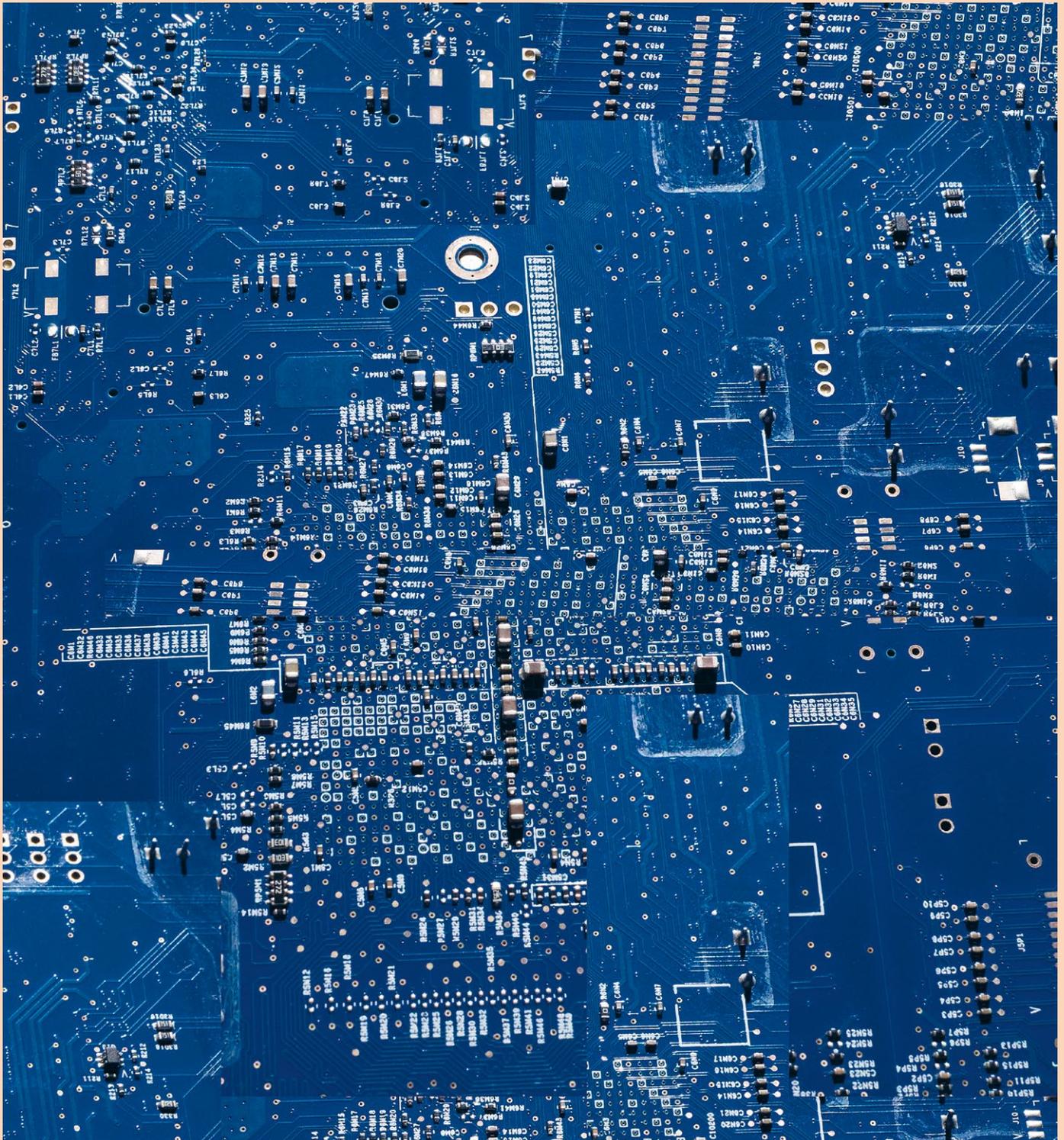


# WORK IN THE AGE OF DATA

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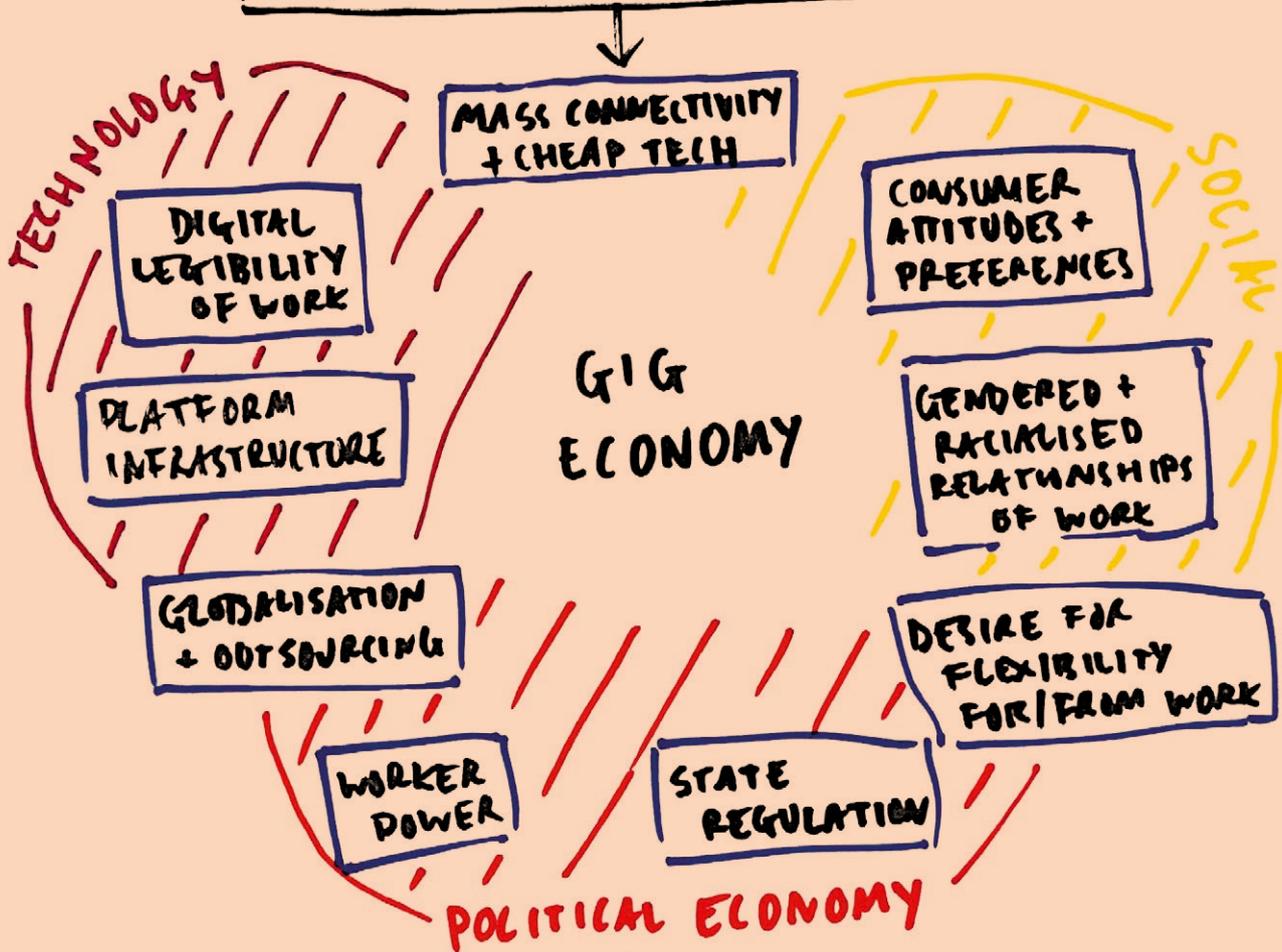
DATA, IDEAS, AND PROPOSALS ON DIGITAL ECONOMY AND THE WORLD OF WORK

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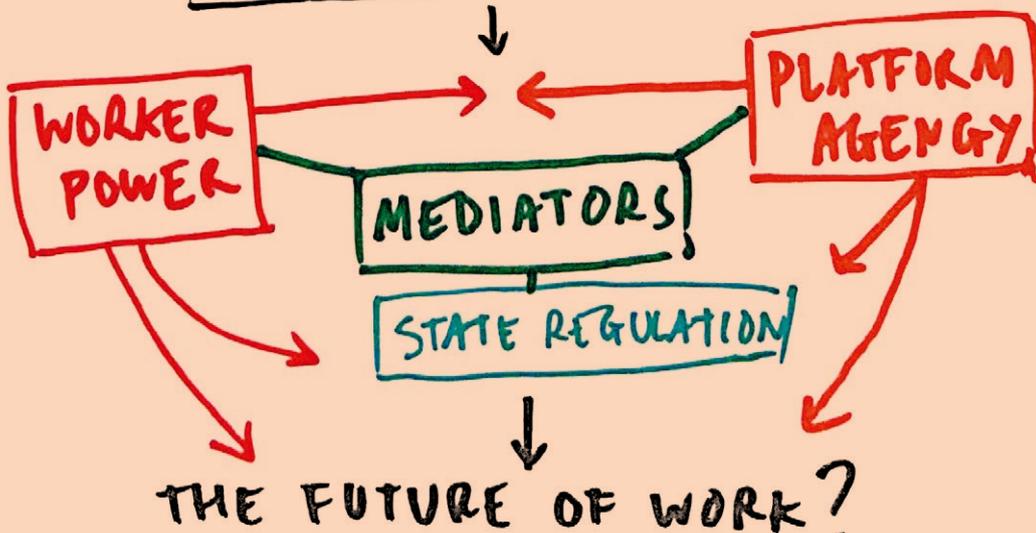




# PRECONDITIONS OF THE GIG ECONOMY



# RESHAPING THE GIG ECONOMY



# The Impact of the Gig Economy

## Jamie Woodcock

This chapter discusses the impacts of the gig economy on labor markets in Europe. The gig economy and platform work have become popular topics, while reshaping the experience of work for increasingly larger numbers of people. However, too often debates around the gig economy lack empirical insight. This chapter seeks to introduce readers to these issues, starting with the preconditions that shape the emergence and dynamics of the gig economy. The next part examines the resulting labor market trends, including effects beyond the gig economy; the experience for workers, drawing on current research; and possible future directions, both positive and negative.

The gig economy, along with the future of work, has become a popular topic of discussion. The gig economy, broadly speaking, involves working arrangements that are closer to “gigs” than traditional kinds of jobs. This riffs off the ideas that work is becoming more like playing a music gig at a venue, with no guarantee of continuing work, but with workers also free to choose where to go next. Short-term or precarious work has a history longer than formal work arrangements, both within jobs that now have so-called “standard employment contracts” and roles that remain informalized, like domestic work.

The current interest in the gig economy has also been spurred by the application of digital technology and the use of platforms. Often, when talking about the gig economy, the subject is usually platform economy—and more specifically platform work. App-based transportation—like Uber, food delivery, or other consumer-facing services—represents particularly visible changes to work. Throughout this chapter, the focus will be narrower than the gig economy, examining how gig work is increasingly being mediated via digital platforms. As Nick Srnicek (2017: 48) has argued:

Platforms, in sum, are a new type of firm; they are characterized by providing the infrastructure to intermediate between different user groups, by displaying monopoly tendencies driven by network effects, by employing cross-subsidization to draw in different user groups, and by having designed a core architecture that governs the interaction possibilities.

This focus is important because, although broader gig work has existed for a long time, the platformization of this work is drastically reshaping the gig economy—with the potential to create widespread impacts across the entire economy. To give some sense of the scale, Richard Heeks (2017) estimates that around seventy million people have found work via a platform. In the slightly longer term, McKinsey estimates that 540 million people could be seeking work through “online talent platforms” by 2025, with a prediction that up to 230 million would find work (Maniyika et al., 2015). Moreover, Guy Standing (2016) predicts that, by then, one third of all work will be mediated via digital platforms.

This chapter seeks to introduce readers to these issues, starting with the preconditions that shape the emergence and dynamics of



the gig economy. The next part examines the resulting labor market trends, including effects beyond the gig economy; the experience for workers, drawing on current research; the impact on society more widely; and concludes with possible future directions, both positive and negative.

### The Preconditions of the Gig Economy

Before examining the impacts of the gig economy, it is first worth exploring the preconditions that shape its emergence. Otherwise, there is a risk of seeing the gig economy as only taking a particular form, shaped by technological factors, thereby reducing the agency of other important actors in the process. At its core, the platforms that mediate gig work use “tools to bring together the supply of, and demand for, labor” (Graham and Woodcock, 2018: 242). However, both aspects of labor are shaped by preconditions, which then facilitate and encourage the growth of this kind of work. As identified by Woodcock and Graham (2019), there are nine preconditions that shape the gig economy, involving

The gig economy, broadly speaking, involves working arrangements that are closer to “gigs” than traditional kinds of jobs

Bike couriers working for Foodora and Deliveroo take to the streets to demand higher wages, Berlin, June 2017

aspects of technology, society, politics and their combination.

The first precondition is technological: “platform infrastructure.” The availability of underlying technology, including 4G connectivity, cloud computing, GPS networks and so on, is an important factor in facilitating the rapid growth of platforms as a model. The second precondition involves the “digital legibility of work,” which refers to whether or not the work can be mediated via a digital platform. For example, delivery work has a high level of digital legibility as it involves a discrete task that can be mapped onto a process with defined steps. However, there are many kinds of less well-defined work that can be challenging to organize via a platform. The third precondition combines technological and social aspects: “mass connectivity and cheap technology.” The availability of affordable smartphones with regular Internet connectivity is important for both workers and consumers of platforms. Without this, services can be unreliable and do not meet the needs of either party. Transportation platforms excel at offering a service at any time—and often when other alternatives are not possible—



Gig work can be divided in two: “geographically tethered work,” which requires workers to be in a particular place, and “cloudwork,” which refers to work that can be completed remotely via a computer

and this is facilitated by technology that is cheap enough for mass uptake.

The fourth is a social precondition relating to “consumer attitudes and preferences,” tying into the previous factor. These kinds of platforms can only grow if there is an existing market for these kinds of services (or one can be manufactured in various ways) and customers are amenable to accessing these services via platforms. For example, domestic work platforms require—of course—a market for domestic workers that involves customers who are used to having workers in their homes. In countries where these practices are more common, for example in South Africa, there are existing ways through which domestic workers are recruited and managed. These often draw upon longer informal relationships, often with vouching or other forms of trust playing a key part in both. For domestic work platforms like SweepSouth or Domestly to be successful, there has to be a shift in customer attitudes and preferences toward using digital platforms instead. This example connects with the fifth social precondition: “gendered and racialized relationships of work.” Domestic work has long been gendered as female work, as well as being racialized with minority and migrant workers. Similarly, in the UK and other global north countries, driving and delivery work has historically been considered as male work, while often racialized too. In both cases, this means many workers who are not covered by effective employment regulation due to irregular status, as well as facing racist marginalization more widely. Many of these dynamics can be carried over into platform work.

The sixth precondition is a combination of social aspects and political economy: the “desire for flexibility for/from workers.” There are two pushes for the flexibilization of work with platforms that are closely related. The first is platforms seeking a high flexible workforce that can be engaged at short notice with little commitment to continuing work. For example, delivery drivers who are paid only to make deliveries, particularly at peak times, not needing to be paid during times they are not needed. This allows platforms to scale rapidly, while reducing staffing costs—particularly through the use of self-employment status, which will be discussed in more detail later. However, only considering this imperative for flexibility misses the demand—and indeed often discussed benefit by workers—for more flexible working practices. Many workers want more flexibility than traditional

employment offers, being able to schedule work around other aspects of life, or to be able to work more or in addition to other jobs. While there are a variety of reasons why this may be, including the prevalence of low paid and bad quality jobs, this desire for flexibility of workers is an important factor to consider.

The seventh and eighth preconditions are related to political economy and involve “state regulation” and “worker power.” Both of these factors shape the environment from which the gig economy and platforms are established. The first, state regulation, sets the regulatory environment that provides limits upon—or indeed facilitates—the growth of this kind of work. However, in many cases, existing regulation will not have been designed to consider the specificity of this kind of work, meaning platforms can evade or avoid regulation. Worker power, on the other hand, refers to the strength of the existing labor movement, understanding how its relative power can shape the environment in which platforms operate—tipping the scale in favor of workers and their rights. For example, in countries with strong trade unions of taxi drivers, the entry of platforms has been frustrated or blocked. In other cases, worker-friendly regulation has been brought in following pressure. The balance between worker power and corporate lobbying therefore sets an important terrain upon which platforms are established and developed.

The ninth and final precondition is a combination of political economy and technology, referring to the dynamics of “globalization and outsourcing.” In a sense, this refers more specifically to one particular kind of gig work. Broadly, gig work can be divided in two. First, “geographically tethered work,” which requires workers to be in a particular place—whether cleaning a house, delivering food, or so on. The second is “cloudwork” which refers to work that can be completed remotely via a computer. This could either be microwork on platforms like Amazon Mechanical Turk, with the short tasks like image tagging or transcription, or the longer online freelancing on platforms like UpWork (Woodcock and Graham, 2019). Clearly, the latter involves dynamics of outsourcing that build on increasingly globalized networks of digital logistics. For example, much of the behind the scenes work of the Internet is completed by these remote gig workers, like moderating video content in the Philippines. However, the former also involves these processes as much of this work is undertaken by migrant workers, moving



across borders and becoming outsourced workers within new national boundaries.

These preconditions do not determine the form that the gig economy will take, but when taken together they have a deep influence on shaping the potential outcomes of the gig economy in different countries. It is important to draw attention to these different preconditions, particularly those that are not directly related to technology, in order to show how there are “actually myriad *gig economies* all over the world that are experienced in significantly different ways” (Woodcock and Graham, 2019). Despite this, as the remainder of the chapter will show, there are increasingly common threads, dynamics, and outcomes that are emerging—but that these do not foreclose the possibilities for this kind of work to be reshaped in the near-future.

## Labor Market Trends

Building upon these different preconditions, the gig economy has grown and developed. In an earlier phase, some researchers discussed this as the start of the “sharing economy” (Sundararajan, 2017). However, these promises of the gig economy have not come true. For example, Sarah Kessler (2018: x) describes a story told to her by a start-up founder: that “we could work for our neighbors, connect with as many projects as we needed to get by, and fit those gigs between band rehearsals, gardening, and other passion promises.” This proposed way of working has, instead, arrived not to fit around existing relationships, but, instead, to begin breaking up previous ways of working. In particular, this involves a break from what has been called the “standard employment relationship.” This denotes an expectation for workers that they will have a “stable, socially protected, dependent, full-time job” that is subject to protections from the state and influenced by collective agreements (Bosch, 2004: 618).

In particular sectors, like transport and delivery, there are clear and visible trends emerging. Uber now has an estimated four million drivers globally, with over 40,000 in London. In a study by Huws et al. (2016), they concluded that platform “work is not only growing fast but spreading into diverse occupational areas,” including both work completed online, or forms of gig work like delivery that are mediated online. They also note that there is “evidence that this model

is spreading to other diverse areas including health services, teaching, legal services and a wide variety of manual and maintenance tasks” (Huws et al., 2016: i). Across the countries they surveyed in Europe, 9% of people in the UK had carried out paid work via platforms, with 9% in the Netherlands, 10% in Sweden, 12% in Germany, and 19% in Austria. In a US-based study, it was found that 8% of Americans worked on an online “gig” platform in 2016, rising to 16% for the eighteen to twenty-nine age bracket (Smith, 2016). However, for many workers, this was supplemental income in addition to other forms of employment. The findings of the survey argue that for a small, but growing, number of workers, platform work is becoming a main part of their income. Workers are “choosing it from a desperation to find any source of income, rather than as an active career choice” (Huws et al., 2016: iii).

Despite these findings, it has proven difficult to accurately measure the size of the gig economy. First, there are important differences on how researchers define the gig economy—meaning that the contours change from study to study. Second, there is little data available at present. As noted earlier, Heeks (2017) estimates seventy million registered workers on platforms, but that only around 10% are active at any one time. The flexibility and low barrier to entry means that many people may try working on platforms, or move between this kind of work and other forms. Despite the difficulty in providing an accurate measure, it is clear that “ever more work ... is being mediated by platforms” (Woodcock and Graham, 2019). For example, in the UK one estimate puts the gig economy workforce at 1.1 million, this is as many as work for the NHS (Balaram et al., 2017). Regardless of the quantitative figures, the gig economy is creating important qualitative changes—both for workers and society more broadly.

## The Experience for Workers

The experience of working in the gig economy, like that of working many jobs, is diverse. People bring a wealth of experiences, wants, and needs to work with them. It is therefore not possible to say there is a singular experience of the gig economy. In a US context, Alexandra Ravenelle (2019: 1) has argued that there are “strugglers,” “survivors,” and “success stories” in the gig economy. If you

look hard enough, on every platform these typologies can be found—as well as many in between. However, there are important dynamics that are becoming increasingly common across experiences of the gig economy.

The first is related to the flexibility of the gig economy. Flexibility is an overused concept that can mean a variety of things in practice—from workers having the ability to choose when to work, to the freedom for employers to hire and fire at will, and so on. Flexibility is therefore often experienced within constraints, flexibility from or to something. For those with relatively little power, this flexibility is often experienced as precarity. This means difficulties in predicting how much they will earn, or how long paid work will continue. To illustrate this, it is worth returning to an example from my own fieldwork with Deliveroo drivers in London (Woodcock and Graham, 2019). The story articulates many of the issues involved with this kind of work:

One of the riders, who had been a participant in Jamie’s research since the beginning, told a particularly revealing story about the experience of working for Deliveroo. At the end of an interview, Jamie asked the driver what he thought the most challenging part of the work was. Expecting the driver to mention the low pay, insecure contracts, or threat of accidents, he was instead told the following story. The driver worked at two other jobs in addition to Deliveroo. In the morning he would wake up and go to the first job, trying to eat breakfast before he left. Over lunch he worked a shift for Deliveroo, making sure to grab something quick to eat on the way. In the afternoon he worked at the third job, before starting the evening shift at Deliveroo. The most challenging aspect of the work was making sure he ate enough food once he got home to ensure he had the energy to get up and repeat the process the next day ... Deliveroo is marketed as a service for delivering food to stylish young professionals, but the reality is that many of his deliveries were to people too exhausted from working to make their own dinner. This is especially ironic given how Deliveroo brands itself. His story is therefore a damning indictment of the realities of gig work in London: a worker struggling to eat enough calories to deliver food to people who are too tired from work to make their own.



This is an important story for a number of reasons. First, it is an indictment of the working practices that many workers face in the gig economy. While they have the flexibility to work when they choose, for this worker it meant trying to top up the minimum wage income of other jobs in order to try and survive in a highly expensive city like London.

This worker had never met anyone who was employed by Deliveroo. The first meeting was with people considered legally self-employed like him to register and set up the app, while any problems were handled through an outsourced call center. This meant it was a very different experience to either the café, the bookshop, or other forms of low-paid work common in London. The irony of his struggle to consume enough calories to deliver food draws attention to the continuing materiality of this kind of platform work. This means understanding how the road networks, with other drivers and risks of accidents, the weather, personal fitness, the ease or difficulty of finding addresses, remaining phone battery and data signal, and all the other aspects that are hidden behind the digital interface of the app.

There is an increasing body of research that points toward the negative outcomes for workers in the gig economy (Aloisi, 2016; Scholz, 2017; Graham et al., 2017; Graham and Woodcock, 2018; Wood et al., 2018; Woodcock and Graham, 2019; Cant, 2019). The use of self-employment statuses exacerbates many of these negative aspects, beyond what is found in precarious work like call centers (Woodcock, 2017a). For many workers, the experience is that work is increasingly precarious. As defined by the ILO (2011: 5),

In the most general sense, precarious work is a means for employers to shift risks and responsibilities on to workers. It is work performed in the formal and informal economy and is characterized by variable levels and degrees of objective (legal status) and subjective (feeling) characteristics of uncertainty and insecurity. Although a precarious job can have many faces, it is usually defined by uncertainty as to the duration of employment, multiple possible employers or a disguised or ambiguous employment relationship, a lack of access to social protection and benefits usually associated with employment, low pay, and substantial legal and practical obstacles to joining a trade union and bargaining collectively.

The use of self-employment statuses exacerbates many of the negative outcomes for workers, beyond what is found in precarious work like call centers

Freedom from traditional forms of work has the potential to create larger societal problems in the future. In many countries, social security is connected to the standard employment contract

This precariousness has been driven by a range of “social, economic, and political forces” that “have aligned to make work more precarious” (Kalleberg, 2009: 2). The actual precariousness of a job—that is, the likelihood that it will end—is also related to the experience of precarity—the threat that the job could end at any time (Woodcock, 2014). The impact of precarity can become greatly amplified beyond actual figures of workers losing their jobs. This also effects workers beyond the workplace, feeding into workers ability to engage in other aspects of society too.

### The Impact on Society

The gig economy is reshaping not only work, but also aspects of society more broadly. One of the key preconditions discussed earlier was the “desire for flexibility for/from workers,” as well as “consumer attitudes and preferences” (Woodcock and Graham, 2019). These could be combined to make sense of the impact of the gig economy on society more broadly: workers, platforms, and consumers are all seeking greater flexibility from these kinds of platform services. Workers are seeking to find more flexible and adaptable ways to work; platforms are freeing themselves from previous employment regulations, and consumers increasingly expect on-demand services.

Due to the customer-facing nature of many of the high-profile platforms these are changing consumption patterns. For example, Uber has widely increased the provision of private-hire drivers, with a surplus of drivers, meaning consumers often only have to wait a short time for a pickup. The lower prices have meant increased take-up of these services, transforming transport practices across many cities. Food-delivery platforms are also changing consumption patterns. They have also shifted the relationship with restaurants, through the establishment of so-called “dark kitchens” (Butler, 2017) in which the food is no longer made in a restaurant, but in special purpose-built delivery units, often hosted in shipping containers.

These shifting consumption patterns have a common trend that ties them together. Whether passenger journeys, delivery of food, or other on-demand services, these allow other workers to externalize aspects of their “social reproduction” (cf. Bhattacharya, 2017), that is, recovering from and preparing





for work. At the most obvious level, faster transportation options open up more time—either staying later at work or having more non-work time—while delivery food does not require time to prepare. Therefore, the gig economy connects to broader trends of work intensification that can be seen throughout other sectors of the economy (Graeber, 2018). This involves taking parts of our lives that might previously have been organized in the home—notwithstanding all the problems that that can entail—and opening them up to the market and venture capital.

This freedom from traditional forms of work also has the potential to create larger societal problems in the future. In many countries, social security—whether to cover sickness, retirement, or maternity/paternity—is connected to the “standard employment contract” in various ways. The short-term flexibility of the gig economy has brought some benefits to people working the gig economy, as well as to those who now rely on externalizing the costs of overwork in various ways. However, given the lack of social provisions for people in the gig economy, the social costs

of their work will be borne predominantly by private individuals.

As has been noted, the gig economy relies upon a self-employment status which frees the platform or company from the requirement to pay benefits and cover the risks of work. For workers driving in the gig economy this is particularly important. In a study of gig workers in London:

42% said they had been involved in a collision where their vehicle had been damaged and 10% of the total sample said that someone had been injured as a result and this was usually themselves ... three quarters of respondents (75%) said that that there had been occasions while working when they have had to take action to avoid a crash (Christie and Ward, 2018: 4–5).

Moreover, the authors of the study warned that the incentive systems in the gig economy encouraged “chasing jobs,” exacerbating risks to get more work, which further “increases the exposure to risk.” They con-

Uber co-founder Ryan Graves, with CEO Dara Khosrow, rings a ceremonial bell at the New York Stock Exchange as the company makes its initial public offering on May 10, 2019

clude that “these faceless digital brokers take no responsibility for the health and safety of the people who accrue income for them” (Christie and Ward, 2018: 5). These risks extend beyond the time that people are working. The insurance group Zurich has warned that there is “a blind spot in the current pension system. Gig economy workers don’t have access to a workplace pension, meaning millions aren’t saving enough for retirement” (quoted in Shaw, 2017). They estimate five million people are at risk of not having adequate pension provision—including those working for platforms but also insecure forms of work like zero-hour contracts.

There is also little discussion of the environmental impact of platform work. The Internet infrastructure and the vast server farms upon which these services run is having an increasing impact on the environment. For example, platform operations now



Parts of our lives that might previously have been organized at home—such as cooking—are opening up to the market and venture capital

In the absence of traditional forms of trade unionism, like collective bargaining, platform operators have been shaping work and also actively influencing state regulation through lobbying



Signage outside the co-working office space group WeWork in London

consume an estimated three percent of the global supply of electricity, while producing two percent of global greenhouse gas emissions—an equivalent carbon footprint to the airline industry (Woodcock, 2017b).

### Future Directions

It is possible that all work could become organized over platforms and become part of the gig economy. There are many jobs that can be split into smaller parts, paid by the task, with employers that could see the benefit of a much more flexible workforce. However, as pointed out in this chapter, the growth of platform work is not determined solely by technology. Instead, there are a range of preconditions that shape how the gig economy develops. In some forms of work, both employers and workers would be opposed to this; in other cases just one or the other, or a range of other social, technological, or political economy factors may not facilitate this.

In particular, there are two preconditions that continue to act as important mediators on how the gig economy operates and how it will develop. They are both related to political economy: “state regulation” and “worker power” (Woodcock and Graham, 2019). These combine with a third important factor not mentioned in the preconditions, which is the agency of platform operators themselves. There is, therefore, an important three-sided dynamic that has the potential to exert considerable influence on the future direction of work. As workers on platforms start organizing, they are beginning to raise demands about how they want to work. For example, workers have now been on strike from London to Bangalore and Guangzhou, so much so that “we need to stop talking about resistance as emerging in platform work”—it has arrived (Cant and Woodcock, 2019). In the process, they are attempting to change how platforms operate, but also state regulation. On the other hand, platform operators have been shaping work in the absence of traditional forms of trade unionism, like collective bargaining, while also actively influencing state regulation through lobbying (Woodcock and Graham, 2019). This contradiction between the interests of platform operators and independent contractors is increasingly mirroring the historical struggles between workers and employers—particularly at early phases of an indus-

try’s operation. In addition to this, the state in different countries is beginning to introduce new regulation—often favoring platform operators, but sometimes favoring workers. Given the three-sided nature of this, the current directions and outcomes of the competition between these different groups remains unresolved.

The importance of this competition is that it has the potential to reshape much more than only the gig economy. The impact of the gig economy is not only about the numerical growth of the number of people working in this way. It also becomes an important test case of a new way of managing labor. Thus, while the quantitative impact of the gig economy may be relatively small, it has the potential to make a huge qualitative change in how work will be organized in the future. As Callum Cant (2019) has argued, the gig economy acts as a “laboratory” from new management techniques. This is much like how previous forms of digital work, like call centers, have early roots in the Taylorism of factories, then go on to influence the emergence of the gig economy (Woodcock, forthcoming). Thus, what methods prove successful in this new testing ground will be adapted and used across the economy more broadly. It is, therefore, crucial to understand what is happening within the gig economy now, in order to chart a better future of work and for workers.



Dr. Jamie Woodcock is a researcher at the Oxford Internet Institute, University of Oxford. He is the author of *Marx at the Arcade* (Haymarket, 2019) about videogames, and *Working the Phones* (Pluto, 2017), a study of a call center in the UK—both inspired by the workers’ inquiry. His research focuses on labor, work, the gig economy, platforms, resistance, organizing, and videogames. He is on the editorial board of *Notes from Below* and *Historical Materialism*. Jamie completed his PhD in Sociology at Goldsmiths (University of London) and has held positions at Goldsmiths, University of Leeds, University of Manchester, Queen Mary, NYU London, Cass Business School, and the LSE.

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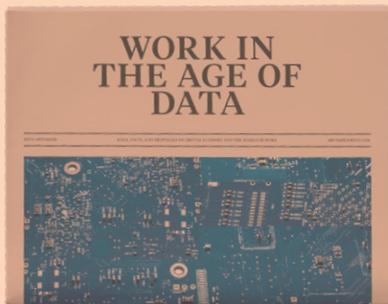
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*Reinventing the Company in the Digital Age.*
- Innovation and the Service Economy, , Ian Miles  
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