a much wider (and cheaper) range of cars. This means that part-time work for platforms is practical and much more widespread. In countries where levels of car ownership are much lower, such as South Africa and India, platforms engage in other practices to

bring workers on to the platform. While in Bangalore, I had a long conversation with a driver who worked mainly for Uber, although he would also work for the rival Ola when there were special offers. He had been recruited by Uber with the promise of being able to make large amounts of money and assurances about monthly income. He had moved into the city, selling family land in the countryside to fund the purchase of a car. However, once he had taken on this large level of debt, the initial special offers from Uber began to decline. He was left with high payments to make, which were incommensurate with his actual income. He had also lost the family land that provided an alternative means of surviving.

For those who do not have the means to access a vehicle, platforms have provided ways to bring workers in without one. In both India and South Africa, it was common to find workers who were driving a car owned by someone else and being charged very high rental fees that were sometimes collected directly by the platform. As a worker in South Africa explained to me, this meant he had to make the rental fee each week before he earned any money. When he was ill for a week, he failed to make this minimum and the platform charged him, so that he effectively lost money. Many workers start through this arrangement, attempting to save enough money on low wages to take on the debt of their own car.

Across these different arrangements, shared grievances begin to emerge from the labour process: low pay, safety concerns, management issues, and fear of deactivation. As with food delivery workers, the roads provide meeting points for workers. While there are not the same meeting points at restaurants, drivers still find places to meet, share experiences, and join WhatsApp groups. Algorithmic management has been a common focus of grievances, mirroring the issues that other platform workers have found. In particular, this form of management has proven opaque to many workers. Unlike food deliveries, transportation can often involve large distances and significantly different costs. While there are peak times for demand, these are more diverse than the mealtimes of food delivery. Transport platforms have experimented with different ways to encourage workers to stay on the app, with Sarah Mason (2018) identifying the use of gamification and bonuses to compel Lyft drivers to keep working. An important part of this has been the use of customer ratings to discipline workers. Unlike food delivery, customer ratings play an important role in the management of private hire drivers. In many cases, this means that drivers have to go above and beyond to ensure that customers provide them with a good rating. In some cases, cutoff points for acceptable ratings can be as high as 4.5 out of 5 stars, meaning that any ratings below perfect put the driver at risk of deactivation. This means that workers must put up with customers' whims and bad behaviour, given that low ratings can risk their livelihood. The main risk here is deactivation from the platform, which can be difficult to challenge. Being removed from the platform means that drivers cannot work, while still having

to bear the costs of the vehicle, insurance, and so on. These forms of managerial control often have to operate within the employment status debate – platforms exert control over the labour process, while simultaneously attempting to look as though they are not employers.

From these grievances, workers have found ways to resist. The political recomposition of private hire drivers has a longer history than food delivery platforms. For example, Uber drivers in London have been organising since 2013. At first, workers shared problems with the work and had initial meetings with the platforms. These networks later formed into the LPHADA (London Private Hire App Based Drivers Association), which became part of the larger GMB union. Drivers launched an employment tribunal case against Uber in 2016, but left after dissatisfaction with the union to join the IWGB (which would later organise with Deliveroo workers). Across this longer history of organisation there have been experiments with different ways of organising, including directly against platforms, through the courts, and targeting the regulator Transport for London and the Mayor of London. This has involved strikes and protests, as well as campaigning on social media.

In 2019 this emerging movement of private hire workers began to organise transnationally. This is another instance of the third example from the start of this book: that these platforms have laid the basis for international networks of workers. The example of the driver in Cape Town came up time and again while I was doing international research with Uber drivers. Similarly, workers in London were increasingly building networks and connections with drivers in other countries. While travelling for work, I was often able to take the opportunity to meet workers and share stories and experiences from London.

The internationalisation of private hire drivers' struggles intensified after Uber announced that it would be launching an IPO (Initial Public Offering). This provided a clear focus for coordinated action between workers in different countries, bringing together and strengthening networks that had been emerging over the previous few years. Given the importance of the IPO to Uber, it also provided a test of whether worker action could be effectively organised on an international basis. After all, Uber had warned in documents released in the run-up to the IPO that it expected that 'driver dissatisfaction will generally increase' (quoted in Bary 2019). Given that an IPO involves investment, it provided an important opportunity to damage the reputation of Uber. In the background to all of this, and indeed mentioned by Uber, was the issue that if it 'were forced to classify its drivers as actual employees rather than contractors, that change would weigh on its financials. Employees are entitled to legal protections around wages and overtime' (Bary 2019). This meant that coordinated workers' struggle around the IPO had the capacity to disrupt Uber in both the immediate and the longer term.

On 8 May 2019 driver networks in the US called for a two-hour coordinated strike to coincide with a day of action against Uber (Franklin 2019). In

WhatsApp groups in the run-up to the strike, increasing numbers of drivers from around the world stated that they would participate: in France, Scotland, England, Nigeria, Chile, Brazil, Panama, Costa Rica, Australia, and the US (including New York, Los Angeles, San Francisco, San Diego, Seattle, Dayton, Minneapolis, Chicago, Washington DC, Boston, Philadelphia, and Atlanta), and more. Of course, this did not mean that all Uber drivers in those locations went on strike, but rather that there was enough organisation present that networks were attempting to organise action in that location.

The action gained widespread coverage in international news. It was discussed as one of the reasons why Uber's IPO failed to meet its lofty expectations. The energy and visibility of these actions spurred different networks to start formalising. Later that year, in December 2019, the first national meeting of worker and union organisers in the transport platform sector met in Mumbai. The conference had 157 delegates and 15 unions present, representing 25,000 workers across 11 major cities. It launched the Indian Federation of App-based Transport Workers (IFAT), a broad coalition that also included delivery drivers. The first general secretary of IFAT, Shaik Salauddin, argued that it was 'a historic moment and marks the growing strength of local union of Ola and Uber and other app-based drivers across India and their desire to speak in a unified voice' (quoted in Hussain 2019). IFAT received support from Biju Mathew, the secretary of the NYTWA (New York Taxi Workers Alliance), building connections along the lines of migration between New York and India, and sharing experiences and strategies between the two. It also involved support from the ITF (the International Transport Workers Federation), forging links with the established trade union movement – something that has proven harder to achieve in other countries and regions. Sangam Tipathy, the assistant regional secretary for the Asia Pacific of the ITF, pointed out that it:

> emerged out of 2 years of work and several meetings amongst the driver leadership from across the different states to network them, share stories of unions fighting for drivers rights against the app-based and rideshare companies in other parts of the world and help build the campaigning capacities of the unions. (ITF 2019)

Building on these successes, I supported members of the IWGB, including the UPHD (United Private Hire Drivers) branch and staff, on a project focusing on 'Transnational Organising Strategies for App-Based Drivers'. Starting in September 2019, this involved connecting workers from these previous struggles, developing existing networks, as well as introducing workers who I had met during my periods of academic fieldwork. The project built towards a convening of drivers held in January 2020 in the UK. The outreach was mostly organic and often led by social media. There are some important observations to be made here. First, digital technology has greatly reduced the barriers to

communication, both within existing worker communities and across the world. The use of social media campaigning by many groups of workers has made struggles more visible, particularly those that would often be hard to find from another country. However, this also means that groups focusing on social media are much easier to find. Therefore, care has to be taken in reading the activity of groups from their social media output – after all, it has become common to find something projected on social media that might not actually be reflected in reality. This can be particularly acute with organisations that are facing off against a global platform such as Uber. There were a number of instances in which rival groups were operating in a region or country, and from social media it can be difficult to understand the differences. The conference therefore provided an important opportunity for worker organisers to share and exchange experiences in person.

Despite the ease of connecting beyond national borders, there remain other constraints when trying to organise transnationally. The first is that while the cost of online communication might have fallen drastically, the cost of travelling in person certainly has not to the same degree. An international conference presents serious logistical challenges, including the securing of visas and documentation. This is something that can be particularly challenging for platform workers, given the lack of employment contracts, variable earnings, and so on. The conference successfully brought together workers from 23 different countries across six continents. While the majority worked for Uber, there were also Ola, Lyft, and other platform workers represented. Nicole Moore (from Rideshare Drivers United in California), was quoted in the press release for the conference (Richardson 2020), arguing that:

> This is unprecedented. App-based transport workers are coming together from around the world because we are all subject to the same exploitation. Multinational corporations like Uber make billions from our labour and work to undermine labour rights for everyone, while we're left struggling to survive on poverty pay. Global exploitation calls for a global resistance strategy and that is exactly the work we will begin at the conference.

This international conference was followed up by a broader 'Global Digital Workers Conference' organised by the Transnational Workers Network on 25–26 June 2020. As they explained (quoted in Mobile Workers Alliance 2020) in the call for the conference:

> Join the first global initiative of workers in defense of their rights against the abuses by transnational companies in the platform economy …
>
> The 'Global Digital Workers Conference' aims to be the culmination of the process of creating a global platform that defends the rights of gig workers and taxi drivers. This initiative, the Transnational Workers

> Network (TWN), seeks to organize more sectors and connect workers in the so-called 'gig economy' or 'uberization of the economy' in which workers are affected by the deregulation processes that allow the growth of transnational companies through misclassifying workers and calling them 'false self-employed' or 'independent contractor' …
>
> Currently there are organizations participating from the United States, Spain, France and the United Kingdom. At the end of June we will do the public presentation. Within this framework of collaboration, different platforms of workers and unions are exchanging experiences and collaborating in our investigations from different countries.

This conference included platform workers more widely, including food platform worker organisations from France, Collectif des Livreurs Autonomes de Paris (CLAP), and Spain, RidersXDerechos, as well as private hire, the broader Mobile Workers Alliance (MWA), and support from the large US union Service Employees International Union (SEIU).

Across both food transport and private hire driver platforms, there are a number of initiatives unfolding to bring workers together to share experiences and plan collective struggles. The existence of multiple initiatives – with talk of more emerging at the time of writing – shows the exciting potential within the new political composition emerging in these sectors.

CHAPTER 4

Online Workers

Delivery and transportation are forms of work that must happen in a particular place. They are easy to stumble upon during our day-to-day lives. However, other forms of platform work can be much harder to gain an insight into. This chapter will discuss these other forms of online work. While all work is, of course, linked to location by the fact that a worker is completing it somewhere, there has been a growth of work that is mediated online. This does not mean that location is not important, but rather that it matters in a different way. The two main forms of online work are freelancing – which may entail tasks such as graphic design, copy-editing, software or website development – and microwork – which involves short tasks broken apart and distributed to workers across the world. The differences in the character of both these kinds of work has meant that the previous label of 'unorganisable' (which had been applied to all platform workers) is now increasingly applied to these online workers. After all, so the argument goes, these workers do not meet each other on the streets, so how could they start building the networks they need to organise? The aim of this chapter is to show that online workers can – and indeed are – organising against platforms.

Origins of Online Work

Before moving on to talk about the experiences and activities of these platform workers, it is first worth stepping back to consider how this work came into being. The first underpinning factor is global labour arbitrage. Work has always been distributed unequally across the world, between different countries and regions. This has been fundamentally shaped by histories of conquest, colonialism, and imperialism. Historically, capital has been able to exploit these regional and national differences, creating networks of production and circulation based on – and indeed exacerbating – these divisions. Although there are

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long histories of this alongside capitalist production, the introduction of forms of digitised work has increased the capacity for these new global divisions of labour – which of course also rely on global networks of production for the infrastructure and technology that allow them to work.

One of the most visible – or perhaps audible – examples of this is call centre outsourcing. The relocation of call centres has followed the linguistic lines of imperialism (Huws et al. 2001), with call centres moving from Britain to India, or from Portugal to Brazil, for example. The legacy of imperialism means that many workers in the previously colonised countries speak the same language as the customers in the imperial centre, while the cost of their labour is significantly less. The integration of telephones with computers meant that it was possible to route calls internationally, without significant cost or challenges to the technical quality of the conversation. While in many cases this led to a huge shift in call centres to India and the Philippines (Sallaz 2019), it also allowed work to be combined in new ways. Some of this involved a form of virtual outsourcing, in which 'firms routinely reroute calls from UK to Indian centres when UK operators are busy, at night or weekends, or when overtime rates apply at home' (Glucksmann 2004, 807). As Glucksmann argues, this kind of outsourcing involves both 'organizational' and 'spatial' dimensions, building on 'industrial and organizational divisions of labour' that 'enmesh with global divisions of uneven development' (2004, 801). Call centres that followed this model initially gained competitive advantage, which later reduced as competitors adopted the same methods. This led to a context in which the 'only way to continue to compete is to use the, now established, work system more intensively' (Ellis and Taylor 2006, 6).

These dynamics in the call centre became the testing ground for new methods of technological surveillance and control, many of which would later be developed in the platform model (Woodcock 2020a). However, as Taylor and Bain (2004) argue, the movement of call centres 'should be regarded as an extension, however dramatic, of the spatial dynamic that is inherent in the call centre project'. This kind of work organisation starts by pulling together workers in a single workplace and having them call – or be called – by remote customers. It therefore provides a virtual interface between customers and companies, while driving down the costs of these interactions.

Online work develops from this same organisational and spatial dynamic. It involves a much more diverse set of tasks than simply speaking to a customer and can draw on a much larger pool of potential workers. For example, there was much early hype surrounding the discovery of the capacity of a 'crowd' of participants to solve problems. Crowdsourcing develops this idea to fill a particular niche for capital. The term was coined by Howe (2006) in the techno-evangelist magazine *Wired* as 'the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call'. Rather

than just taking the communication interface of the company, as in the case of the call centre, this takes aim at other aspects that would have previously been internal to a company. This is the first step towards microwork – often posited as a 'competition' to complete a task: designing a new logo or coming up with a new flavour of a product, for example. However, most of these outsourcing tasks involve a new form of cooperation. As Marx previously argued, 'as a general rule, labourers cannot co-operate without being brought together: their assemblage in one place is a necessary condition of their co-operation' (1867, 447). However, with digital technology it has now become possible to assemble huge numbers of workers across the world to cooperate indirectly under the command of capital. This new cooperation of a dispersed crowd is what microwork allows.

Automation

From this origin of outsourcing and crowdsourcing, platform technology has facilitated new ways to manage remote and distributed workforces. Here, crowdsourcing is transformed into online freelancing for large tasks, or crowdwork through new methods of breaking up and distributing smaller tasks. In a sense, online freelancing is an extension of the longer histories of freelance work, with tasks now subcontracted across increasingly global platforms. For crowdwork, this builds on a technical organisation of work which 'relies on dyadic relationships consisting of one buyer, one supplier and a well defined final deliverable' (Kaganer et al. 2013, 25). It is hard to break up complicated tasks into smaller fragments for distribution in this way. Instead what is needed is a clear output: the tagging of an image or the transcription of a small part of text, for example.

The Amazon Mechanical Turk (MTurk) platform provides a clear example of this process. Amazon distributes HITs (Human Intelligence Tasks) to a large group of workers. The platform does not provide a way for these workers to collaborate on the discrete tasks, nor to know what large piece of work they are contributing to. The HITs are posted as microtasks, with workers competing for them. The name of the platform alludes to the Mechanical Turk. This was an eighteenth-century hoax: an automaton made to look as though it were playing chess while hiding a human player inside. The Mechanical Turk was widely displayed and toured, although it would later be outed as an illusion. While it was on display in London in 1784, Edmund Cartwright visited it. Apparently, he was so taken with it that he questioned whether 'it is more difficult to construct a machine that shall weave than one which shall make all the variety of moves required in that complicated game' (quoted in Levitt 2000, 31). Spurred on by this, Cartwright filed a patent for a power loom within a year (Levitt 2000, 32). The introduction of the power loom is often cited as a key development in the

industrialisation of weaving during the Industrial Revolution. Hundreds of thousands would be built, driving out skilled weavers and creating conditions that William Blake would refer to as 'dark satanic mills'.

This is therefore a particularly interesting choice of name by Amazon. First, it implies that Amazon is hiding workers behind the platform façade. Indeed, Trebor Scholz (2015) argues that Amazon's 'crowd sorcerers work with coolness and the spectacle of innovation to conceal the worker'. This can also be seen with the abbreviation HIT, using and then removing 'human' from the name of the task. This deliberate hiding of workers' labour on the platform makes it appear quite different to the transportation tasks previously discussed. Platforms, like an increasing proportion of our society, operate like a 'black box', meaning a 'system whose workings are mysterious' (Pasquale 2015, 3). As Scholz (2015) has argued, the labour process at MTurk can be understood as a form of 'digital black box labor'. However, this labour is being used for particular ends. For example, Amazon itself has previously used the slogan 'artificial artificial intelligence' for MTurk. This is applied to tasks that, for now, rely on the human ability to interpret things, whether images or emotions. These kinds of tasks are those that, so the current AI (artificial intelligence) hype goes, could soon be performed by AI.

MTurk is therefore part illusion. It provides the illusion of automation, or as Astra Taylor (2018) has described it, 'fauxtomation', to make it appear as though the work has been automated. In fact, the technical challenges of artificial intelligence have led to some companies opting to use MTurk instead, as 'some startups have worked out it's cheaper and easier to get humans to behave like robots than it is to get machines to behave like humans' (Solon 2018). Expensify is one example of this. It was positioned as an automated app for business expense management, claiming to have developed 'SmartScan technology' to automatically transcribe receipts. However, it was later discovered that the company had done no such thing. Instead the scanned receipts were posted as HITs to MTurk. As one MTurk worker and advocate, Rochelle LaPlante, said, 'I wonder if Expensify SmartScan users know MTurk workers enter their receipts', including personal and sensitive data such as 'someone's Uber receipt with their full name, pick-up and drop-off addresses' (quoted in Solon 2018).

The reality, as companies such as Expensify have found, is that automating these tasks requires the development of machine learning algorithms trained on high-quality datasets. These datasets still have to be produced by real workers. The reality for workers is that requesters (those posting HITs) increasingly treat workers as part of their software, plugged in to wider assemblages of algorithms and automation. Indeed, they do not even have to get involved with the messy business of hiring and firing people. As Jaron Lanier says, this involves 'a sense of magic, as if you can just pluck results out of the cloud at an incredibly low cost' (2014, 178). This low cost is the result of much work being very poorly paid (Hara et al. 2018), and the exploitation both of international differences in the cost of living and people who cannot find work elsewhere. Clearly, Amazon's offering can be quite attractive to capital.

However, MTurk represents something different from the chess-playing automaton: it is also helping to develop the basis upon which automation could happen in the future. As Cartwright saw the original illusion and the potential for greater automation, so too do many of MTurk's clients (those posting work). The huge quantities of human labour being exploited on MTurk therefore provide a route towards automation, as well as a cover for failing to have achieved this so far. This goes far beyond the original illusion. For example, Uber's dream of automated vehicles relies upon the training of datasets by microworkers (Gray and Suri 2019). This ties in with broader claims about the coming automation of work. The claims vary: either 47 per cent of occupations are at high risk of automation in the next two decades (Frey and Osborne 2017), or half of all work could be automated (McKinsey Global Institute 2017), or risks vary across countries, with 14 per cent of jobs being highly susceptible to automation (Nedelkoska and Quintini 2018). MTurk therefore needs to be understood within this drive, both real and apparent, for automating work. However, as the later chapters will discuss, automation of work needs to be understood as developing out of the existing economic and power relationships in the workplace (O'Neil 2017; Eubanks 2018; Noble 2018), not as some deterministic drive.

Automation is, in a sense, an important part of less discrete online work. Online freelancing can take in a wide range of different activities, but it is also tied to the contradictions of outsourcing and forms of creative work. Unlike discrete HITs, online freelancing has an element of autonomy, something that brings risk for capital as the labour process takes place outside the boundaries of the traditional workplace. Capital has struggled with the need to 'balance' the 'insatiable need for a stream of innovative ideas with the equally strong imperative to gain control over intellectual property' and workers (Huws 2010, 504). As Braverman observed, after 'mental labour is first separated from manual labour', it 'is then itself subdivided rigorously according to the same rule' (1998, 78). This specialisation can be seen in crowdwork and outsourcing, with tasks being carved off and then subjected to greater control, deskilling, and devaluing. The reality has meant increasingly complex forms of surveillance and control – both with online work, and then increasingly applied to workers within the boundaries of organisations. The pressure for automation is there too with online work, as training algorithms does not just involve training datasets, but also finding ways in which 'workers' knowledge is first routinized, then codified and transferred from its variable (human) component to its fixed, machinic form' (Dyer-Witheford 2015, 178).

Technical Composition

Online work has grown enormously in scale. As Mark Graham (2015) has previously argued, there are now 'millions' of online workers in 'low-income countries like Kenya who can use online work to transcend some of their local labour market's constraints'. However, in escaping the local labour market conditions,

these workers enter what we might call new 'planetary labour markets', with Upwork and Freelancer, the two largest English-language platforms, claiming to have 12 and 25 million workers signed up each (Graham and Anwar 2019). It is worth noting that this figure is not the same as those who have actually secured paid work on the platform – a figure that is much lower. The global scale of these marketplaces forces 'many workers to desperately try to underbid each other to attract short-term contracts. And, because contracts are largely unregulated, stories of discrimination and exploitation abound.' Despite this increasing digital mediation of work, there remain important geographic features and dynamics. Much of the work, as noted earlier, follows linguistic lines of imperialism. Companies in the Global North request the majority of the work, which is mostly completed by workers in the Global South. According to one study, almost three-quarters of demand comes from the US and the EU, while two-thirds of the workers live in Asia (with India and Bangladesh comprising 41 per cent). However, there still remain significant numbers of online workers in the Global North: US workers make up 12 per cent of the total (Ojanperä et al. 2018).

On this vast scale of globally distributed online work, there is a risk that the individual – and indeed collective – worker fades in the background. Despite the role of digital technology, these relationships of work still involve capital and labour, and the labour of workers happens in a particular place, drawing on and using the physical world. Often the metaphors of clouds and so on obscure the materially rooted processes that underpin this work. It is worth returning to the example of the Mechanical Turk, but this time inquiring into the conditions of the person behind the façade.

The first experience that is important to draw attention to is one that comes from the technical composition of this work. Signing up to work on one of these platforms is an isolating experience. The platforms use a range of double-speak to refer to aspects of the work – for example, not even calling it work, as in the term HIT used by Amazon. There is often little explanation of how to complete the tasks. This means that workers need to learn how to work in this way. This often starts with testing the water – signing up to platforms and figuring out if it is possible to make money this way. Unfortunately, there are many diversions and dead ends as part of this process. The promise of making money from home has long involved scams: envelope-stuffing work-at-home schemes have existed for almost a hundred years. The flyposted offers of an income far beyond what workers could find elsewhere (although often the figure is 'up-to') are one example of this. These scams have proliferated through online networks, preying on people who are unable to find work elsewhere.

The process of signing up to work online is one of avoiding scams like these. However, scamming is a widespread practice on platforms. While the capitalist work relation involves scamming at its core – workers are paid less than the value they produce – there are also scams that further exploit workers beyond

the contracted limits. This is, of course, nothing new. Marx noted that the factory inspectors had observed the '"small thefts" of capital from the labourer's meal and recreation time', and how, as one master explained, 'to work only ten minutes in the day over-time, you put one thousand a year in my pocket' (1867, 352). These struggles over the length of working time stem from the contradiction between labour and capital, played out in both factories and digital platforms. In the case of microworkers who are not legally employed, they are only paid when actually completing the small tasks. This means that paid work is regularly interrupted by unpaid periods. It would not be possible to sit down for a shift of, say, seven hours and be paid non-stop for that period. Instead, bits of paid work are interspersed with unpaid time searching for new tasks. This strips out the unproductive time for capital, meaning that it only needs to pay for the parts that are profitable. After all, as Marx noted, 'moments are the elements of profit' (1867, 352). At the beginning of the process, these periods of unpaid work are even longer. Understanding which platform to work for, signing up, learning the interface, training for the work, reading the requirements of the task, and so on are all unpaid.

As a worker becomes more experienced, they would hope that these periods of unpaid work could be reduced to a minimum, ensuring they have the maximum pay for their time. However, this calculation is not as simple as increasing the pace of your work. On platforms such as MTurk, requesters can 'reject work that does not meet their needs', a safeguard on the platform that in practice 'enables wage theft' (Irani and Silberman 2013). Perhaps this was included to convince early requesters that the work would be of high quality – a kind of money-back guarantee. However, MTurk has been going on long enough, with enough requesters regularly using it, that this has become a commonly abused feature. Again, this follows a long history of capital's 'petty pilfering of minutes' (Marx 1867, 352). For example, one study found that requesters that were badly rated by workers (a point we shall return to later with the worker-rating platform Turkopticon) could engage in wage theft around five times more than other requesters. As a result, working for the highly rated requesters meant that workers could earn 40 per cent more (Benson et al. 2015).

This creates a challenge for microworkers. Clearly, it makes sense only to work for the highly rated requesters and to avoid the dodgy ones. However, taking the time to establish which requesters to work for involves more unpaid labour – as well as narrowing the pool of available work. This also raises another issue. As a new worker on a platform, you have no reputation of your own. Even if you have moved from another platform, you start afresh on the new one. This means that workers have to grind through low-paid – and more frequently unpaid – work to develop a reputation through ratings from requesters. On microwork platforms this means very low-paid work in very large quantities, often competing with other workers for these accessible tasks. On freelance platforms this means underbidding other, better-rated workers, to compete for

entry-level tasks that can start to build this reputation. As Wood et al. found in a study of online freelancers, 'work flowed to those workers who had managed to maintain a strong reputation over a long period and were thus known by clients and highly ranked by platform algorithms' (2018a, 69). As an example, Graham and Anwar (2019) found that only 7 per cent of workers signed up to Upwork had ever been able to secure work. This results in high levels of competition between workers. It also gives workers with high reputations the ability to repost work to those with lower reputations, taking the difference in pay rates for themselves. While these online platforms may look like open markets for work, the reality is that they are stratified, with new and existing relationships of exploitation and exclusion.

When workers do find work, the kinds of tasks can vary significantly. Workers are asked to write website content, essays, reviews, work as personal assistants, translators, and lead generators, among other things. Microworkers fill out surveys, tag images, transcribe text – all small and discrete tasks. Much of this is repetitive work with low pay. It is far from the so-called produsage (Bruns 2008) of 'content creators' on platforms such as Facebook, YouTube, and TikTok. In fact, these platforms rely on low-paid hidden work to operate effectively. With massive quantities of user-generated content being constantly uploaded, there needs to be a way for this to be moderated. This moderation is required for advertising to be effective, ensuring that brands are only associated with the kinds of content they would approve. There is a growing demand for what Sarah Roberts has called 'commercial content moderation (CCM)' work. The 'interventions of CCM workers on behalf of the platforms for which they labor directly contradict myths of the Internet as a site for free, unmediated expression'. Instead, these workers engage in microtasks that involve viewing and categorising 'racist, sexist, homophobic, or sexually or violently graphic content' that is considered either too unpleasant or disturbing for users and/or advertiser (Roberts 2016, 150). These platforms rely on this work, hidden away from the user perspective – perhaps thought of as an automated function. These workers are like the cleaners of the internet, picking up after platforms and users. However, there is often little or nothing done to protect the mental health of the workers who are exposed to this material, often for lengthy periods of time.

New Forms of Political Composition

While CCM is at the more extreme end of the risks of this work, the day-to-day experience of online work can be harder to get an insight into. It is possible to hear stories of workers on these platforms when they protest. Despite the claims that these workers cannot organise, there have been flashes of public conflict. One example is the letter-writing campaign organised by MTurk workers. This followed a public relations campaign from Amazon that proclaimed: 'Jeff Bezos

may run Amazon and he may be a billionaire, but he is very accessible to his customers with an easy-to-find email address, jeff@amazon.com' (Shontell 2013). MTurk workers organised a letter-writing campaign (Dynamo 2014). This began with a statement that outlined three aims for Turkers (workers on MTurk):

1. Turkers are human beings, not algorithms, and should be marketed accordingly.
2. Turkers should not be sold as cheap labour, but instead as skilled, flexible labour which needs to be respected.
3. Turkers need to have a method of representing themselves to requesters and the world via Amazon.

Each letter began 'Dear Mr. Bezos', and then went into detail about the writer's individual experience of working on the platform. The letters brought to light the personal experiences and reasons why workers started on MTurk – revealing the people behind the screen.

The open letters of MTurk workers hint at networks of online workers, something that is likely to have grown significantly since 2014. These networks emerge, like those of transport workers, from the contradictions of the labour process. Despite these workers not sharing a workplace, or even a physical space like the roads of a city, workers still find ways to connect with each other. This is mostly home-based work, with workers searching for work on the internet. The challenges of this, as outlined above, include a lack of clarity and training over the work, as well as competition for jobs. At first glance, these dynamics might imply that workers are not engaging in cooperation. Microwork is necessarily collaborative (see Irani 2015) – after all, the overall project is broken up into smaller parts for a group of workers to complete. The benefit of this is that it is quicker than getting a single worker (or smaller group) to complete the task, increasing the pace of completion. On these platforms there is no reason for workers to be in touch with each other. The cooperation is coordinated by capital, piecing these fragments back together after the workers' task is done. It is therefore no surprise that platforms do not integrate ways for workers to communicate with each other. It is better to emphasise the isolation of workers, encouraging competition and reducing the risk that workers might band together on platforms.

Despite platforms not facilitating communication between online workers, they nonetheless find ways to meet and discuss with each other. This is driven by the contradictions of the labour process: the work can be difficult to understand, the platforms do not provide training or other resources, and there are clear benefits to meeting other workers. In the section above, it was emphasised that microworkers and online freelancers are not homogeneous. Instead, workers develop skills and reputations through the work. They are stratified on platforms through a combination of these factors, the locations they work

from, and the different cost of reproducing labour power (and so different possible pay rates). Engaging in these groups can also be a response to what workers have identified as the 'loneliness of working without interpersonal contact' (Wood et al. 2018a, 66). It should not therefore be a surprise that there are uneven networks of communication that have emerged in online work. Like the zone-specific WhatsApp groups of Deliveroo riders, different overlapping communities have emerged online, becoming established on different communication platforms. Previous research has demonstrated that these forms of online communication are a key part of how workers engage in this work (Gupta et al. 2014; Gray et al. 2016; Yin et al. 2016). One survey, for example, found that 58 per cent of online workers had communicated with other workers at least once every week, whether through social media, text message, email, or in forums (Wood et al. 2018b, 100–1).

Turkopticon is an important example of how these worker networks can grow and develop. This project, focused on Amazon Mechanical Turk, involves an attempt to reverse the power and information imbalance between workers and the platform. The name reflects this, combining 'Turk' with the latter part of panopticon (Foucault 1991). The architectural model in which prisoners are subjected to the constant threat of observation has been applied in call centres, for example (Fernie and Metcalf 1997; Woodcock 2020a). Starting as an academic project developed by Lilly Irani and Six Silberman, Turkopticon is 'an activist system that allows workers to publicize and evaluate their relationships with employers. As a common infrastructure, Turkopticon also enables workers to engage one another in mutual aid' (Irani and Silberman 2013, 611). As the Turkopticon (2020) website explains:

> Turkopticon helps the people in the 'crowd' of crowdsourcing watch out for each other—because nobody else seems to be … Turkopticon adds functionality to Amazon Mechanical Turk as you browse for HITs and review status of work you've done. As you browse HITs, Turkopticon places a button next to each requester and highlights requesters for whom there are reviews from other workers. Bad reviews let you avoid shady employers and good reviews help you find fair ones. You can view reports made against requesters with a quick click.

This plug-in functionality changes how workers engage with Amazon Mechanical Turk. In addition, the project developed a forum for workers. As an intervention, this shows how something that focuses on building worker power – however small – can provide a starting point to bring workers together. It is also a powerful example of how academic research can be brought into the service of developing worker power, through designing an intervention that promotes workers' self-activity from the start. It shows how counter-data, in the form of negative ratings about requesters, can provide a source of counter-power for workers. While this does not fix the power imbalances of platform work, it provides a strategy for workers to avoid the worst aspects.

Turkopticon is a particularly visible example of microwork organising. However, across forums such as Reddit and elsewhere, there are large and lively communities of online workers. These are the virtual street corners and zone centres of online work. They may not look like traditional forms of union organising, but they are the building blocks upon which any successful organisation will be based. However, there is an even more visible example that shows an instance of the 'subterranean stream' of worker resistance making its 'way to the surface', as Braverman (1998, 104) put it.

Rev is a platform that has a similar pitch to many discussed so far in the book. As they explain on their website (Rev 2020):

> Our mission is to give more people the freedom to work from home. Revvers work from all over the world using their freelance income to help fulfill a wide range of personal goals. Over 50,000 Revvers transcribe and caption millions of minutes of audio and video for companies like Google, Buzzfeed, NBC, and Amazon.

Then the keyword of the so-called gig economy appears: 'aside from the extra income paid out weekly via PayPal, the best part of freelancing jobs with Rev is the flexibility'. The claim is that you can log on to the platform and work any time with flexibility. The work itself involves transcription, providing captions, or foreign language subtitling. The platform has become one of the biggest online transcription services, being used for 'interviews, videos, podcasts, or whatever else' for 'the bargain-basement price of $1 per minute of audio' (Menegus 2019a). As the hype for content creation grew, so did services like Rev, ensuring that fashionable podcasts could look as though they had professional production – for a fraction of the cost.

In November 2019 Rev had been running for almost ten years, with many transcribers having worked long term for the platform. However, resistance broke to the surface after an internal announcement to workers. In what has become the go-to management strategy for platforms, Rev unilaterally announced changes to its payment structure. With a justification that echoes transport platforms, it was argued that the change in payment structure was intended to 'more fairly compensate Revvers for the efforts spent on files' (quoted in Menegus 2019a). However, this change was not intended to improve the existing disparity between platform and worker. As reported by a 'whistleblower', of the US$1 cost, 'a little less than half of that buck went to the contractor, while about 50 to 55 cents on the dollar lined Rev's pockets' (Menegus 2019a). Rev now proposed to reduce the minimum payment to workers to 30 cents per minute (cpm).

Workers were informed of the change on the Rev forum. Unlike many platforms, Rev provides a forum for workers to discuss their work. As one worker explained, 'there was an internal forum post made two days prior, but not everybody checks the forums … a lot of people found out when they logged on on Friday. People are still showing up in the forums asking what's going on!'

(quoted in Menegus 2019a). The pitch to Revvers was, as with many pay reductions on platforms, that they would actually make more money: '30 cpm will be a starting price for a very small number of jobs. On the other hand, some jobs will now start at 80 cpm … The goal is NOT to take pay away from Revvers but to pay more fairly for the level of effort/skill required' (quoted in Menegus 2019a). This was met with anger from many workers – including Li Zilles who broke anonymity and publicly explained what was happening in a Twitter thread.[6] Workers began arguing that the pay cut was, in reality, a pay cut.

Li Zilles rapidly became a figurehead for the Rev workers protesting the pay cuts. As Zilles explained, 'for the most part, we haven't been able to organize because the only place we have to communicate en masse right now is the internal forum … people are scared, some are still hoping to appeal to the company rep on the forum' (quoted in Emerson 2019). However, from this starting point, workers were able to protest the pay cuts. Workers claimed higher rate jobs, then refused them, leaving a note for the next worker to try and claim the job. As Emerson (2019) noted, this was a development of a similar tactic used by Instacart earlier that month. During their protest, workers accepted jobs and then did not complete them, causing knock-on delays.

Much of the news coverage of the strike emphasised the weaknesses and challenges that these workers face. For example, Popper (2019), writing in the *New York Times*, argued that 'the Rev protest is distinct from many that have come before because its workers don't have any presence in the physical world, like the couriers and drivers who have led most of the protests in the past'. I reached out to Zilles on Twitter after hearing about the strike and was quickly put in touch with a worker in London. Far from not having 'any presence in the physical world', we were able to meet in a café in South London and discuss the action, sharing contacts and solidarity. Rev had previously provided work to many people with the promise of flexibility so prevalent on platforms. For those workers who spoke multiple languages, the transcription work could be relatively well paid. The worker I spoke to expressed how they felt the platform was trying to squeeze wages without engaging in any debate. The challenge was that most workers had never organised before and did not have links to other groups of workers to share experiences and tactics. For the worker I spoke to, the solution was to leave the platform and try to find work elsewhere. As I have written in the context of call centres (Woodcock 2017), this is a kind of half strike: refusing to work but not making demands that would have to be met in order to return to work.

Much of our discussion was reflected by a public response composed by a Rev worker, published in *Gizmodo*, which had provided coverage of the events. The worker explained (quoted in Menegus 2019b):

> I am writing this anonymously because I fear reprisals from the company I am a transcriptionist for. I have already been subjected to arbitrary silencing on our internal forum for speaking my mind, although

> I did not violate forum guidelines. Therefore I feel the only way to communicate this information is on an anonymous basis. I want to be clear about who I am. I am not a disgruntled former employee or a person who has only worked at Rev for a short time. I am a long-time [worker] with excellent feedback on my work from both the company and customers for over many years.
>
> Rev seems to think that people can just work harder or longer, but there is a point where a person can't do anymore. Rev went through this same scenario in 2016 when they did away with some tasks that paid extra, no longer rounded all minutes up, and dropped their base price from 50 cpm to 48 cpm and then shortly later to 45 cpm. People protested then, too, but were told by CEO Jason Chicola that the price changes were here to stay and that if people didn't like it, they could leave. People tried to boycott the low-paying jobs, but Rev mass hired new people who would do the work. Again, people are boycotting low-paying jobs, this time by leaving unclaim comments urging people not to do those jobs. They have been threatened with losing forum privileges if they continue to leave these comments. Many fear losing their jobs if they continue to speak out.
>
> Mr. Chicola was able to drop the pay in 2016. Perhaps he can do it again. But the businesses that use this company's services need to be informed and understand that their transcripts are produced by an underpaid, exploited workforce. Even if it's not illegal for an employer to set its contractor's wages far below the national minimum standards, it's certainly morally and ethically unacceptable.

Although happening with a different speed and intensity to transport platform workers, the same grievances are coming to the fore.

There is also the threat of automation hanging over this work. For example, Rev formed an artificial intelligence competitor in 2019. This led to a fear among Rev workers that they were only being allowed to continue in order to train their own replacements. As Popper (2019) found, other transcription services have actually experienced an increase in work 'because the advances in speech recognition technology have come alongside the proliferation in recording devices and people wanting to see their words turned into text', and 'much of the work … today involves correcting bad transcriptions from automated services'. What is significant in the case of Rev is that the platform's cut can be as high as 50–70 per cent, significantly more than transport platforms, which often take 25 per cent. The high profile of the protests, particularly drawing attention to these figures, also meant that customers could be mobilised to boycott the service. This was particularly successful with journalists. The *New York Times* announced that it was 'aware of the concerns and are currently reviewing our use of the vendor', and writers at *The New Yorker* publicised a boycott (Popper 2019).

Despite the protests, the Rev website today states that the pay for transcriptionists is US$0.30–1.10, for captioners US$0.54–1.10, and for foreign-language subtitlers US$1.50–3.00 (Rev 2020). This raises the problem of how protests can be converted into victories for workers on these platforms. As other researchers have emphasised (and indeed over-emphasised), there are serious challenges to developing bargaining power on either online freelance or microwork platforms. The mediation of this work online allows for competition on a global scale. Similarly, as Gerber (2020) has argued, many platforms encourage communication between workers, yet this has not led to a growth in workers' power. The seeds are, however, present in Rev and Turkopticon. Communication, clearly, is an important first step towards collective resistance and organising, but communication alone cannot build power. Protest, too, is not enough on it own.

CHAPTER 5

Understanding Platform Resistance

The first strike of platform workers I encountered was in London in August 2016. Deliveroo had announced that it was changing from paying £7 per hour and £1 per drop to paying only £3.75 per drop. Like the statements made to the Rev workers, Deliveroo claimed that this would result in some workers being paid more. However, the feeling from the WhatsApp group was that this represented a huge potential pay cut, particularly with workers no longer being paid if there were no orders coming in. After increasing discussion on WhatsApp groups, like those examined earlier, calls for a strike circulated in response to a change in the payment scheme.

The strike was called and a new meeting point set by workers: Deliveroo's (then) headquarters just off the busy Tottenham Court Road in London. I remember turning up to the protest early with Tim, unsure if anyone else would come. Another worker arrived and we chatted over rolled-up cigarettes, concerned that maybe no one else would show up. A few more workers arrived, all covering their faces. It got off to an awkward start, with many introductions between workers from different zones who had never met before. However, quite quickly more and more workers arrived from different parts of the city. Mopeds and motorbikes were parked along the road, eventually filling all the available spaces. Across from the headquarters a mass meeting of workers got underway. Demands and grievances were discussed, with someone stepping forward to translate speeches into Portuguese for the Brazilian workers. As one worker recounted to me:

> The Deliveroo strike was the most like fun demo I've ever been on … I've got some really good videos of people like, so like there were all the moped drivers and quite a few cyclists as well holding on to the back of the mopeds being like driven along around central London. And the front driver was like this Brazilian dude who was like driving for Uber

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> and he had like a fucking like six by four red flag out of his delivery box and he was just like kicking the bike all over the road jumping around on it from side to side, revving it at lights … it was just really fun. And on the Deliveroo strike, you were there, people just ragging it up and down the road doing burnouts and stuff … it was so playful and it is fun … the thing is I don't think it's a coincidence that it's like coming from migrant workers who don't necessarily share that much of a language because everyone can share taking the piss out of your boss … that is a common language and I think that's something that can be used a lot more than like than like getting motions passed and stuff [as in a traditional trade union].

A small group of workers approached the headquarters and demanded to speak to someone. By this point, the street was filled with green and silver uniforms, packed with mopeds. Organisers from the IWGB were handing out recruitment forms. I took a bundle of forms and held them up in the air, and workers took them, filling them out against walls or leaning against their delivery bags.

Eventually, a manager from Deliveroo came out to address the crowd. As I wrote at the time (Woodcock 2016):

> One manager, surrounded by drivers, tried to control the situation. He was met with booing and jeering, before returning to the headquarters. A small group of managers gathered by the doors, looking at the growing crowd of drivers with a blend of contempt and barely-concealed fear. Here, in this moment, the business model of black-boxed labour was seeing the exploitation and resistance rise to the surface. These drivers, upon whose labour the platform is built and run, were no longer hidden. Instead they were visible outside, organising together, and angry … The negotiations ended with Deliveroo saying that it would be impossible to increase wages. This was met with anger by the drivers who promptly voted to go and visit some of the restaurants Deliveroo works with and return to the headquarters the next day. Over the megaphone someone shouted 'it's only impossible until we win!' And with that a convoy of hundreds of mopeds set off into central London.

On this first day of the strike, which would go on to have reverberations across the platform economy, something had changed. Platform workers were visible and present. However, despite the resistance and solidarity that could be felt on that day, the strike did not end in long-term success. The new payment scheme was delayed, in part, before being brought in throughout Deliveroo in the UK. The aim of this chapter is to try and understand the connections between these moments of resistance and organising and how they might develop in the future.

Forms of Resistance

Resistance can refer to people opposing change, the refusal to accept or comply, an uprising against an oppressive force, protection against something, or relationships between material things involving friction or electrical current. These comparisons can help illustrate how resistance at work comes in a range of forms and intensities. As with electrical current, in practice we find that resistance is always present. This is the case in traditional workplaces as well as platform work. The question is not whether it exists, but how strong it is and what can amplify it.

Taking the example of food platform work, resistance of another kind is present whenever a rider begins to push the pedal. When the worker's legs engage the gears, they need to overcome the resistance of inertia, pushing metal against metal until the bicycle moves. No matter how hard the worker cycles, that mechanical resistance is still present. Parts can be cared for and lubricated, but the friction still grinds them down over time. This can be compared to how workers resist in the labour process. There is an external force that pushes people into work: workers have no other way to get by under capitalism than through work. This might be less obvious than the foot pushing down on the pedal, but anyone who has struggled to find work or feared unemployment has felt this force weighing down upon them. Worker resistance is then present from the moment the labour process begins. The interests of the worker diverge from capital – whether that is embodied in a physical manager or instructions from an algorithm. Platforms only want to pay the worker for the time that is profitable, while expecting workers to take on the costs of the work and the waiting time. Resistance is generated when workers are directed to try harder, cycle faster, drive further, accept a new lower rate of pay, pretend to like a customer, or whatever it might be. The labour process involves the gears of capital grinding against the worker, compelling them to move into activity. At points this process can reach high speeds and work smoothly, while at others it can be felt keenly or even bring the whole process to a halt.

The history of work is full of ways in which capital has sought to lubricate the labour process, attempting to overcome resistance – or at least finding the path of least resistance. However, like mechanical maintenance, these can only ever be attempts. They do not solve the underlying contradiction between capital and labour. As Braverman remarked:

> the hostility of workers to the degenerated forms of work which are forced upon them continues as a subterranean stream that makes its way to the surface when employment conditions permit, or when the capitalist drive for a greater intensity of labor oversteps the bounds of physical and mental capacity. (1998, 104)

Workers, unlike gears, have agency in the labour process. Gears do not come together at work to discuss friction, complain after a shift, and so on. Workers do.

In the previous chapters, we discussed how this 'subterranean stream' of resistance is fed by many tributaries across different kinds of platform work. Despite most platforms relying on the appearance of self-employment, there is still a clear contradiction between the interests of workers and platforms. Rather than resistance in platform work being rcent and unexpected, it has clearly been happening since the first workers signed up to platforms. Here, we can think of resistance in broad terms as 'any individual or small-group act intended to mitigate claims by management on workers or to advance workers' claims against management' (Hodson 1995, 80). This frame is useful, as often the idea of resistance evokes placards, chanting, and picket lines. While the strike (as collective refusal to work until demands are met) remains a vital tool for workers' struggle, this broader definition draws attention to the day-to-day conflicts that proliferate across work.

Using this lens to think about resistance means we can look beyond the obvious examples of action such as strikes – although as the previous chapters have shown, these happen too in platform work. As Richard Hyman argues – building on Goodrich's (1975) work – there is an 'invisible frontier of control' at work, 'a frontier which is defined and redefined in a continuous process of pressure and counter-pressure' (1975, 26). This moving boundary is the balance of power between workers and capital, pushed one way or another at different points. This is a process that is constantly underway, as capital attempts to respond to workers by changing the technical composition of work.

Worker resistance can therefore involve the 'withdrawal of cooperation' (Edwards and Scullion 1982, 154), or more general forms of 'misbehaviour' involving 'anything you do at work you are not supposed to do' (Ackroyd and Thompson 1992, 2), or it may take more militant forms such as 'sabotage' (Jermier 1988). As van den Broek and Dundon argue, a range of 'work behaviours – such as incivility, sabotage, culture, humour, leadership or harassment … for many workers who lack formal collective organisation … may represent the most available forms of resistance and as such should be analysed as acts of resistance in their own right' (2012, 99). These forms of misbehaviour often provide a coping strategy at work to survive the grind of capital's gears discussed above. The conversion of this into forms of individual and collective resistance – as well as developing into organising – moves in fits and starts. However, successful forms of organising emerge from these building blocks in the labour process.

Solidarity and Organising

If these acts of resistance – found across all platforms to a greater or lesser degree – show that there is conflict in platform work, the main question is how and why these can develop into more sustained organising. Of particular

interest here is the emergence of solidarity and collective forms of organising in platform work. Tassinari and Maccarrone (2020) provide a useful model of solidarity with food platform workers. The model starts with the 'sources of antagonism in the labour process', including issues relating to low pay and unilateral changes; insecurity regarding both earnings and working hours, as well as lack of safety nets and health and safety protection; and managerial control, with a lack of clarity on how data is used for performance management and allocation of work, as well as unilateral deactivation – the firing of workers. These lead into 'factors shaping expressions of solidarity', including the 'common facilitating factors' of shared spaces (in-person and online), 'nurturing social relations', the collective identity of workers, and connections developed through shared action; the 'common obstacles' of high turnover of platform workers and differences within the workforce, and the ways that managers respond; as well as 'contextual enabling factors', including trade unions or social movements. Finally, Tassinari and Maccarrone (2020) argue that these lead into 'possible forms of expression of solidarity', which include 'day-to-day mutual support' which involves helping each other, sharing resources, and making complaints to platforms; 'low-risk participation in collective action', mainly involving refusing to work (with a lower risk than in other forms of work given the contracts), sharing publicity, or engaging in what they refer to as 'online "shitstorms"', attempting to damage the platform brand for example; and 'visible forms of collective action', including strikes and picketing, demonstrations, and legal action Tassinari and Maccarrone (2020, 49). All of these can be witnessed, to a great or lesser degree, across platform work.

The emergence of wider solidarity is also an effect of increasing numbers of workers with a similar technical composition. There are, of course, differences between the experiences of delivering food, transporting passengers, cleaning houses, or working online, but there remain important similarities across platform work. The clearest example of this is the lack of human supervision or management. Unlike many workplaces, there is no one checking up on workers in person. While this checking up is often seen as a means for disciplining and performance management, it also plays an important role in communication in the workplace. It gives the opportunity for workers to raise small grievances or problems or get advice and feedback on the labour process. As noted before, this provides management with an interface to deal with minor problems – whether actually addressing them or just appearing to.

The lack of this management layer means that across platforms there is a lack of communication during the work. The refusal of platforms to provide effective training or support – which stems from the fear of looking like an employer – means that workers must resolve many issues themselves. In response, workers seek each other out to share information and discuss the work. Transport work also involves downtime between jobs in which workers gather in shared spaces. Even if this does not mean face-to-face discussion, Cant and Mogno note that 'workers also spend a lot of time watching their phones whilst they

wait, particularly if they and themselves on their own' (2020, 403). This development of solidarity from the labour process is confirmed by Maffie:

> qualitative data suggested the following pattern: while many gig workers may work alone and enjoy the entrepreneurialism of this industry, when a conflict with a customer occurs, they are often unaware of their responsibilities or how to handle the situation. Without coworkers or a union to ask for support, workers turn to their most immediate community: an online network like Facebook. Once part of this group, however, many find that they share grievances with other drivers and enjoy the comradery and support of their digital colleagues. (2020, 133)

There are also shared cultures – whether of migrant workers or subcultures of couriers – that facilitate the building of these networks. Within some migrant groups, platform work has become popular, with newer migrants being introduced to the work when they arrive in a country. The recruitment practices of some platforms also involve sign-on bonuses, encouraging workers to recruit their friends. Platforms attempt to mobilise existing networks of workers, so when workers are signed up to the platform they may already be part of discussions about their work with others.

The widespread use of digital communication methods, whether WhatsApp, Facebook, or otherwise, can be found across all platform work. This stems from the technical composition of the work, as most platforms deliberately do not include means for workers to discuss with each other. These networks are also built from and overlap with existing networks, drawing attention to the previous and shifting social composition of platform workers. These networks and digital spaces play an important role in building collective identities (Wood et al. 2018b). For example, Maffie has demonstrated that 'frequent social interaction in digital spaces was associated with more positive views on unions and an improved interest in joining a labor association' (2020, 141). These existing networks can therefore be understood as the building blocks from which more formal organisations can be developed. It also highlights how these workers are not unorganised merely because they are not members of a formal organisation. Instead, forms of what Cant (2019, 130) has called 'invisible organisation' at Deliveroo are widespread.

The formation of platform worker identities has also been driven by companies such as Uber. While it has not pushed an image of an organised collective worker through its publicity, it has sought to develop an image of the 'driver', 'partner' or 'driver-partner'. For example, the Uber website explains:

> Earn any time, anywhere: You can drive and make as much as you want. And, the more you drive, the more you could make. Plus, your fares get automatically deposited weekly.

> Set your own schedule: Only drive when it works for you. There's no office and no boss. That means you'll always start and stop on your time – because with Uber, you're in charge.
>
> Signing up is easy: Sign up to gain access to the app. After your account activation is complete, you can start getting connected with customers.[7]

Another page puts it slightly differently:

> Set your own schedule: You're in charge. You can drive with the Uber app day or night. Fit driving around your life, not the other way around.
>
> Make money on your terms: The more you drive, the more money you can make. When demand is higher than normal, you can make even more.
>
> Let the app lead the way: Just tap and go. You get turn-by-turn directions, suggestions to help you make more money, and 24/7 support.[8]

There is a common theme in this framing of Uber drivers: you will be your own boss, have flexibility and control, make money, and so on. The top of the webpage even proclaims: 'Opportunity is everywhere.' This pitches Uber as something far from work. Of course, much of this is down to avoiding and evading employment regulation, but it also creates an expectation of this work that is far beyond the reality that many drivers find in practice. As has been discussed previously, the draw of so-called flexibility is an important reason why many people start working on platforms. However, after workers start, they find that Uber's claims (and indeed those of other platforms) ring increasingly hollow. You might be free to work whenever you want, but taking on the risk and costs often requires working at peak times to make enough money for it to be worthwhile.

The attempt to forge an alternative self-employment identity for drivers has provided a common reference point for many Uber workers, regardless of location or country. Instead of a huge number of individual entrepreneurs plying their trade through platforms, each with their own messaging and branding, people enter into platform work through this Uber identity. Across a wide range of interviews in different countries, drivers explained that they 'worked for Uber' or that they were an 'Uber driver', rather than claiming that they had their own business. The reality for drivers in India, South Africa, the UK, the US, and elsewhere is that workers rely on a particular platform. Many workers use a combination of two, perhaps including Lyft in the US, Ola in India, or Bolt in South Africa. However, the ubiquitous branding of Uber has become a stand-in for platform work in many cases. When using other platforms there might be differences in how the work is conducted – for example, Bolt accepts cash trips in South Africa, with all the additional risks that this involves – but

on the whole the experience of working via a smartphone app remains relatively constant.

This lays the basis for solidarity beyond the immediate connections that workers make through the labour process. The model outlined by Tassinari and Maccarrone (2020) provides a framework to explore how moments of resistance that emerge from the contradictions of the platform labour process are shaped by the availability of communication and common relationships to develop into forms of collective solidarity. These can be expressed in ways that are easy to observe from outside, such as strikes and protests, as well as the more granular activities that workers engage in day-to-day to get by as platform workers. This also provides a much more solid basis from which we can think about what organising at work means. Too often, organising is seen as something that can be inferred from institutional markers, for example by asking whether there is a recognised trade union, a collective agreement, how many members there are, and so on. However, this provides only a surface reading, which can miss the realities of what is happening at work – and sometimes can reflect the results of previous waves of struggle and even mask a lack of current organising.

With some forms of platform work there have not been open struggles like those discussed so far in this book. As noted earlier, these have been conspicuously absent from cleaning and domestic work platforms. In part, this mirrors the low level of open struggle in the non-platformised sectors that these platforms are seeking to 'disrupt'. Using Tassinari and Maccarone's (2020) notion of 'factors shaping expressions of solidarity', we can see that there are particular challenges in this sector when compared with transport platforms, for example. There are far fewer opportunities for workers to come into contact with each other in the course of the work, since there are neither meeting places nor regular encounters on the road. The 'contextual enabling factors' of either trade unions or social movements are much less common too. However, care needs to be taken not to read 'unorganisable' features into these sectors, as academics and trade unionists previously did with both transport platform and online workers. Instead, more attention needs to be paid to the emerging class composition of the different groups of platforms workers. As Gigi Roggero has noted in another context: 'our challenge is to begin once again from the blockages experienced by the struggles of the precarious … to use *operaismo*'s classic terms, the political composition of the class is crushed within the sociological mold of its technical composition' (2011, 23).

There is nothing automatic about the leap from technical and social composition to new forms of political composition. While resistance can be found throughout platform work, the emergence of collective solidarity and forms of organising is uneven across different sectors. This is where more attention is needed – not because it is academically interesting (although to some it will be), but because it is politically useful. These 'blockages', as Roggero calls them, are the result of the counter-offensive of capital against workers. They are designed

to prevent the leap into organising, but they do not solve the contradictions of the workplace or eliminate resistance. If we imagine resistance as Braverman's (1998) 'subterranean stream', these blockages may be focused in one part of an underground system. As water has carved through these systems, so too can new routes be made. However, this does not happen in a short space of time. While these blockages might frustrate the leap into political recomposition, they cannot hold back workers indefinitely. The process shifts and diverts energies, often hidden and sometimes in sight, and can re-emerge at other points and times.

Domestic work might seem to be the example that disproves the widespread recomposition of platform workers. However, there are differences between these kinds of platform work, and workers will find different ways to struggle. Rather than focusing on the lack of struggle here, what is surprising is the speed with which workers have recomposed in platform work more widely. Previously, when new technical compositions of work have been introduced, there have been long periods in which workers have experimented with and found new ways to successfully convert resistance into sustained and successful organising. For example, the introduction of factories involved long periods during which workers searched for tactics and strategies to fight within the new technical composition. With platform work this has not taken generations of struggle, but rather a new and complex political recomposition has emerged in a matter of years.[9] There is still plenty of time for blockages to be swept away by other platform workers.

Building Worker Power

The technical and social composition of transport platform work has created conditions in which wildcat strike action has become a widespread tactic. It might appear that there is something very different happening with this kind of work than either domestic or online work. However, this line of thinking can collapse some of the challenges that transport workers face in building power and taking effective action. For example, strike action in workplaces with a fixed location allows for picket lines. This provides a space in which strikers can try to convince other workers to join the action (with varying levels of intensity). Some forms of platform work do not have these spaces – or in the case of restaurants for food delivery or parking lots for transportation, they may be spread out across the city. Highlighting this problem, Magesan (2019) argues that during a strike 'you could make a lot more money than you normally would by being the only Uber driver in Los Angeles with her app on'. This goes beyond the 'free rider' (Olson 1971) problem that workers might choose not to engage in collective action, as they would enjoy the benefits either way. Given the use of dynamic pricing, workers who do not participate stand to make even more money than usual by scabbing on a strike. In this light, the

strikes of platform workers that have taken place look even more impressive. However, there remains an important question regarding how these strikes and other forms of collective action can successfully build power and win demands.

As I have written about elsewhere (Woodcock 2020b), inspiration can be taken from other kinds of work that have not been reorganised on to platforms. In 2019 I travelled to Athens with Callum Cant. As part of our trip, we spent International Workers Day with the Driver Workers' Informal Assembly (SVEOD). They had recently held a 24-hour strike of delivery drivers (ANA 2019). However, this work differed from Deliveroo or other food platforms as it remained organised on a restaurant basis. Spread across the entire city are restaurants that hire a small number of delivery workers. Unlike Deliveroo, there was no antagonism with a single platform that organised and distributed the work. This case therefore provides an important example of how workers' power can be built, despite the challenges and potential blockages of the technical composition.

At first glance, this appears a difficult kind of work to organise in. Organising could easily become individualised around particular restaurants, fighting to change things in one workplace at a time. Despite the clear antagonism that many workers had with restaurants, they also sought to find a single point around which to focus the action. There were two demands made as part of the strike: the first was that the state should reclassify the profession of delivery driving as hazardous. This would mean that these workers would be entitled to higher rates of pay, improved conditions, and additional changes such as a lowering of the official retirement age. Reflecting the danger of motorbike delivery in a built-up city such as Athens, they also demanded that protective equipment, as well as the motorbike itself, should be provided by the employing restaurant. These demands provided a focus for the action, on a city and nationwide level. Victories on this level could then be fed back into local organising, ensuring that restaurants provided the motorbikes, equipment, and improved pay and conditions. The drivers also produced propaganda directed at customers. As well as publicising their demands during the strike, they produced a poster with a simple recipe for an evening meal. The tongue-in-cheek message was that while they were striking over their conditions, safety, and pay, customers could make do without souvlaki for one night.

The process of getting to this national strike involved long-term, committed organising. We met some of the SVEOD organisers in their office in Athens. The small office was filled to brim with leaflets, posters, placards, motorcycle helmets, as well as a political library. Over many cups of coffee and cigarettes we exchanged experiences of organising with delivery drivers in London and Athens. The conversation ranged from the minutiae of organising to politics – and quite a lot in between. Like the couriers in London, there was clearly a shared culture around delivery work in Athens, mixed with radical Greek politics. What became clear was that SVEOD was much closer to

an anarcho-syndicalist organisation than a mainstream union. Their radical politics was reflected across the office, as well as in how they organised. To demonstrate this, one of the organisers suggested that we take a ride through the city. On a few evenings a week, a group of organisers would ride around Athens, stopping at restaurants to speak with other drivers. This was a key part of their organising strategy. Given spare helmets, Callum and I were invited to ride pillion.

Setting off in convoy, we rode quickly from restaurant to restaurant. At red traffic lights, an organiser would hop off the back of one of the motorbikes, quickly stapling posters to lamp posts. Outside restaurants, the organisers would get into discussions with drivers. These were a mix of case work – going over issues at work and responses – as well as arguing about politics. In Athens, there is a long and somewhat complex history of political organising (Kretsos 2011), specifically in relation to anarchism within delivery work. Through this process, we saw how these networks were made and remade during the convoys. Tools such as WhatsApp played less of a role, but these detailed in-person discussions could go much further than instant messaging. Every two weeks workers would meet at the office to discuss organising, strategies, demands, and politics late into the evening.

These workers face clear challenges. They have small workplaces spread across the city, different employers and conditions, and so on. However, the long history of political organising has provided methods and tactics to overcome this. SVEOD has no paid staff and little infrastructure beyond the office. However, through politically driven organising methods, they have found ways to develop workers' power in their industry. The rides around the city and the collective discussions are a form of workers' inquiry in practice: discovering shared conditions, exploring them, and moving into action. Here we can see how previous waves of struggle feed into new compositions. In Athens, the technical and social composition of this work shape, and are indeed then shaped by, the political composition of these workers. It also shows how the leaps from technical and social composition are neither automatic nor mechanistic.

In the case of platform work, there is an ongoing question about how emerging political compositions can be translated into worker power. The point here is that across the waves of strikes and protests, demands have often pointed to the lack of communication or negotiation with the platform. As noted before, many platforms will not enter into any kind of official negotiation, fearing that this will indicate an employment relationship. Therefore, many strikes have not ended in successful negotiation, or changes have been attributed to something else.

To address this, it is worth first – and only briefly – narrowing the horizon to only examine workers' bargaining power. In academia, this is a dominant way of thinking about workers' power that misses much of the potential of new forms of class composition. However, it does point to some important features of platform work. Starting with Erik Olin Wright's (2000, 962) formulation of

'associational' and 'structural power' (inspired by Perrone's [1983; 1984] work on positional power), Beverly Silver argues that:

> A useful starting point for differentiating types of workers' bargaining power is Erik Olin Wright's … distinction between associational and structural power. Associational power consists of 'the various forms of power that result from the formation of collective organization of workers' (most importantly, trade unions and political parties). Structural power, in, contrast, consists of the power that accrues to workers 'simply from their location … in the economic system'. Wright further divides 'structural' power into two subtypes. The first subtype of structural power (which we shall call marketplace bargaining power) is the power that 'results directly from tight labor markets'. The second subtype of structural power (which we shall call workplace bargaining power) is the power that results 'from the strategic location of a particular group of workers within a key industrial sector'. (2003, 13)

There are instances of associational power being developed through coalitions of platform workers with other worker organisations and political parties. For example, across food delivery and private hire transport platform work, there has been engagement with mainstream and alternative trade unions, as well as some engagement in public discourse and political parties. This has fed into legal struggles around classification or other forms of regulation, but is removed from the direct conflict between workers and platforms.

In terms of positional power (to use Perrone's definition), this is more complicated. Perrone's argument is that 'a measure of the "disruptive potential" of workers … is derived from their varying positions within the system of economic dependencies' (1984, 413–414). This is not the same as identifying strike statistics, but is rather a matter of trying to understand the potential power of workers within the economic system. Platforms are, by their nature, closely interconnected with other parts of the economy. For example, food delivery platforms involve buying food from restaurants and reselling it to customers (while the platform would prefer to disappear into the background, this is, in effect, what is happening), private hire keeps urban transportation moving, and online workers keep the internet working behind the scenes. However, there is clearly less potential for economic disruption than with a strike that stops food manufacturing and logistics, or shuts down public transportation or power networks.

The development of the framework of structural power is part of a project to understand working-class 'bargaining power'. As Cant has noted, this is a narrow trade union conception of power that differs significantly from class composition.[10] However, trade union bargaining – despite missing most of the potential of new class compositions – is one form of power that can provide some insights into organising against platforms. Structural power is that which

develops from workers' (and their workplace's) position within larger divisions of labour. Structural power therefore involves disrupting the process of production. Cant proposes that this idea of structural power can be developed by making two distinctions: first, 'internal power', the ability to disrupt the workers' own workplace; and second, 'external power', the capacity to disrupt production beyond the workplace. While these may go together, they do not have to. Cant applies this to food delivery platforms by arguing that food delivery workers have a high level of internal structural workplace power. If they do not make deliveries, the food cannot be transported to customers, preventing the realisation of value from the commodity. However, beyond the platform and local restaurants, there is a low level of power. As the Greek delivery drivers joked, customers can make their own dinner. This can be compared with other kinds of transport workers, such as port workers who have very high levels of both kinds of power, with a strong knock-on effect on other workplaces that rely upon deliveries arriving from their workplace. Cant argues that Perrone's analysis shows us how we can measure external power on a more macro level by looking at the inputs and outputs of commodities from one workplace or sector. However, to understand internal workplace power, we need a much more detailed examination of the labour process and the technical composition of work.

This internal power is something that has been discussed in detail throughout this book. There are examples in which a lack of external power can prove challenging for workers seeking to organise. Silver (2003, 13) also discusses structural power in terms of 'marketplace bargaining power'. This refers to three different aspects that can shape workers' power: whether the workers' skill is in high or low demand within a labour market, the rate of unemployment and therefore the reserve army of labour available, and whether workers can reproduce themselves through other means than work. The risk is that an analysis could read off from these factors stacked against workers to conclude that they have little chance of building power. This has been the case in many areas of precarious work. So, the argument goes: if the work is 'low skilled' and there are many people looking for work, workers are easily replaceable. However, while this might involve starting with lower power at the bargaining table, this does not mean workers cannot build power. The waves of struggles of migrant cleaners in London (Woodcock 2014b) have shown how workers can find other sources of workplace power, collectively forcing changes in their work.

Wright's (1984) development of Perrone's ideas of positional power involved combining this with what he called 'organisational power'. This is the way in which positional power is organised by workers as leverage to win demands. It is useful, in this context, to think about 'organisational' power in its original form, particularly in light of the Greek delivery drivers' example discussed above. This issue of other kinds of power is captured in the broad notion of 'associational power'. Again, as Cant notes, this is often collapsed into discussions of trade unions, political parties, and movements. Class composition

attempts to connect these to the workplace, understanding the relationship between work and struggle, and providing a way to read leaps from the technical and social to the political. This is not a question of whether workers are able to get a better bargain for selling their labour power, but of understanding the struggle of workers against capital.

Making Sense of Platform Struggles

If we focus on bargaining power, we risk missing the processes unfolding in platform work. While platform worker struggles have shown incredible ingenuity, creativity, and passion, few have won sustained demands. There have been flashes of power, caught in a moment of political recomposition. As a Deliveroo worker explained to me:

> The problem is how do you translate that into, that just resistance into, into like productive resistance, because I do think that like the resistance that's happened so far has been effective and people are aware of it, Deliveroo drivers are well aware of the strike that happened and what can be done and I know that's what IWGB are trying to capture that momentum and turn it into like workers' rights and that's difficult. But I still think that like there is more that can be done to rock the boat and get people on board with it.

These examples of wildcat action are becoming increasingly widespread. For example, Joyce et al. surveyed 300 examples of platform worker protest since 2015, finding that 'the main cause globally for labour protest is pay, with considerable geographical variation when it comes to other causes for dispute' (2020, 3). Clearly, low or falling pay is a key platform worker grievance. We could, using Kelly's (1998) formulation, see these wildcat strikes as mobilisations against injustice. However, there is a risk of narrowing the understanding to see these strikes as specific responses, losing the details of the labour process. Maurizio Atzeni argues that the conflictual nature of work provides the context from which struggles emerge. As Atzeni points out, 'the contradictions produced by the capitalist labour process, often in combination with a favourable political and cultural climate, create the room for moments of collectivisation, largely based on solidarity' (2009, 13).

Solidarity provides an important backdrop to platform workers' struggles. However, when taking in the scope of different forms of platform work discussed in this book, there are significant internal differences. As Nick Clare has argued, 'class analysis must also consider relationships within and not just between classes, as these influence political (in)activity of the working classes … class composition analysis is particularly attuned to this internal heterogeneity' (2020, 5). That heterogeneity is abundant in and across different kinds of

platform work. As Marx and Engels (1848) noted when discussing the workers' struggles of their time:

> Now and then the workers are victorious, but only for a time. The real fruit of their battles lies, not in the immediate result, but in the ever expanding union of the workers. This union is helped on by the improved means of communication that are created by modern industry, and that place the workers of different localities in contact with one another. It was just this contact that was needed to centralise the numerous local struggles, all of the same character, into one national struggle between classes. But every class struggle is a political struggle. And that union, to attain which the burghers of the Middle Ages, with their miserable highways, required centuries, the modern proletarian, thanks to railways, achieve in a few years.

Therefore, while the platform worker struggles discussed here have not always resulted in a better bargaining position or institutional settlement, they represent an important unfolding of a historical process. The technical composition of platform work has created conditions that (like the railways before) facilitate the circulation of workers' struggles at a greater pace and intensity. This means that struggles ripple outwards from one platform or location, but also forge new shared subjectivities against platform capitalism. As noted earlier, this has happened much faster with platform work than other forms of paradigmatic work such as that in the factory. As Maffie has argued, 'the same technology responsible for the emergence of platforms appears to be connecting workers in new ways as well, and in doing so, may change the way workers view the role of unions in emerging types of work' (2020, 142).

In this light, as Callum Cant and I have argued (Cant and Woodcock 2019), there are three questions opening up for platform workers' struggles. The first involves workers starting to form new connections from their own workplace to the rest of the industry, both along the supply chain and with the platform itself. As has been highlighted in previous chapters, platform workers are connected with both consumers of their services and other workers, such as those in restaurants. In London, one example involved Uber Eats drivers coming into contact with McDonald's workers who organised a strike in 2018, but there are other points at which workers come into contact with each other. There has been a rise of tech worker organising over the past few years. For example, Tech Workers Coalition (TWC) has shown how an increasing number of these workers are becoming aware of the impact of their work. While this has particularly focused on the relationship with the military and police, there is the potential for connections to other workers too (Woodcock 2019b). There is an emerging dynamic of tech workers in Silicon Valley supporting the organising efforts of service workers (Prado 2018), and these connections can be developed with platform workers. This highlights how tech work influences the work

and conditions of other workers along the supply chain, with the potential to build solidarity. While platforms like the idea of outsourcing all of the work, there often remain teams of in-house software developers who are needed to keep the platform operating.

The second question relates to the forms of organisation that are beginning to emerge. Across the platform economy there are a variety of different organisational forms developing for platform workers. These include informal networks, more formalised worker networks, new trade unions, or branches of existing ones. Many platform workers' struggles have been led by what Alquati called a kind of 'organized spontaneity'. In practice, there has been a split between these less formal or alternative forms of worker organisation and the entry of platform workers into mainstream trade unions. As Roggero argues, Alquati's formulation is a rejection of an understanding that there is a:

> division between the cult of spontaneity and the fetish of organization, or saw them as operating within a dialectic following stages of development: first there is spontaneity, then there is organization. Alquati definitively broke with this dialectic and proposed an apparent oxymoron: at Fiat there was no external organization that produced conflict, but neither was it simply spontaneity that created it. A sort of 'invisible organization' had been created through which the workers communicated, prepared struggles, scheduled their attacks and blocked the factory. It was this invisible organization that posed itself as the avant-garde of the recompositional process, while the party militants were left behind, following hesitantly and in fact often acting as an obstacle. (2020, 8)

The 'invisible organization' of platform workers is therefore key to understanding this new moment of political composition. These networks are expressing themselves in different forms. As Cant and I argued (Cant and Woodcock 2019):

> At present, the new and alternative unions are proving successful, but lack the capacities and resources of the mainstream trade unions. Which of these forms of organising becomes dominant is part of the moment of political recomposition – each of which has challenges and opportunities. For example, greater resources from mainstream trade unions could intensify the struggles as well as share experiences within the wider labour movement, but also brings the risks of bureaucratisation and lack of democracy.

The third question is one that relates to the new political composition of platform workers. New class compositions cannot exist in isolation from the wider working class and capital. While new forms of resistance and struggle are emerging, with international connections to other platform workers

and new possibilities for organising across the supply chain, there is also the potential for reshaping working-class struggles more widely. Many of the issues that platform workers face beyond the work itself – including access to housing, racism and oppression, thr relationship to the state, and so on – bring platform workers into contact with other groups of workers with a shared social composition. This remains an open question, but one with exciting possibilities for how struggles against platform capitalism can encourage and nourish other working-class struggles. It is therefore fitting to end this chapter with the same conclusion that Cant and I have made previously (Cant and Woodcock 2019). While there may be many questions:

> One thing is clear for now: we need to stop talking about resistance as emerging in platform work!
>
> Resistance is clearly already happening, from Deliveroo riders in London, Uber drivers in Bangalore, to Meituan workers in Guangzhou. A working class recomposition is rapidly under way. The key question now is understanding what forms of struggle can be successful beyond the short term and how these can be generalised more widely by the working class, both logging off platforms and breaking away from capitalism more broadly.

CHAPTER 6

Conclusion: Why Struggles Against Platform Capitalism Matter

This book has argued that there is an emerging new global composition of platform work. It started with three examples that illustrate the dynamics that have underpinned this shift. They are:

1. The increasing connections between platform workers, showing that they are not isolated.
2. The lack of communication and negotiation from platforms, leading to escalating worker action around shared issues.
3. The internationalisation of platforms, which has laid the basis for new transnational solidarity.

These different aspects are driven by the technical composition of platform work. They are also shaped by the shared social composition of platform work, particularly migration. This is underpinned by two key features of this work. The first is that platform work is indeed work, not some kind of flexible self-employment. Platforms exert managerial control over workers, profiting from the surplus value extracted during the labour process. While platforms may pretend not to be employers, the labour process involves methods of control and surveillance that do not represent a break from the employment relationship. In fact, the actions taken by platforms to disguise their status as employers result in a sharpening of the contradictions of the labour process. Platforms minimise training, reduce support, refuse to provide equipment, deactivate workers without appeal, and refuse to negotiate. This means that workers have fewer institutional channels through which to deal with problems that emerge from the labour process. Instead, many workers increasingly turn to wildcat strike action to raise their grievances. The platform's desire not to

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appear as an employer instead turns it into an even more hostile employer, sparking further worker resistance.

The second feature is connected to this. Platform workers are workers. They are not disconnected small businesses plying their trade across a range of platforms. Across most platforms, flexibility is touted as a key reason to sign up. There is a pressing need to push back against the conception of flexibility that is promoted by platforms. Some claim that this is a difficult thing to do. However, Jason Moyer-Lee (2017), the general secretary of the IWGB, has put forward a clear response: 'flexibility that works for the worker is a marvellous thing. What we do say is that these companies need to abide by the law. Just because some of their workers have flexible work arrangements, that doesn't mean you can deny them basic rights.' To return to the example from earlier in this book of the Deliveroo riders in Islington, there is clear evidence of what the platform's 'flexibility' means for workers. I met these drivers on a strike called to protest against the inaction of the platform after the death of a driver. As noted earlier, one of the workers explained that:

> I spend my whole life on this bike. What kind of life is that? For £2.80 a delivery? I go home, shower and sleep, back out driving all day, seven days I week. I've been working since 2014, now I can barely make any money. It has to change … a rider is killed working for £2.80 a delivery, to risk your life for so little money.

Another worker added 'we don't just want to mourn, we want action, change'. We discussed how dangerous it can be working for Deliveroo in this part of the city. Workers detailed the risk of robberies or road accidents. They felt that the police saw them as a problem, harassing them and becoming another risk in the work. Another worker arrived at the picket line outside a restaurant. He explained how he had been knocked off his moped, breaking his arm. He pulled back his sleeve to show the stitches needed after a metal plate was fitted. Deliveroo had done little to support this so-called self-employed independent contractor. He had brought his two young children along to show them the strike, joking with the other workers that now they were not working either.

The claim of self-employment may, for now, absolve platforms such as Deliveroo from the legal requirements owed to workers, but it cannot cover up the callousness of this process. I have met workers in different countries with similar stories: a worker has an accident that was not their fault and they are left to bear the brunt of the platform's risks. The contractual trick frees capital from its obligations, but it does not prevent the boiling of anger against them. For the owners and managers sitting in plush office spaces, this anger can seem so distant as to not exist. However, on the street corners and outside restaurants it can be seen rising to the surface. I met workers in Islington with an organiser from Hong Kong who was visiting London. Despite organising with workers who

are a twelve-hour flight away, he was able to quickly share stories and discuss the similarities of the work. On the surface, Deliveroo might look different in both countries, but there are shared concerns and grievances. In Islington, the crowd of Algerian workers stood around their mopeds, big coats on against the weather, with helmets tipped back on their heads. The conversation switched back and forth from English to Arabic, staying mostly in English when a Brazilian worker arrived. Echoes of the Algerian revolution could be heard in the conversation. So, too, did the protests in Hong Kong interact with the union organising. In both contexts, workers can find shared experiences.

This book has sought to unpick the relationships that exist behind the app and the screen of platform work. Rather than starting with the platform, we have approached from the other direction. As Cleaver argued, we must begin from an 'examination of workers' actual struggles: their content, how they have developed, and where they are headed' (1979, 58). In the context of transport platforms, this has involved tracing resistance and struggles across different national contexts. There is a convergence in the experience of work that can be found here, as platforms 'have recruited large numbers of young and migrant workers, connected them via smartphone applications, ordered them to meet in specific places, attempted to immiserate their conditions without any space for negotiation, all the while claiming not to actually employ any of them' (Cant and Woodcock forthcoming). Transport platform work provides the most developed examples of the three dynamics discussed above. First, there is widespread use of communication methods such as WhatsApp, with overlapping networks of workers that often intersect with migrant communities. Second, there have been waves of wildcat strikes across transport platform work. Third, these strikes have been connected both within countries and internationally. There are the beginnings of organic international coordination and organising in this work.

These three dynamics are driven by the technical composition of this work. Platforms have reorganised previously existing forms of work across the city, removing the traditional workplace, managing the work through a reliance on piece rates and algorithms, while avoiding employment regulation through the use of self-employment status. These features create a shared experience of the work beyond national borders – both in the day-to-day of the labour process and also in how workers fight against it. These dynamics are also shaped by the social composition of many of these workers. Despite the platform's fantasy that workers are isolated individuals and only a temporary inconvenience, they bring their lives and experiences with them into platform work. This includes previous experiences of resistance and struggle, as well as community and solidarity. All these are combining to form a potentially new political composition of platform workers, both in national contexts and internationally. There are, of course, significant differences between Uber drivers in London, Cape Town, Bangalore, San Francisco, and so on. But they are developing a collective

subjectivity as Uber drivers. On this basis, new forms of organisation are coming to the fore. These are not just mobilisations against the injustices of platform work (Kelly 1998), but involve 'labour-process-generated solidarity' (Atzeni 2009, 15).

There are other forms of platform work that require a worker to be in a particular place, for example cleaning and care, which are growing areas of platform work. The dynamics found in transport work are not as pronounced in these forms of work, with little evidence so far of open resistance and struggle. However, this does not mean that capital has succeeded in defeating worker agency. We can consider what kinds of 'blockages' (Roggero 2011) are preventing a political recomposition of workers in this context. The fact that recomposition has happened so quickly in transportation should not be taken as evidence that cleaners and care workers cannot struggle in this way. Instead, it shows that they too could wage a struggle against platform capitalism.

These 'blockages' are clearly also present in the discussion of online work. There are even more challenges here than with cleaning and care work, with many workers physically isolated from each other, perhaps even separated by thousands of miles. However, this new technical composition of outsourced work has not removed the ability of workers to find new ways to connect with each other. Forums, social media, and digital communication have become the new watercooler or street corner for many of these workers. While this might not facilitate building connections as powerfully or as quickly as meeting face-to-face, it has contributed to the development of collective worker subjectivities on these platforms. Through the examples discussed earlier, particularly the Turkopticon intervention and the protests at Rev, resistance can be seen rising to the surface in this kind of work. The dynamics present in transport work are also present in online work, albeit taking longer to crystallise and develop. However, what the examples show is that workers are beginning to find ways to organise against platforms in this work.

Why Does This Matter?

Despite the increasing evidence of resistance in platform work, whether in transport or online, there remain important questions about how this can develop into worker power. The chapter on understanding platform resistance discussed the challenge of moving from strikes and protests to sustained forms of organisation and tangible victories. In many cases, this work could be assessed as having low bargaining power, with issues relating to low structural and associational power. Capital's use of platforms has involved introducing a new technical composition that has sought to destroy – or limit – these forms of power. This includes refusing to employ workers, breaking up the labour process, the use of technology, new management techniques, and attempts at isolation. It is also exacerbated by the threat of automation, whether real

or imagined, that hangs over much of this work. However, it is worth noting Callum Cant's conception of 'internal' structural power. Despite all of these changes, platforms still rely on the labour of workers: no pizzas are delivered by algorithms, after all. Workers can still find and develop forms of disruptive power to strike back at capital.

There is also a risk of posing workers' struggle solely in terms of the power they can wield in conventional terms at the bargaining table. If workers are found to be lacking these capacities, they can be written off as 'unorganisable'. However, this misses how platform work – like other forms of work – is not a given but is produced by the conflict between workers and capital. It narrows these workers' experiences and struggles to the platform they work for, cutting them off from other workers' movements more widely. As Cant (2019) has argued, platform work is a laboratory for capital. It provides a testing ground in which new technical compositions are being experimented with. The success or failure of these tests has implications far beyond the platform economy. This is not to say that platform work should become the sole focus of attention. As Kim Moody warns, this could 'trivialize the deeper reality of capitalism, its dynamics, and the altered state of working-class life' (2017, 69).

Workers' inquiry, outlined in this book through the idea of digital workerism, provides a way to develop a deeper understanding of what is happening in platform work. This means understanding the struggles against platforms and their potential, but also learning how to fight new technology in the workplace. While platforms have transformed limited sectors of work so far, there are many other kinds of work that could be reorganised in this way. In particular, there are many public sector workplaces where platforms could be introduced. For example, universities increasingly rely on a supply of precarious workers to provide teaching, often in response to student numbers. It would not require much of a stretch of the imagination to see teaching being provided on a platform basis, with workers brought in just for classes or marking, and receiving numerical scores (as many already do). Similarly, with health and social care there has been an increase of precarious contracts. Platforms could offer a way to further drive down labour costs here.

The fight of platform workers therefore matters beyond the immediate platform they are resisting. The 'refusal' (Tronti 2019) of these workers when they strike against platforms shows how these forms of technological surveillance, control, and attempted domination can be resisted. This shows up the strengths and weakness of capital's use of technology in the workplace. It highlights how the imperatives of capital are written into the software and algorithms of these platforms. As Berardi reminds us, 'in the beginning someone is writing the code, and others are supposed to submit themselves to the effects of the code written by someone' (2013, ix). As he continues, 'the pragmatic effects of the code are not deterministic, as far as the code is the product of code writing, and code writing is affected by social, political, cultural, and emotional processes' (Berardi 2013, x). We are not trapped by algorithms, nor have they found a way to prevent

resistance in the labour process. They are a product of the social relations within which they are made. As struggles of platform workers develop, they provide the opportunity to 'reveal some of the contradictions over production involved in working with code, in parallel to labor conditions and class struggle more broadly' (Cox 2013, 40). Here, new alliances across the supply chain are possible that can provide a glimpse of how technology could be used differently, while providing powerful weapons to disrupt capital's technology.

This book has also provided an example of experimentation with the ideas of digital workerism. Rather than starting with the platform or technology, it began from workers' experience. From this perspective it is possible to develop a new understanding of platform workers' struggles and the directions they are heading in. It also breaks the distinction between online and offline, showing that workers use a combination of these relationships to resist their work. Digital organising is no replacement for face-to-face organising, but it can be used to facilitate worker organising in new ways. Collective subjectivities and networks can be developed between workers located across the world. This highlights that ever 'since hackers led digital systems on a line of flight from their military origins the Internet has had an ambivalent political virtuality' (Dyer-Witheford, 2012, 2). Clearly, the internet has been used to develop a new technical composition of platform work, but it can also form part of 'an electronic fabric of struggle', used by workers against capital (Cleaver 1995).

Digital technology also provides new ways to undertake and circulate workers' inquiry – as well as workers' struggle. Despite the challenges of the technical composition of platform work, the use of technology also brings workers into contact with each other. As Romano Alquati (quoted in Roggero 2010) has argued previously, 'political militants have always done conricerca [co-research]. We would go in front of the factory and speak with workers: there cannot be organization otherwise.' Therefore workers' inquiry (or co-research) should involve finding the factory gates for workers today. For Deliveroo this might mean street corners or restaurants, while for other workers this might be located online. Digital technology provides opportunities for workers' inquiry beyond just doing inquiries with digital workers (Brown and Quan-Hasse 2012). The widespread use of smartphones and messaging – alongside posting on social media more generally – indicates that many of these workers are producing and consuming information in new ways. WhatsApp groups are filled with commentary on the work, as well as discussions of struggles against it. The co-writing projects in *Notes from Below* have been able to use digital tools to facilitate writing and editing with workers without being located in the same room. Similarly, technology allows for these inquiries to be widely read and shared.

Digital workerism needs to be alive to the strengths and weaknesses of technology. This means critically analysing the way technology emerges from existing social relations and the acts within them. In relation to platform work, this

means understanding how different technologies have been used to discipline and control workers, while also seeing that they have played a role in facilitating new dynamics of international solidarity and struggle. Technology is understood within the specific technical composition of platform work. However, the use of this technology has also revealed a counter-tendency in which workers can take advantage of this new technical and social composition to recompose politically on a higher level. There is, however, nothing automatic about tendencies. As Roggero argues:

> From the revolutionary point of view, tendency doesn't mean the objectivity and linearity of the path of history, and doesn't have anything to do with foreseeing the future. It's best to leave meteorologists to predict the rain, as militants we must create storms … So tendency means the capacity to grasp the possibilities for an oppositional and radically diverse development within the composition of the present. Tendency is like prophecy: it means seeing and affirming in a different way something which already exists virtually. (2020, 8–9)

Digital workerism is not just about analysing the role of technology within the technical composition of work (although this is, of course, important), but is also about the role of technology in class struggle. This is not an argument that platform work and automation have broken the contradiction between labour and capital. That is clearly not true. Instead, the leap to a new political composition can show the different potential uses of technology.

Where Next?

Alternatives to platform capitalism will come from the struggles of platform workers. However, one of the common arguments about platform work is that capital has made itself redundant through the setting up of platforms. For example, so the argument goes, now that the model has been established, why is it necessary for capital to own and control the platform, seeking monopoly rents? The response has been a call for platform coops (Scholz 2016), using alternative apps. This is often presented as a shortcut to another way of working: just kick capital out of the relationship and workers will be free from the problems of the platform labour process. The first issue with this is that a platform coop would be very unlikely to get the levels of investment that capitalist platforms have had – and even if it did, this would denature its worker-led values. As argued by Englert et al., a platform coop:

> would have to compete with – and indeed out-compete – a capitalist platform like Uber. While an ethical platform might seem to be an easy

> sell versus a company like Uber, the latter has a vast marketing budget and already has the user base. The ability for venture capital platforms to run at a loss to ensure monopoly (or near monopoly) status, means that they have the resourcing to be vicious competitors. The only successful alternatives have been able to operate when regulators or legal changes have banned capitalist alternatives. (2020, 141)

This approach, as well as many other ideas cooked up by academics and other commentators, understands the current organisation of platform work as a problem. It involves proposing an organisational and technological, but not a political, solution. To use Hal Draper's (2019) terminology, these are interventions devised and implemented 'from above'. They often care little about workers' experience or their struggles. It is worth noting that there are examples of worker-driven coops, but these are few and far between.

This approach misses the potential of platform workers' struggles to contribute to a wider fight against capital. Englert et al. (2020) have pitched this as contributing to a struggle for digital socialism. Drawing again on Draper we can identify 'socialism from above' that is '*handed down* to the grateful masses in one form or another, by a ruling elite which is not subject to their control' (2019, 10). On the other hand, 'socialism from below' begins from the 'view that socialism can be realized only through the self-emancipation of activized masses in motion, reaching out for freedom with their own hands, mobilized "from below" in a struggle to take charge of their own destiny, as actors (not merely subjects) on the stage of history' (Draper 2019, 10). The struggle of platform workers can contribute to the formation of a digital socialism from below. These workers are fighting against the leading edge of capitalist technological innovation, often subjected to the most advanced forms of control. As argued before, these workers are not isolated test subjects, but instead are forming new subjectivities against platform capital. They can build alliances along the supply chain, both with other workers involved in the services they are providing, but also with the tech workers needed to develop these new technologies. This highlights the class nature of digital technology. Platforms cannot be understood simply as something neutral that needs to be taken into cooperative ownership. Instead this is about wrenching technology and all of its missed potential away from capital and the 'Californian ideology' (Barbrook and Cameron 1996).

Instead of platform coops, we could imagine 'platform expropriation':

> The hypothesis of this strategy is that a transferal of capital ownership from bosses to workers in the platform sector, achieved through an escalating cycle of political struggle (a cycle that has already been the subject of significant inquiry), would be the optimal way to prevent market competition from undermining different forms of worker-run platforms. This transformation of ownership, however, is not enough

> in and of itself. Management of the platform has to be placed in the hands of both tech and delivery workers, in conditions of workers' control. But rather than commodity production under workers' control, which would remain just a strange form of distributed ownership capitalism, the real socialist possibility in such a reorganisation lies in the decommodification of the platform through its integration into a programme of universal basic services. Rather than maintaining the current market niche of food delivery to relatively well-off urban white-collar workers, this people's Deliveroo would be actively re-designed to produce the greatest possible social use value. By taking control over their daily activity, exploited platform workers could increasingly become the co-producers of a decommodified urban food system – one premised on the socialist transformation – and collectivisation – of the relations of social reproduction. (Cant, quoted in Englert et al. 2020, 141–2)

These are latent possibilities in the struggle against platform capitalism. But these kinds of changes could only be won through a sustained struggle from below. Here we can imagine platforms coops across a range of versions, from those proposed 'from above' as a solution to the problems of platform capitalism, to class-struggle-driven platform coops 'from below', with a whole range of alternatives in between.

Instead of focusing on the particular form of the alternatives, it is helpful to understand the process of getting there. This might involve forging new alliances between platform workers, the labour movement, and other currently 'unorganisable' workers. There are experiences and important lessons than can be shared between each of these groups. Workers' inquiry can provide snapshots of these different struggles. It can provide insights into the struggles of transport platform workers from London, Bangalore, São Paulo, Cape Town, San Francisco – and how these are beginning to converge. Online workers, too, are finding ways to overcome the technical composition of platform work.

It is not the role of this book to chart the future of the fight against platform capitalism, or indeed what comes after it. This fight will be led and shaped by platform workers themselves. Their struggles might take the form of waves of strike action, starting cooperatives, seizing the means of production, or creative tactics and strategies yet to be seen. They might focus on building worker power within or beyond platforms. Only one thing can be said for certain: it is through the struggles of platform workers that alternatives can be articulated and won. To return to a crucial but too often overlooked argument from Marx: the worker 'acts upon external nature and changes it, and in this way he simultaneously changes his own nature' (1867, 283). As Lebowitz has argued, this 'coincidence of the changing of circumstances and self-change' provides the basis through which the 'old subjects, the products of capital, go beyond capital' (2003, 180). This is why there can be no shortcuts in the struggle against

platform capitalism. It is precisely through the process of fighting against platform capital that it can be overcome.

The labour process and the technical composition of platform work, as well as the social composition of workers beyond the platform, has laid the basis for a powerful new political composition. Throughout this book, the framework of digital workerism has been used to highlight the increased communication between platforms workers, a propensity to resist and take action, and increasingly international connections being forged in practice. It also provides a way to connect with the resistance and organising that is beginning to emerge across platform work. After all, the stakes of these struggles matter both for platform workers and the workers' movement more widely. To again paraphrase E. P. Thompson (2013, 8), platform workers were present at their own making. They are present now, leading the fight against platforms, and their struggles will shape the future beyond platforms as well.

Notes

[1] This is just one element of the work completed on Amazon Mechanical Turk. This will be further unpacked in Chapter 3.
[2] See https://dictionary.cambridge.org/dictionary/english/uberize.
[3] See *Notes from Below*, https://notesfrombelow.org/about.
[4] A kitchen set up to make only food for delivery, rather than a restaurant that also serves customers. In London many of these are located in prefabricated structures. See Waters and Woodcock (2017).
[5] This is the main trade union federation in the UK, unlike in many countries that have multiple politically affiliated federations.
[6] You can read the original tweet thread here: https://twitter.com/thricedotted/status/1193928787857039362.
[7] From the signup page for Uber: https://www.uber.com/a/join-new/gb.
[8] From the 'drive' Uber page: https://www.uber.com/gb/en/drive/.
[9] In lieu of a citation, credit is due here to Simon Joyce, who discussed this with me.
[10] Callum Cant, PhD thesis, forthcoming.

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Index

A

academic gig work 45, 89
algorithms 8–9, 34–36, 87, 89
  obsession with 37, 45
Alquati, Romano 36–37, 82, 90
Amazon 55–56, 60–61
Amazon Mechanical Turk (MTurk) 6, 10, 24, 55–59
  workers letter writing campaign 60–61
American Worker, The (1946) 14
associational and structural power 78
Athens, workers' activism in 76–77
Atzeni, Maurizio 80, 88
automation 20, 55–57, 88
  illusion of 56

B

bargaining power, of workers 66, 78
Battaggia, Alberto 18
Belgium, workforce mobilisation in 42–43
'black box' labour system 34, 56
Braverman, Harry 36, 57, 63, 69
Brazil, strikes in 44

C

'Californian Ideology', the 92
call centres 1, 35, 36, 64
  outsourcing 54–55
Cant, Callum 12, 25, 33, 40, 42, 45, 72, 76, 78–79, 81, 82, 89, 93
  idea of 'internal' structural power 79, 89
Cape Town 4
Capital (1867) [1977] 32–33
Cartwright, Edmund 55
Chicola, Jason 65
CitySprint strike 41
Clare, Nick 80
class composition 9, 13, 18, 19, 21, 22, 25, 74, 78, 80
  and workerism 15–18
class struggle 16–17, 18, 19, 21
cleaners and cleaning 40, 74, 88
cognitariat 16
cognitive capitalism 16
commercial content moderation (CCM) 60
COSATU union federation 27
counter-subjectivity 16
crowdsourcing 54, 62
customer ratings 47

D

data extraction and collection 37
Deliveroo 1, 4, 11, 23, 25, 28, 30, 31, 33, 34, 36, 38, 40, 41, 43, 67–69, 90
Deliveroo workers 41, 44, 48, 67–69, 80, 86
  cyclists 1–2, 67
  risks and accidents 86
digital socialism 92

digital technology 6, 7, 16, 19–22, 90
  class nature of 92
  importance for worker activism 49
digital workerism 9, 11–25, 90–91, 94
  practice of 23–26
domestic work platforms 74
Doordash 30–31
Driver Workers' Informal Assembly (SVEOD) 76–77
Dyer-Witheford, Nick 20–21, 25, 57, 90

E

Engels, Friederich 81
Englert, Sai 12
Expensify app 56

F

'false consciousness' 16
fauxtomation 56
FIAT 14, 82
flexibility 8, 22, 63, 64, 73, 86
food delivery platforms
  and wages 4
  role as mediator 30
food platform delivery workers 29–31, 43–44
  organisations 51
  political composition 41–44
  social composition 38–41, 87
Fordism 17
France, strikes in 42
Freelancer 58
freelancing 53, 55, 57, 63
'free rider' problem 75

G

gig economy 43, 51, 63
  factors shaping the 27
Gillespie, Tarleton 5
Global Digital Workers Conference (2020) 50–51
Graham, Mark 3, 8, 57

H

Hay, Arthur 42
Hong Kong 44, 87
Human Intelligence Tasks (HITs) 55, 56, 62
Hyman, Richard 70

I

'illusion of freedom' 35
immaterial worker 16
Independent Drivers Guild 28
  and Uber 28
Independent Workers Union of Great Britain (IWGB) 23, 28, 41, 44, 48–49, 68, 80, 86
  successful campaigns 41
India 27, 28, 40, 47, 49, 54
  Bangalore 3, 4, 28, 40, 47
Indian Federation of App-based Transport Workers (IFAT) 49
Industrial Workers of the World (IWW) courier network 28, 42
Instacart 64
'internal' structural power 79, 89
International Transport Workers Federation (ITF) 49
International Workingmen's Association 13
Irani, Lilly 24, 62
Italian Communist Party (PCI) 14
Italian workerism (*operaismo*) 14–15, 18, 21, 74
  post- (and 'post-post-') 16, 21
Italy of 1960s 14–15

J

Johnson-Forest Tendency 14, 15, 17
'just-in-place' worker, the 34

L

LaPlante, Rochelle 56
Latin American strikes 44

lean platforms 8, 29, 37
London 4
  Brazilian workers in 40, 67, 87
  Islington 4, 86
  migrant cleaners 41, 79
London Private Hire App Based Drivers Association (LPHADA) 48
Lyft 47, 50, 73

M

Maffie, Michael 72, 81
Marxism
  workerist reading of 14
Marx, Karl 13, 24, 30–33, 55, 59, 81, 93
  understanding of technology 19–20
Mason, Sarah 47
Mathew, Biju 49
McDonagh, Siobhain 1
microwork and microworkers 10, 53, 60, 61
migrant workers 40, 41, 46, 68, 72, 87
migration patterns 40, 44
Milburn, Keir 17
Mogno, Clara 43, 71
monopoly concentration 31
Montaldi, Danilo 14
Moody, Kim 89
Moore, Nicole 50
Moyer-Lee, Jason 86

N

Neerukonda, Mounika 3
neoliberalism 8
New York Taxi Workers Alliance (NYTWA) 28, 49
Notes from Below 9, 12–13, 17, 18, 25, 42, 90

O

Ola 47, 49, 50, 73
online work
  origins of 53–55
  technical composition 57–60
online workers 53–64
  communication 62
  composition of 58
  freelancers 10
  networks 61
operaismo (see Italian workerism) 14–15
organisational power 79
Oxford Internet Institute 23

P

Panzieri, Raneiro 20, 21
Perrone, Lucas 78–79
piece work and piece wages 33, 43, 87
píngtái 6
platform capitalism 5, 33–34, 43, 91
  resistance against 10, 43
  struggles against 85–94
platform coops 91–92
platform expropriation 92–93
platform resistance 67–83
  building worker power 75–80
  forms of 69–70
  solidarity and organising 70–74
platforms
  absence of management layer 36, 71
  connecting workers and employers, new way of 6
  internationalisation of 3, 85
  lack of communication and negotiation from 3, 5, 85
  scamming on 58–59
  status of workers on 9
  understanding 5–9
platform work
  as shift in organisation of labour 8
platform workers
  connections between 3, 5, 85
  digital communication, use of 72, 87
  isolation of 61, 88
  self-understanding of 11–12
  wages, importance of as issue 4

political composition 9, 10, 17, 18
new forms of 60–66
political recomposition 41–44, 48, 75, 88
Potere Operaio 15
private hire drivers 44–51
political composition of 48
worker grievances of 47
produsage 60

R

Rev 63–66, 88
automation, threat of 65
change in payment structure 63–66
(transcription) workers 10, 64–66
Rideshare Drivers United 28
Roberts. Sarah 60
Roggero, Gigi 16, 18, 19, 21–22, 25, 74, 82, 88, 91
Roy, Ranjan 30–31, 33

S

Salauddin, Shaik 49
Scholz, Trebor 56, 91
'self-employment' status 9, 20, 22, 28, 30, 45, 70, 86
in eyes of workers 34
'sharing economy', the 8
Silberman, Six 24, 62
Silver, Beverly 78, 79
social composition 38–40, 87
socialism 12, 92
Socialisme ou Barbarie 14, 17
solidarity 80, 82
model of 71
transnational 5
South Africa 27, 28, 37, 40, 47
Srnicek, Nick 8, 29, 37
Steinberg, Marc 5–6
structural power 78–79
subjectivity, production of 16
surplus value 30, 32, 85
Swiggy 3

T

Taduri, Pradyumna 3
taxi services, history of 6
Taylor, Astra 56
Taylorism 17, 36, 37
technical composition 10, 18, 22, 46, 57–60, 70, 79, 81
and food transport workers 31–38
of platform work 3, 28, 72, 85, 87, 88, 90–91, 93–94
at Deliveroo 31
working class, of the 17
technological surveillance 54, 89
Tech Workers Coalition (TWC) 81
Thompson, E. P. 2, 94
Tipathy, Sangam 49
Trades Union Congress (TUC) 41
trade union bargaining 78
Transnational Federation of Couriers 9, 43
transnational worker resistance 13, 23, 42–44, 48–51, 87
Transnational Workers Network 50–51
Transport for London (TfL) 28, 46, 48
transport platform workers 27–51
Tronti, Mario 16, 21, 89
Turkopticon project 24, 59, 62–63, 88

U

Uber 3, 4, 7, 23, 28, 31, 34, 38, 45–51, 72–73, 88, 91–92
app 7
automated vehicle plans 57
image of 'driver-partner' 72–73
IPO (Initial Public Offering) 48
research, as focus of 8
Uber Eats 30, 31, 43, 44, 81
workers 42
United Private Hire Drivers (UPHD) 49
universities 89
research protocols 24
unpaid work 46, 59

Upwork 58, 60
USA, transport platform workers 28
UVW (United Voices of the World) 41

V

videogame workers 25

W

Wallerstein, Immanuel 13
Watts, John 33
WhatsApp
  groups of workers 2, 39–40, 47, 49, 87, 90
    Deliveroo 67
wildcat strikes 3–4, 5, 80, 87
  in Italy 14
Wood, Alex 1
workerism 14
workerism (see also 'digital workerism')
  and class composition 15–18
  and subjectivities 16
workers' inquiry 9, 12–15, 18, 77, 89, 90, 93
Workers' Inquiry Network 17
workers' power 27–28
worker writing 9
working class (classes), the 12–13, 17, 21, 37, 80, 82–83
Wright, Erik Olin 77–79
Wright, Steve 17

Z

Zilles, Li 64
Zomato 3

THE FIGHT AGAINST PLATFORM CAPITALISM

So far, platform work has been an important laboratory for capital. Management techniques, like the use of algorithms, are being tested with a view to exporting across the global economy and it is argued that automation is undermining workers' agency. Although the contractual trick of self-employment has allowed platforms to grow quickly and keep their costs down, yet it has also been the case also that workers have also found they can strike without following the existing regulations.

This book develops a critique of platforms and platform capitalism from the perspective of workers and contributes to the ongoing debates about the future of work and worker organising. It presents an alternative portrait returning to a focus on workers' experience, focusing on solidarity, drawing out a global picture of new forms of agency. In particular, the book focuses on three dynamics that are driving struggles in the platform economy: the increasing connections between workers who are no longer isolated; the lack of communication and negotiation from platforms, leading to escalating worker action around shared issues; and the internationalisation of platforms, which has laid the basis for new transnational solidarity.

Focusing on transport and courier workers, online workers and freelancers, author Jamie Woodcock concludes by considering how workers build power in different situations. Rather than undermining worker agency, platforms have instead provided the technical basis for the emergence of new global struggles against capitalism.

SOCIOLOGY OF WORK | DIGITAL SOCIOLOGY | INTERNET STUDIES

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