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# 'My Life Is More Valuable Than This': Understanding Risk among On-Demand Food Couriers in Edinburgh

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[journals.sagepub.com/home/wes](https://journals.sagepub.com/home/wes)**Karen Gregory**

University of Edinburgh, UK

## Abstract

Drawing from the social study of the gig economy and platform labour and from the sociology of risk, this article explores how on-demand food couriers in Edinburgh, Scotland, construct and represent work-related risks. By taking the gig economy's contested and contentious status of 'self-employment' as a starting point, this article positions couriers as experts of their own work process and draws on in-depth interviews with 25 couriers to illustrate how platformed labour creates a range of risks, including physical risk and bodily harm, financial risks and epistemic risks. To negotiate these risks, couriers use a range of strategies, including *privatising*, *normalising* and *minimising* risks and by *forging new communities of support*. While some risks can be negotiated by recourse to the private, entrepreneurial, or 'choosing' self, interview data illustrate how algorithmically managed work creates uncertainty and confounds the issue of choice by obscuring the work process and associated risk probabilities.

## Keywords

gig economy, platform labour, risk, self-employment

## Introduction

In July 2018, Daniel Smith, a Deliveroo rider and student in Edinburgh, was hit by an oncoming car while on his bicycle en route to a delivery pickup. Daniel suffered a cracked spine and minor head injuries; he later claimed that the accident was 'a reminder for me of how vulnerable cyclists are cycling in a city' (Buck, 2018). Just a few months

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### Corresponding author:

Karen Gregory, University of Edinburgh, 6.23 Chrystal Macmillan Building, George Square, Edinburgh EH8 9LD, UK.

Email: [k.gregory@ed.ac.uk](mailto:k.gregory@ed.ac.uk)

later, Franck Page, an 18-year-old student and Uber Eats rider, was hit by a truck and killed while delivering an order on his bicycle in Bordeaux, France. A spokesperson for Uber Eats said that ‘it was with great sadness that we learned of the death of the courier’, but riders responded by organising a memorial walk to bring attention to the risks they face in the city, including dangerous traffic conditions and pressures placed on them to deliver quickly. Fellow bike couriers attending the memorial were quoted as saying, ‘We are not paid enough for the risks we take’ and ‘We do the same thing. I’m a student too, it could have been me’ (Provenzano, 2019).

While food delivery is not a new form of work, on-demand delivery platforms increasingly enable individuals to take up this form of ‘dirty’, or risky, work (Kidder, 2006: 40). Historically, delivery work was taken on by young men, and, in the United States, the visibility and hazards of delivery work helped establish worker compensation laws (Downey, 2002). Similarly, in the United Kingdom, the first inquiry held under an expanded Workmen’s Compensation Act (1906) was into the death of bicycle messenger James Hayes, who died after losing control of his bicycle and crashing into a wall (Scotsman, 1907). Today, anyone who can prove their right to work in the UK can put themselves to work via on-demand platforms such as Deliveroo, which has successfully drawn in full-time and part-time riders, including students, migrant workers and those looking to supplement their incomes with gig work (Huws et al., 2017). Were any of these individuals to suffer a crash, however, they would not qualify for employee compensation. Deliveroo riders are classified as ‘self-employed contractors’ rather than as employees of the company.

This legal designation has been subjected to repeated legal scrutiny (Prassl and Risak, 2016; Todoli-Signes, 2017). Such a classification has been seen as ‘sham self-employment’ (Leighton, 2016) or a form of ‘sub-entrepreneurialism’ (Josserand and Kaine, 2019: 550). Until the question of employment classification is resolved in the courts and enforced locally, individuals who work for Deliveroo (and other gig economy platforms) must engage it as a self-employed contractor and under conditions marked by a ‘demutualisation of risk’ (DeStefano, 2016); that is, where the risks of doing business have been shifted primarily or entirely to the worker.

Starting with the premise that riders are experts of their own experience of this form of self-employment, this article explores how on-demand food couriers conceptualise, represent and negotiate work-related risks. Through in-depth interviews with 25 current riders in Edinburgh, this article explores how the platforming of food delivery creates a range of risks that can be categorised as *physical risk and bodily harm*, *financial risk*, and *epistemic risks*, which result from the uncertainty of ‘algorithmic management’ (Lee et al., 2015). These risks are also informed by the material conditions of the city, particularly as this work is conducted on and through city streets that pose their own local hazards and concerns. Riders employ strategies to privatise, normalise and minimise the risks they identify, but these strategies are not employed evenly. While physical and financial risks can, to some degree, be negotiated by recourse to the private, entrepreneurial, or ‘choosing’ self, interview data illustrate how algorithmically managed work creates uncertainty and confounds the issue of ‘choice’, which sits at the heart of self-employment. Riders do not understand how the algorithm organises or dispatches work, and thus they cannot determine if and when their work will be ‘worth it’ to them. While

some riders turn to one another for support, information and best work practices, on-demand food delivery remains, much like its historical predecessors, a visible form of hazardous work and a site ripe for formal legal interventions.

## Background

On-demand platforms have been credited for creating innovative business models that offer workers choice and flexibility (Pasquale, 2016), and Deliveroo's marketing explicitly offers workers the opportunity to 'be your own boss' and 'earn great money'. Such marketing actively whitewashes the risky aspects of the work and often relies on images of young, male, healthy, able-bodied individuals shown seamlessly riding through the urban environment. These images link on-demand work with the hipness of bike messenger culture – a branding strategy consonant with other gig economy platforms, who likewise portray their workers as young, flexible and glamorous (Rosenblat, 2018: 27). However, while urban bike messengers tend to see themselves as skilled professionals who embrace risk as part of their identity (Kidder, 2006), labour platforms such as Deliveroo sell a sanitised version of messenger culture that suggests anyone is capable of doing this work as a form of 'self-employment'.

Platform-based self-employment is often discussed in tandem with 'the future of work' (Berg et al., 2018), but much of this work should be understood as a continuation of the larger historical trend towards the privatisation of risk. While a full accounting of the sociology of risk (Bauman, 1991; Beck, 1992; Giddens, 1990) is outside of the scope of this article, this body of literature helps us understand three distinct trajectories that have given rise to the platform economy. Broadly, we can see the destabilisation of formal employment, the rise of entrepreneurial culture and the technological rationalisation of the work process all giving rise to new forms of risk and uncertainty for workers.

First, as business models and corporate logics have sought to keep pace with increasingly risk-favourable, volatile markets, so have their investments in a long-term and stable workforce decreased. This trend towards precarious work, or work that is 'uncertain, unpredictable, and risky from the point of view of the worker' (Kalleberg, 2009: 2), has been coupled with a pressure for workers to be agile, 'fit for work', and ready to accommodate the demands of the market (Gregory et al., 2017). Social science literature that has looked at the development of precarious labour has provided the backstory to the development of the gig economy, exploring the arrival of casualised, informal, affective, networked and 'flexible' work arrangements. In line with theorising the risk society, as older solidarities deteriorate, workers have found themselves less protected, less politically powerful and increasingly subject to the demands of managing risk on their own (Dubal, 2017).

In tandem with this precarity has been the rise of the social figure of the entrepreneur, who is encouraged to embrace risk as a terrain of self-development, opportunity and profit (Gregory, 2018). Deliveroo's marketing tagline – 'Be Your Own Boss' – invites such internalisation, encouraging individuals to see themselves as their own form of management. This entrepreneurial self has much in common with what Elizabeth Povinelli (2006) has called the 'autological self', or the self who 'chooses' their own life and, in turn, creates new opportunities and possibilities for themselves. Risk, through the

rubric of entrepreneurialism, can be recast as private investment, and gig platforms have been successful at offloading the financial costs of work (Fleming, 2017) to individuals and requiring that workers provide their own materials, equipment, or assets (Stanford, 2017). For Harvey et al. (2017: 30), such entrepreneurial and 'hyper-flexible' work arrangements require individuals to 'willingly shoulder all the insecurities and risks of self-employed status'.

Furthermore, we can see that the technological arrangements of the gig economy have emerged in an effort to define, control and limit the ambiguity of the work process from a managerial perspective. In doing so, they have created a range of new forms of risk and uncertainty for workers. Studies of the gig economy have shown how platforms maintain control over workers' schedules (Waters and Woodcock, 2017), over the work process (Gray and Suri, 2019; Griesbach et al., 2019; Irani and Silberman, 2013; Richardson, 2020; Wood et al., 2019), over when and why an individual can be fired (Dubal, 2017; Ticona et al., 2018; van Doorn, 2017) and over earnings (Graham et al., 2017; Katz and Krueger, 2016; Kessler, 2018; Ludec et al., 2019; Ravenelle, 2018; Wells, 2019). Control flows to platforms through forms of 'algorithmic management' (Rosenblat and Stark, 2016), which enables companies to use data and algorithmic systems to measure, surveil and control the work process. Such management enables a few human workers to oversee a vast (and potentially global) workforce and has been shown to result in worker confusion and in attempts to understand, narrate, or 'game' the algorithm (Möhlmann and Zalmanson, 2017).

Such labour arrangements lead to chronic uncertainty around schedules and expected wages and are associated with anxiety and overwork (Petriglieri et al., 2019). Wood (2019) suggests such anxiety is compounded by fears of termination and the difficulty of replacing that income stream. Additionally, researchers have found that gig work is associated with increased safety risks. Uber drivers are at significantly higher risk of being involved in an accident (Christie and Ward, 2018). The same survey found the majority of drivers (63%) had not been provided with training to manage road risks or provided with safety equipment (65%). Competition in the on-demand market means that companies are continually seeking to minimise delivery time, which in turn creates pressures on front-line workers. Contracted grocery delivery workers have been explicitly told to 'drive fast' in order to make delivery targets, and Amazon Prime delivery workers have also reported not having time to take breaks (Cleaver, 2016; Liao, 2018). These severe working conditions have resulted in worker fatigue, illness and even death (Booth, 2018). On-demand food couriers face similar pressures to deliver quickly and experience ongoing surveillance, personal fatigue, violence and harassment (Moore, 2018; Moore and Newsome, 2018).

However, this deep demutualisation and privatisation of risk has given rise to a conflicted position for many individuals who work in the gig economy. Individuals enjoy this work and even consider it to be a form of fun and fitness or a 'leisure time activity that nonetheless earns them money' (Malin and Chandler, 2017: 384). Interviewees for this research project also stressed such pleasure. All interviewees but one said that they prefer on-demand couriership to other forms of work, such as fast food, retail, or call centres, where work can also be precarious, highly pressured, controlled and surveilled. This pleasure and the paradox of self-employment in light of the uncertainty and stress

of algorithmic management invites research into how gig workers develop lay knowledges of risk, which, as Lupton and Tulloch (2002: 319) remind us, are ‘contextual’ and ‘localised’.

## Methods

To understand how riders take up and experience on-demand, app-based food courier work in Edinburgh, interviews were conducted with 25 current or former riders. These interviews were solicited through an online survey deployed through a local ethnographic contact and social media channels, including the local riders’ WhatsApp group. All riders interviewed live in or around the city of Edinburgh and work within the city. Ages of those interviewed range between 18 and 45, and the group was skewed towards male respondents (72% male; 28% female). This gender breakdown resonates with a Royal Society for Arts, Manufactures and Commerce (RSA) survey that found that ‘gig economy workers were considerably more likely to be male than female’ (Balaram et al., 2017).

Early in the recruitment process, I was able mostly to secure interviews with students, as the survey was shared among flatmates and through other student networks. However, as the recruitment survey spread among riders via social media and WhatsApp, full-time, older and more precarious riders were also recruited for interviews. Eleven interviewees are currently students at the University of Edinburgh, Edinburgh Napier, or Stirling University. Another five are former students who remained in the city after their studies ended. Nine individuals are not current or former students and are attempting to work full-time as on-demand couriers or are combining courier work with other part-time jobs. Almost all riders interviewed had held previous jobs, often in service work or retail. As the labour market in Edinburgh is tight and available work for students tends to be hourly and low-paid, on-demand courier work is seen as a way to potentially earn almost £10 an hour. All riders interviewed in this research currently work via the food delivery platform Deliveroo, although almost half of riders also acquire work via other platforms, such as Uber Eats or Beelivery.

Semi-structured, one-hour interviews were conducted face-to-face. All participants were offered a £20 voucher for bike repairs at a local bike cooperative to encourage participation and compensate the gig workers for their time. The interview schedule was composed of questions designed to facilitate discussion of the following: the experience of becoming an on-demand courier, the subjective experience of working conditions, and how (if at all) riders understood work-based risks. All interviews were recorded and professionally transcribed. Transcriptions were coded using a combination of inductive and deductive coding (Graebner et al., 2012), and codes were used to identify relevant themes to develop the categories of risk.

## Findings

### *Bodily risk and physical harm: A personal responsibility*

Road accidents are overwhelmingly identified as the greatest hazard of their work, and this risk is experienced primarily as a source of stress and anxiety. Bethany, a former student who now works full-time for Deliveroo, put it clearly:

I'd put it two ways. One is the physical aspect of the job. You're working, just by greater exposure, you're at greater risk of having some kind of accident on the road. That's part and parcel of the job.

For Bethany, on-demand courier work means placing oneself at risk of some physical harm, and the possibility of a road accident colours her experience of the work. She feels the possibility of an accident has taken a toll on her: 'Personally, an aspect of the job which is difficult, is how it can affect my mental health – the anxiety and the kind of, I don't know, pressure. I find sometimes, for me personally, it was an associated risk with the job.' Stressing that this may be a 'personal' issue, Bethany links her perception of risk to her struggles with her own mental health and to the pressure that she felt while working full-time and studying.

Bethany's sense that physical risk is part and parcel of the work was echoed by almost all other riders and clearly articulated by Tye, a part-time rider and current university student. The possibility of having an accident shapes his experience of the work: 'Having an accident does play on my mind quite a bit, especially when I'm cycling . . . not before shifts, generally; just when I'm actually on the road sometimes. I just play through possible accident scenarios in my head! It isn't very great or healthy.' Here, as with Bethany, the possibility of a road accident is played out while riding – that is, while at work. This 'isn't very great': such scenarios can be distracting and take a toll on his overall health.

As Tye went on to say, the road conditions in Edinburgh also inform his preoccupation with having an accident: 'In Edinburgh, they're really, really awful and in terms of potholes, like, could potentially knock you off; there are ones on every road'. Potholes are a source of city-wide complaint, with the *Edinburgh News* (Murray, 2019) reporting that over 70 pothole-related complaints are made per day to the City Council. In addition to the poor road conditions, Edinburgh is bisected by a tramline that has caused numerous cycling accidents, and the city is notorious among riders for its aggressive driving culture. Mike, a full-time rider, said:

Here, how cyclists are dying is, like, when you see a dead squirrel or a cat or a dog on a road – this is how the cyclist died next to Princes Street. You hit or you just fall off, car goes over you and the car squash your organs, you become haggis and you die, not because you bang your head, most of the time. This becomes much more, like, in my head sometimes, because when you have someone especially aggressive and they just behind you, or they wouldn't mind to push you against the pavement to hurt you, and to kill you, you just think, like, what's going on with this world?

Complicating these road conditions is the variable Scottish weather. Deborah, a single mother in her mid-40s who works for Deliveroo and Uber Eats part-time, explains: 'The wind is a problem . . . Once I was only out for an hour to pick up a peak hour. I did two or three deliveries and at one point I'd actually got blown on to the other side of the road.' Surprisingly, given these city-specific road conditions, riders are not equipped with any special training to determine when it is safe to ride. In fact, Deliveroo sometimes uses adverse weather conditions to encourage or 'incentivise' more riders to sign on for shifts, as they did in 2018 during a 'red alert' snowstorm in Edinburgh.



The issue of safety is also entangled with visibility and the risk of harassment. Deliveroo riders wear highly branded and identifiable clothing and become targets for drivers' hostility towards bike riders in general. Erik said: 'Taxi drivers, and bus drivers, they have this habit . . . Obviously, there are some guys who ride really badly, and then the blame goes to all of us, then, by them.' Such visibility can also lead to harassment or attacks. In the summer of 2018, riders experienced a spate of physical assaults from teenagers in The Meadows, a public park. The park's bike lanes act as main cycling thoroughfares. Its central location means the park also functions as a hub for riders during their downtime. What was described as a 'gang of children' was repeatedly identifying Deliveroo riders by their branded clothing and equipment and pulling the riders off their bikes. Jorge said:

About a month ago, eight people jumped Deliveroo guy. Obviously, he had full uniform. They grab his food, I think they grab his bag, even his jacket. Well, there was a profit in terms of taking his scooter or bike, but they were just beating him because they were bored. Again, make yourself a target, Deliveroo don't give a fuck. Sorry, I don't really like that. They don't give a fuck about these things.

As Jorge suggests, riders feel like they are 'targets' for harassment and that when they experience such risks, the company is indifferent. As Erik, a part-time rider, said:

We're self-employed. We're not their workers, therefore I don't feel like I'm that company, so I don't want to have the name of them . . . I don't feel any sort of commitment to them, and it's kind of dangerous to wear this [branded gear], because you are being attacked, often. When no one exactly knows who I am, they treat me differently. Therefore, I just want to be invisible . . . it's just safer for me.

With regard to physical risk, riders spoke about making choices and relying on themselves to stay safe, privatising the risks that they face working on city streets. Deborah put it quite clearly:

I said: 'This is not worth it. My life is more valuable than this.' But I found myself going out again in the wind – not in [wind as] strong as that. But there are times when I'm in the wind and . . . a gust could just blow me over. The bag's like a sail; the bag makes it worse, yes, but that's my responsibility. . . . My safety is my responsibility; I cannot put that on Deliveroo. I make a choice whether I go out or not. I don't get paid for it if I don't go and it can be very tempting to choose to go when it's really not safe.

Deborah understands that she makes a 'choice' about when to work and that she considers ensuring her personal safety a 'responsibility'. While she understands that her life is 'more valuable' than working under risky weather conditions, Deborah is also conflicted about when to work and when to say no. Of note here is that she says she 'cannot put that on Deliveroo', suggesting that the ultimate determination of risk resides with Deborah, who seems to have internalised the demutualisation of risk common to platform labour arrangements.



Tye further suggests that taking risks with one's safety is not 'necessary' and not 'worth it', stating:

I would say that there are a lot of cyclists that I think take unnecessary risks in terms of skipping red lights and things like that – which I don't do. I'd probably just say the amount of time you're saving doing that is not worth it because – you do find this thing where even if you really, really go for it, you're cycling as fast as you can, you generally do the same amount of deliveries because you're only shaving off a minute or two.

However, as Iain put it, the pressure to ride quickly means 'a lot of people do think it's quite dangerous, but *you just have to know yourself* and how quickly you need to go; in terms of my speed, how quickly I'd push myself to do an order'. For Iain, 'knowing' his own riding ability and his ability to regulate his speed on the streets is what tempers the risk of accidents. Still, 'knowing one's self' may also mean making the active choice to disregard road safety rules. As Erik, a part-time rider and student, said: 'I cannot say I go by the book, because often you need to do something just to get your job done quicker, better. Sometimes it's even more secure for you to choose something not seen as appropriate.' While Erik is aware that he does not always 'go by the book', he is also suggesting that being able to choose for himself how to ride makes him safer.

### *Financial and mobility risks: Blurred boundaries*

Concerns about earnings, costs incurred in the course of the work, and fears that the work may not be 'worth it' were mentioned by all riders interviewed. While some riders feel they can 'push it' (meaning they can accept more orders and ride faster) to make more than the current UK minimum wage, the majority of riders expressed concerns about their financial situation. While not all Deliveroo riders interviewed are financially dependent on Deliveroo, the majority do use the money earned to pay rent, buy groceries and supplement other income. None of the riders interviewed had the capacity to save or put money aside were an accident to occur. Nor did any worker interviewed currently have a pension or retirement fund. While some students suggested that, were they unable to work, their parents would support them, other Deliveroo workers, such as Deborah, find themselves in a fundamental bind. The more reliant they become on Deliveroo for their primary earnings, the more risk they incur both physically and financially. When asked if Deborah had friends, family, or other forms of support she could rely on should she be unable to work, she replied: 'Possibly, if I dared to ask, but that comes to a whole different thing around money and receiving money from people'. Deborah did fall off her bike: 'I misjudged something, caught my handlebars on something. The next thing, I'm flat on the road, the bike's on top of me.' Having hurt her knee, she missed a week of riding, but being unable to go longer without work, she said: 'And so I got back on. I was really shaky and really wary and pedalling really slowly, but I still did the same number of orders.' Finally, she told me, 'that knee is still hurting – I don't know if it's because of that fall'.

Regardless of their financial dependence on Deliveroo, all riders incur ongoing costs related to this work, mostly for equipment maintenance. Sandra said:

I was having some problem with my headset and with my steering, and I was trying to work out what it was myself and doing a few tweaks. It didn't really work, and I ended up having to take it to a bike shop, whilst I was not on a shift, but whilst I was on another ride, and just forking out £30 to get it fixed. There's loads of other things that I need to do to my bike right now, like, quite soon, and so that £30, the day before I had worked a Deliveroo shift, and I was thinking in my head, this is like . . . I'm sort of paying off the costs of keeping my bike. Although that's kind of nice, because it's like me and my bike doing this together, and it's earning its keep, at the same time you have to break even on the costs of running your bike.

Donald, a student and part-time rider, suggested that maintaining his bike is an ongoing project and that having his bike stolen was a major worry, as it would mean that he would be unable to work until he could replace the bicycle. For Donald, the issue of poor equipment provided by Deliveroo is also an issue:

I do think we need some sort of cover for the breakdown of their kit, because I know people that have cancelled their shifts because their box broke or something, and that's Deliveroo's fault because they're giving out these rubbish equipment. Deliveroo don't care, because it's not much loss for them.

It can be hard for riders to keep tabs on these costs, and it is also difficult for riders to predict how much it will cost them to get started with Deliveroo. Sandra, for example, not only invested in her bicycle, but also paid a fee to Deliveroo for her branded delivery box and jacket:

I then owed Deliveroo £150. . . . I didn't have to pay it all upfront. They would just take off increments, no more than 50% of your wage, until £150 was made up, but that also made calculating how much money you were actually going to receive completely impossible because there was no 'We're going to pay it off £10 a week'. It was a random amount, sometimes it was really small and sometimes it was big. It wasn't even like a logical order.

Such an arrangement leaves workers already in debt to the company even before they begin working, echoing concerns that the gig economy creates conditions of 'neovillainy' (Harvey et al., 2017) that leave workers paying rent to the employer without the guarantee of income. Even though Sandra does not rely on Deliveroo to pay her bills, the debt to the company meant that she found herself accepting shifts she ordinarily would not have.

Financial risk is further complicated by Deliveroo's 'pay-per-drop' system, which encourages riders to weigh the risks they are willing to take against the wage they hope to earn or need to earn. Taylor, a student and part-time rider who plans to attend graduate school, said the issue of pay instability was very frustrating. He hoped that Deliveroo would 'tell people that, as a pay-per-delivery rider, you're actually going to earn less'. Despite being part-time and using the money to supplement his disposable income, Taylor nonetheless suggested that Deliveroo 'should focus on hiring just enough people and have a dedicated workforce that they pay properly, instead of having a mob of people who are not really committed to the work and wasting their time'. The question of whether the work is 'worth it' remains unclear to Taylor.

In addition to the costs related to the work and the unstable and unpredictable wages, riders also discussed their inability to save while working for Deliveroo and their lack of references (as there is no ‘boss’ at Deliveroo, there is no manager or supervisor to provide a reference for riders), raising questions about longer-term issues of mobility. Anna, a current student and part-time rider, said:

I don’t really want to be self-employed; because of the age I am, people are looking for references from past employers. I applied to Camp America and they were like, well, give us a reference for a past employer, and the only one I have is from the outdoor centre a couple of years ago. If you’re going to get a flat, sometimes they need a reference from a past employer to just show that you’re reliable. I’m reliable, but I don’t have anyone to say that about me.

With respect to financial risk, the choosing self becomes conflicted over whether riders are being paid to cycle and whether they are working for themselves or working for Deliveroo. Investment costs are normalised as part of an ideal job or fitness regimen one would be ‘doing anyway’. Iain, a student and part-time Deliveroo and Uber Eats rider, said: ‘I love cycling . . . I enjoy being physically active. I mean, yes, getting paid to cycle is my dream job, like dream, dream job definitely.’ That Deliveroo offers such a ‘dream job’, particularly to those who prefer an active job to sedentary, scheduled work, often means that individuals have a hard time understanding if the startup and maintenance costs incurred for the work are work-related or personal. Sandra, a current student and part-time rider, said:

I find it quite hard to distinguish between things that are good for me and my ability to work for Deliveroo, between things that I want to do, and invest in my bike anyway, because I like cycling as, like, a hobby. At some point I would need to get new wheels anyway, but probably working for Deliveroo means I’ll have to do it sooner.

Sandra’s comments highlight a key issue for many riders: the blurring of whether she is working for herself or for Deliveroo. Riders are self-employed contractors who provide their own equipment, including their bicycle, scooter, smart phone, data plan and safety gear. As Sandra suggests, she would need to upgrade her bicycle ‘anyway’, but she is unsure how the wear and tear from her Deliveroo work adds to those costs. Furthermore, the long-term financial risks of working for Deliveroo are minimised by workers who see Deliveroo as a temporary gig. Andreas said: ‘I see Deliveroo as a kind of contingency until I can find another job, because I’m not sure if I’m going to stay in Edinburgh. . . . I will definitely do Deliveroo until I find a job that is, I don’t know, like a proper job, I guess!’

### *Epistemic risks: Lack of transparency*

On the surface, delivery work appears relatively straightforward. Orders come in, and riders are dispatched to pick up food from a restaurant and deliver the food to the customer. In several interviews, riders discussed how the work simply requires ‘common sense’ and suggested that the job was ‘easy’ or ‘not a big deal’. Still, as riders discussed

their work experience in more detail, it became clear that they do not understand how Deliveroo's algorithm structures their personal work allocation or the larger organisation of work in the city. This lack of knowledge frustrates riders at the day-to-day level and, more broadly, confounds their sense of self-employment and agency. Sandra explained: 'Most of the time, you just do what you're told. They give you an order and you accept it, then you go there.' While this seems relatively simple, Sandra went on to say:

I guess my image of being self-employed is that you go out and you find work, and contacts, and things like that yourself, whereas Deliveroo's completely facilitating that process. They can offer you work, and you don't have to accept it, but, I don't know, you're not really given that much . . . So, it's like, when you're on shift they assign you for a new order, and you can reject the order, but then you have a lower acceptance rate, which, I don't know, maybe counts against you.

Not only does Deliveroo 'completely facilitate' or control the work process, but it also gathers performance statistics from riders. These statistics determine when a rider can register for work. The earlier one can register, the better the chance a rider has of receiving busy shifts. As Sandra suggests, however, she fears that rejecting orders, which is not explicitly included in the formal performance metrics, will still count against her. Tye reiterates that he feels these statistics contribute to the pressure to deliver fast: 'A few times I've gone into the wrong building, knocked on the wrong door. That can be stressful mainly because of the perceived time pressure, which I've still not yet actually – there's no basis for believing there is a time pressure!' Despite believing there is 'no basis' for the pressure, Tye feels it nonetheless.

Most riders will take shifts to assuage their anxiety about their performance stats possibly decreasing. For Donald, these metrics influence how much work he will accept, and they keep him 'on edge' to secure shifts:

If I'm on the cusp of 3:00 and 5:00, I'll make sure I'm working as much as possible to stay on at 3:00 because if you're on 5:00, you just get nothing; you get some weekends and that's it. If I am on at 3:00, I've got an alarm set over my phone for like 2:58. I'll be on as soon as it turns to 3:00 because that way I can book, basically, the shifts I want, mostly, whereas if you're on 10 minutes past 3:00, you won't.

Still, beyond the functioning of worker metrics, riders have extensive concerns about how 'Frank', Deliveroo's proprietary algorithm, dispatches the work. As Thomas put it: 'They started sending us emails recently about, like, the algorithm that runs the app, but I think it's pretty opaque. I don't think anyone really understands how it works.' Almost every rider had a different understanding of how work was distributed, creating their own stories of how the system functions. For example, Jonathan said: 'We've worked this out. We think there's an algorithm or something like that. If you're a faster rider you get more deliveries.' Donald's strategy is: 'I have one or two spots [in the city] and I'll just stay there because they're more central, so statistically you're most likely to get an order'. Andreas theorises that 'the algorithm works in a way that they [Deliveroo] limit the distance from the customer to the restaurant that they can order from if there is not enough riders on the road'. Tye recounts:

On multiple occasions people are, like, ‘I think the algorithm’s changed’ and with no real proof. I’m not very inclined to believe it when they do say it. Then yes, if I see anyone, I’m like, ‘Have you noticed you’re getting less orders or less double orders, or you’re getting shorter distances?’ There’s a lot of speculation on the algorithm.

As Taylor suggested, transparency about the functioning of the algorithm might help: ‘Just transparency. We know it’s not great but at least be honest and tell us, yes, this, that’s how this works.’ Taylor strikes at a persistent interview theme, which is that frustration stems from a lack of knowledge or insight into the algorithmic functioning of the platform. Interestingly, riders do not necessarily mind working via/for an app, but they do take issue with the lack of transparency, or ‘black boxing’, of the system. Such black boxing confounds the ‘choosing’ self, who is denied any clear context for making a choice. A majority of those interviewed expressed frustration about their lack of insight into the company’s data practices – how data is gathered, analysed and utilised to structure their work experience.

Taylor went on to say: ‘One of the things I was hoping with this courier network is we could be big enough to be able to negotiate things with Deliveroo, especially about what do you mean by “work”, and exactly what do you want, exactly?’. As suggested above, riders tell disparate and wide-ranging stories about how they imagine their algorithmic boss functions, yet these stories remain incomplete, partial and subjective. In turn, workers have turned to one another not only for support in navigating risks but for debunking, exploring and exposing the internal functioning of the platform. This has taken place across social media, in private WhatsApp channels, and through formal organising. As Taylor suggests, he was hoping that with the Couriers Network, which formed with the support of the Industrial Workers of the World (IWW), riders would be able to negotiate with the company in order to receive some clarity about the algorithmic nature of their work. While not all riders interviewed have joined the IWW, the majority suggested that transparency or insight into the algorithm was ‘the one thing the company could do to help riders’. Whether such insight would translate into riders’ ability to manage or negotiate risk remains to be seen.

## **Conclusion**

Coming to understand and negotiate risk fundamentally informs both the process of becoming an on-demand rider and the experience of the work. While each category of risk identified here influences the others, by disaggregating the categories we gain insight into how these specific conditions of platform-based self-employment are negotiated. Riders develop strategies of privatising, normalising and minimising risk, but these strategies fall short when it comes to working via the algorithm, which obscures the organisation of the work itself. Fundamentally, Deliveroo riders are left to themselves to parse their own sense of risk and to determine when the work is ‘worth it’ or not, but such a choice cannot be consistently made in the absence of crucial information about how worker data are gathered, analysed and used to determine the frequency, organisation or distance of deliveries. This lack of knowledge puts additional pressure on the categories of physical and financial risk. Algorithmic uncertainty therefore produces its own risks by creating conditions where workers are fundamentally unsure about the rules of work.

In the absence of this information, workers do turn to one another – to fill in gaps in their understanding, to ask for support and to formally organise. As this article was being prepared, on-demand riders had forged a transnational solidarity network in part in response to the specific issue of physical risk and the death of food couriers in the UK and Europe. While this research suggests that age, student status and gender could be more deeply explored in relation to physical and financial risk, it also makes clear that the conditions of algorithmically managed platform work fall short of enabling individuals to ‘be their own boss’ and to – at the minimum – ensure their own physical safety. While this research was conducted before the COVID-19 pandemic, recent events have only highlighted the physical and financial risks that on-demand food couriers face, as many have continued to work in the absence of formal health and safety regulations, despite being identified as key workers during the pandemic.

While workers continue to organise and fight for employment status, wage increases and safety protections, this research suggests that workers also require clear and accessible insight into the algorithmic organisation of work. Absent such insight, the promise of self-employment, which relies firmly on the ability to have recourse to a choosing, or ‘autological’, self, will be undermined.

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## References

- Balaram B, Warden J and Wallace-Stephens F (2017) *Good gigs: a fairer future for the UK's gig economy*. Report, April. London: RSA. Available at: <https://www.thersa.org/discover/publications-and-articles/reports/good-gigs-a-fairer-future-for-the-uks-gig-economy> (accessed 1 September 2020).
- Bauman Z (1991) *Modernity and Ambivalence*. Oxford: Polity.
- Beck U (1992) *Risk Society: Towards a New Modernity*. London: SAGE.
- Berg J, Furrer M, Harmon E, et al. (2018) *Digital Labour Platforms and the Future of Work: Towards Decent Work in the Online World*. Geneva: International Labour Office.
- Booth R (2018) DPD courier who was fined for day off to see doctor dies from diabetes. *The Guardian*, 5 February. Available at: <https://www.theguardian.com/business/2018/feb/05/courier-who-was-fined-for-day-off-to-see-doctor-dies-from-diabetes> (accessed 1 September 2020).
- Buck K (2018) Deliveroo cyclist breaks coccyx after being thrown on roof of car. *Metro*, 30 July. Available at: <https://metro.co.uk/2018/07/30/deliveroo-cyclist-breaks-coccyx-after-being-thrown-on-roof-of-car-7778077> (accessed 1 September 2020).
- Christie N and Ward H (2018) *The Emerging Issues for Management of Occupational Road Risk in a Changing Economy: A Survey of Gig Economy Drivers, Riders and Their Managers*. London: University College London Centre for Transport Studies. Available at: <https://www.ucl.ac.uk/news/2018/aug/gig-economy-drivers-and-riders-heightened-risk-traffic-collisions> (accessed 1 September 2020).

- Cleaver G (2016) Amazon Fresh is here – and UK online grocery will never be the same again. *The Grocer*, 9 June. Available at: <https://www.thegrocer.co.uk/online/amazon-fresh-is-here-and-uk-online-grocery-will-never-be-the-same-again/537343.article> (accessed 1 September 2020).
- DeStefano V (2016) Introduction: crowdsourcing, the gig-economy and the law. *Comparative Labor Law & Policy Journal* 37(3): 461–470.
- Downey G (2002) *Telegraph Messenger Boys. Labor, Technology, and Geography, 1850–1950*. New York: Routledge.
- Dubal V (2017) The drive to precarity: a political history of work, regulation, & labor advocacy in San Francisco's taxi & Uber economies. *Berkeley Journal of Employment and Labor Law* 38: 73–135.
- Fleming P (2017) The human capital hoax: work, debt and insecurity in the era of Uberization. *Organization Studies* 38(5): 691–709.
- Giddens A (1990) *The Consequences of Modernity*. Stanford, CA: Stanford University Press.
- Graebner M, Martin J and Roundy P (2012) Qualitative data: cooking without a recipe. *Strategic Organization* 10(3): 276–284.
- Graham M, Lehdonvirta V, Wood A, et al. (2017) *The Risks and Rewards of Online Gig Work at the Global Margins*. Oxford: Oxford Internet Institute.
- Gray M and Suri S (2019) *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass*. New York: Houghton Mifflin Harcourt.
- Gregory K (2018) Pushed and pulled to the internet: self-employment in the spiritual marketplace. *American Behavioral Scientist* 62(2): 208–224.
- Gregory K, Hendry K, Watts J, et al. (2017) Selfwork. Real Life. Available at: <http://reallifemag.com/selfwork/>
- Griesbach K, Reich A, Elliott-Negri L, et al. (2019) Algorithmic control in platform food delivery work. *Socius*. Epub 30 August. DOI: 10.1177/2378023119870041.
- Harvey G, Rhodes C, Vachhani SJ, et al. (2017) Neo-villeiny and the service sector: the case of hyper flexible and precarious work in fitness centres. *Work, Employment and Society* 31(1): 19–35.
- Huws U, Spencer NH, Syrdal DS, et al. (2017) *Work in the European Gig Economy*. Brussels: Foundation for European Progressive Studies.
- Irani LC and Silberman MS (2013) Turkopticon: interrupting worker invisibility in Amazon Mechanical Turk. In: *CHI '13: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, Paris, France, 27 April – 2 May. New York: Association for Computing Machinery, 611–620.
- Josserand E and Kaine S (2019) Different directions or the same route? The varied identities of ride-share drivers. *Journal of Industrial Relations* 61(4): 549–573.
- Kalleberg AL (2009) Precarious work, insecure workers: employment relations in transition. *American Sociological Review* 74(1): 1–22.
- Katz LF and Krueger AB (2016) *The Rise and Nature of Alternative Work Arrangements in the United States, 1995–2015*. Working Paper 22667. Cambridge, MA: National Bureau of Economic Research. Available at: [http://scholar.harvard.edu/files/lkatz/files/katz\\_krueger\\_cws\\_v3.pdf](http://scholar.harvard.edu/files/lkatz/files/katz_krueger_cws_v3.pdf)
- Kessler S (2018) *Gigged: The End of the Job and the Future of Work*. New York: St. Martin's.
- Kidder JL (2006) 'It's the job I love': bike messengers and edgework. *Sociological Forum* 21(1): 31–54.
- Lee MK, Kusbit D, Metsky E, et al. (2015) Working with machines: the impact of algorithmic, data-driven management on human workers. In: *Proceedings of the 33rd Annual*



- ACM SIGCHI Conference*, Seoul, South Korea, 18–23 April. New York: Association for Computing Machinery, 1603–1612.
- Lehdonvirta V (2018) Flexibility in the gig economy: managing time on three online piecework platforms. *New Technology, Work, and Employment* 33(1): 13–29.
- Leighton P (2016) Professional self-employment, new power, and the sharing economy: some cautionary tales from Uber. *Journal of Management and Organization* 22(6): 859–874.
- Liao S (2018) Amazon warehouse workers skip bathroom breaks to keep their jobs. *The Verge*, 16 April. Available at: <https://www.theverge.com/2018/4/16/17243026/amazon-warehouse-jobs-worker-conditions-bathroom-breaks> (accessed 1 September 2020).
- Ludec C, Tubaro P and Casilli A (2019) How many people microwork in France? Estimating the size of a new labor force. Paper 1901.03889. Available at: [arXiv.org](https://arxiv.org/abs/1901.03889) (accessed 1 September 2020).
- Lupton D and Tulloch J (2002) ‘Risk is part of your life’: risk epistemologies among a group of Australians. *Sociology* 36(2): 317–334.
- Malin BJ and Chandler C (2017) Free to work anxiously: splintering precarity among drivers for Uber and Lyft. *Communication, Culture & Critique* 10: 382–400.
- Möhlmann M and Zalmanson L (2017) Hands on the wheel: navigating algorithmic management and Uber drivers’ autonomy. In: *Proceedings of the International Conference on Information Systems (ICIS 2017)*, Seoul, South Korea, 1–13 December. Available at: [https://www.researchgate.net/publication/319965259\\_Hands\\_on\\_the\\_wheel\\_Navigating\\_algorithmic\\_management\\_and\\_Uber\\_drivers'\\_autonomy](https://www.researchgate.net/publication/319965259_Hands_on_the_wheel_Navigating_algorithmic_management_and_Uber_drivers'_autonomy)
- Moore P (2018) *The Threat of Physical and Psychosocial Violence and Harassment in Digitalized Work*. Geneva: International Labour Organization.
- Moore S and Newsome K (2018) Paying for free delivery: dependent self-employment as a measure of precarity in parcel delivery. *Work, Employment and Society* 32(3): 475–492.
- Murray K (2019) Edinburgh’s roads at ‘breaking point’ as new pothole complaint made every 20 minutes. *Edinburgh News*, 18 February. Available at: <https://www.edinburghnews.scotsman.com/news/edinburgh-s-roads-at-breaking-point-as-new-pothole-complaint-made-every-20-minutes-1-4874573> (accessed 1 September 2020).
- Pasquale F (2016) Two narratives of platform capitalism. *Yale Law and Policy Review* 35: 309–319.
- Petriglieri G, Ashford SJ and Wrzesniewski A (2019) Agony and ecstasy in the gig economy: cultivating holding environments for precarious and personalized work identities. *Administrative Science Quarterly* 64(1): 124–170.
- Povinelli E (2006) *The Empire of Love: Toward a Theory of Intimacy, Genealogy, and Carnality*. Durham, NC: Duke University Press.
- Prassl J and Risak M (2016) Uber, Taskrabbit, & Co.: platforms as employers? Rethinking the legal analysis of crowdwork. *Comparative Labor Law & Policy Journal* 37: 604–619.
- Provenzano E (2019) Bordeaux: «Cela aurait pu être moi», une marche a eu lieu ce dimanche en hommage au jeune livreur à vélo tué sur la route. *20 Minutes*, 27 January. Available at: <https://www.20minutes.fr/bordeaux/2437247-20190127-bordeaux-pu-etre-marche-lieu-dimanche-hommage-jeune-livreur-velo-tue-route> (accessed 1 September 2020).
- Ravenelle A (2018) *Hustle and Gig: Struggling and Surviving in the Sharing Economy*. Berkeley, CA: University of California Press.
- Richardson L (2020) Platforms, markets, and contingent calculation: the flexible arrangement of the delivered meal. *Antipode* 52(3): 619–636.
- Rosenblat A (2018) *Uberland: How Algorithms Are Rewriting the Rules of Work*. Berkeley, CA: University of California Press.

- Rosenblat A and Stark L (2016) Algorithmic labor and information asymmetries: a case study of Uber's drivers. *International Journal of Communication* 10: 3758–3784.
- Stanford J (2017) The resurgence of gig work: historical and theoretical perspectives. *Economic and Labour Relations Review* 28(3): 382–401.
- The Scotsman* (1907) Article 24. *No title*. 4 July, p.11.
- Ticona J, Mateescu A and Rosenblat A (2018) Beyond disruption: how tech shapes labor across domestic work & ridehailing. Report, 27 June. *Data & Society*. Available at: <https://datasociety.net/output/beyond-disruption/> (accessed 1 September 2020).
- Todoli-Signes A (2017) The end of the subordinate worker? The on-demand economy, the gig economy, and the need for protection for crowdworkers. *International Journal of Comparative Labour Law and Industrial Relations* 33(2): 241–268.
- Van Doorn NAJM (2017) Platform labor: on the gendered and racialized exploitation of low-income service work in the 'on-demand' economy. *Information, Communication & Society* 20(6): 898–914.
- Waters F and Woodcock J (2017) Far from seamless: a workers' inquiry at Deliveroo. *Viewpoint*, 20 September. Available at: <https://www.viewpointmag.com/2017/09/20/far-seamless-workers-inquiry-deliveroo/> (accessed 1 September 2020).
- Wells K (2019) *Public Report: The Uber Workplace in Washington DC*. Washington, DC: Georgetown University.
- Wood A (2019) The Taylor review: understanding the gig economy, dependency, and the complexities of control. *New Technology, Work, and Employment* 34(2): 111–115.
- Wood AJ, Graham M, Lehdonvirta V, et al. (2019) Good gig, bad gig: autonomy and algorithmic control in the global gig economy. *Work, Employment and Society* 33(1): 56–75.

Karen Gregory is a digital sociologist, ethnographer and lecturer in sociology at the University of Edinburgh, where she is also Programme Director of the MSc in Digital Society. She is the co-editor of *Digital Sociologies* (Policy Press, 2016). Her writing has appeared in *American Behavioral Scientist*; *tripleC: Communication, Capitalism & Critique*; *Women & Performance*; and *Women's Studies Quarterly*. You can follow her on Twitter: @claudiakincaid.

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