Confronting algorithmic management using subject access requests: Insights using the case of food-deliveries

Luca Perrig¹
University of St. Gallen
12 December 2023

Gig work is defined by a (mostly) automated management, operating remotely through an app. Without human interaction, workers are left with only guesses about the functioning of the algorithms they are subjected to. To better position themselves in their competition for tasks, they try to influence the data profile that platform build about them. Made of performance indicators, personal information, and sensor data, these profiles are an essential part of algorithmic management. This paper will identify data profiles are core sites of the struggle in the gig economy. It will discuss the benefits and limitations of bringing data at the center stage through a workers' inquiry of food-delivery platforms. The analysis will distinguish three actors in this inquiry and discuss their uses of data profiles: the couriers themselves, as they attempt to make sense of algorithmic management; the researcher, and how they can use personal data in order to reconstitute this field of struggle; and the trade unions, which can provide a way to collectivise data governance and gain better information in building their case in favour of gig workers' rights.

Introduction

The gig economy has been a thorn in trade unions' side for almost a decade now. After labour platforms spread in the mid 2010s, a major concern has been the legal status of gig workers. Trade unions have since relentlessly advocated for an employment status, and have been successful in numerous court rulings (Hießl 2022). The case for an employment status is certainly among the best single improvement gig workers could hope for, as it grants them access to labour law and the social benefits that unions have fought for on their behalf for decades. However, the labour law still has to address the specificities of algorithmic management. We thus encounter a second stage in the regulation of the gig economy, in which trade unions must build a case in favour of decent work in this new environment.

¹Correspondence: Luca Perrig, Research Institute of Sociology, University of St.Gallen, Müller-Friedberg-Strasse 8, CH-9000 St. Gallen, Switzerland. E-mail: luca.perrig@unisg.ch.

This article will discuss the new stakes that are at hand. Gig workers on the streets are constantly trying to make sense of the algorithms that govern their activity. In doing so, they develop a good understanding of the data they produce, and the margin they have in order to take advantage of it. Drawing from this insight, this paper will show that accessing one's personal data can provide an empowering tool to confront algorithmic management.

The question of working conditions in the gig economy has been addressed through multiple lenses in the current literature. In the early days of the gig economy, it has revolved mainly around the question of control and autonomy (Lee et al. 2015; Rosenblat and Stark 2016). On the one hand, social scientists led extensive fieldworks and identified the multiple forms of control that platforms exert on their workforce through the use of highly developed incentive schemes (Wood, Lehdonvirta, and Graham 2018), surveillance tools (Newlands 2021), or customer ratings (Rahman 2021). These insights proved to be major drivers in the rejection of independent contracting in many jurisdictions (Hießl 2022). Then, addressing the inner workings of algorithmic management was the question of workers' voice (Heiland 2021; Wilkinson et al. 2022). What recourse do workers have for their grievances on the gig economy? Algorithmic management is indeed largely devoid of human interaction and collective action is made difficult by the atomisation that remote management implies (Cant 2020). There is additionally little recourse for complaints within the app, as workers are constantly redirected to FAQs or sent automated answers (Rosenblat 2018). But even though organizing among gig workers is rare, there has been numerous instances of successful collective action, as recounted by Wood, Lehdonvirta, and Graham (2018), Lei (2021), or Cianferoni, Perrig, and Bonvin (2022).

On the other hand, legal scholars have addressed questions of algorithmic transparency (Wachter, Mittelstadt, and Floridi 2017), data rights (Naudts, Dewitte, and Ausloos 2022), or worker misclassification (Prassl 2018). Some have provided essential criticism of current data governance, highlighting its focus on individual rights rather than collective rights (Calacci and Stein 2023), thus undermining collective bargaining about algorithmic decision-making (Adams and Wenckebach 2023). This paper will attempt to bridge the gap between these two fields by providing fieldwork insight about the understanding and uses of personal data in the case of food-deliveries. Drawing from an ethnographical study among food-delivery couriers in Switzerland, it will discuss how actors on the field conceive of data profiles and how Subject Access Requests (SARs) can come into use.

More specifically, the perspective adopted in the fieldwork is that of the workers' inquiry. That is "a militant process of trying to understand work in order to fight against it" (Woodcock 2021, 12). Key to this method is the co-production of the research along with workers (Englert, Woodcock, and Cant 2020). Indeed, as we will see, couriers were first in the field identifying data profiles as sites of struggle. From this starting point, we will ask ourselves how researchers and trade unions can be of any use in accompanying workers' in organizing against platforms. How can reconstituting data profiles help researchers inquire about the rules governing gig work? Can SARs be helpful in this regard? Can trade unions make any use of SARs? And does it allow them to build a collective resistance to platforms?

The paper is structured as follows. The next section will detail the data this study relies on and provide some context about the case at hand. The next three sections will focus on each actor previously mentioned: the workers, the researcher, and trade unions. Each section will discuss the role data profiles can play in helping them conduct their inquiry. Lastly, a concluding section will discuss our findings with regards to current examples of successful alliances between trade unions and digital rights organizations.

Methods and data

This research draws from an ethnography of the online food-delivery market in Western-Switzerland that was led between August 2017 and December 2018. This field work started with an engagement as a bike courier for four of the major platforms in the region for a period of six months. This participation facilitated contact with numerous couriers. It also provided exclusive access to the app interface, a prime vantage point for the observation of workers in action, as well as the interactions between managers and workers. This direct contact with couriers and managers also opened access to three instant messaging groups, which compiled a total of more than 10'000 messages in which couriers exchange tips and encouragements in their daily work.

The next six months were devoted to the conduct of interviews with couriers (n=24) and managers (n=11) from four different platforms. Finally, one month was spent doing observation among managers inside the offices of a food-delivery platform. Besides this involvement with workers and managers of the gig economy, the study also draws from the observation of the meetings of a trade union committee that was forming at the same time to organize traditional couriers against the unfair competition of platforms. There were a total of five meetings and numerous emails before an agreement was reached with platforms owners and the committee was dissolved.

A major novelty of this study is the use of Subject Access Requests (SARs) as complementary data. Users of digital platforms in the EU and Switzerland have a right to request their personal data to any platforms that they use. By sending an email or by filling an online form, they should receive shortly thereafter a copy of the data that the platform holds about them individually. What will interest us more specifically in our case is the data that food-delivery platforms hold about couriers. Building robust data from SARs is notoriously difficult, as it requires that a large number of users collectively request their data and cross-reference it (Calacci and Stein 2023; Exchange 2021). Such an endeavour was out of the scope for this research, which does not aim at building quantitative inferences from this data but rather inquire about the rules of algorithmic management. During this fieldwork, ten couriers were told about this opportunity to ask and study their personal data. Six did actually request it, and four ultimately received it and agreed to share it. We thus had access to the data profiles of couriers from two different platforms. The uses of this data as well as the limitations of

SARs as a method of inquiry are detailed in a subsequent section precisely devoted to these questions.

The data that is used in this study has been provided with the full consent of the participants involved. The personal information of the individuals mentioned below have been anonymised. In accordance with non-disclosure agreements I signed, most platforms will not be distinguished in the remainder of this paper in order to remain anonymous. UberEats however is a notable exception. At the time of the study, it was by far the largest and most sophisticated platform operating in Switzerland. The other three platforms are local and smaller scale. It would thus have been difficult and disingenuous not to mark this difference. That said, the information used about UberEats is either public (blog posts) or mixed with other sources in a way that makes it indistinguishable (data profiles).

The datafied workers

The employment of gig workers has a very welcome impact on their pay and stability, but it does not affected their daily activity, as algorithmic management is often left unaddressed. In Switzerland, trade unions have successfully bargained a collective agreement resolving the problem of misclassification and establishing minimum compensation and safety precautions for workers. However, it still remains to address the specific toll of algorithmic management.

Algorithmic management is now set as a generic term in the literature when referring to the specific management tools that govern workers of the gig economy (Jarrahi et al. 2021; Stark and Pais 2021). This organisational arrangement assumes that a platform positions itself as an intermediary and ensures the conclusion of economic transactions automatically (Vallas and Schor 2020). In doing so, platforms automate core functions of human resources such as hiring, assigning tasks, and evaluating workers (Duggan et al. 2020). Workers of the gig economy are thus governed by algorithms that treat them not as individuals but rather as data profiles (Ajunwa 2020). This "algorithmic identity" determines their capacity to work and ultimately their success on the market (Cheney-Lippold 2011). As we will see, managing one's data profile is key to better position oneself in the gig economy (Bucher, Schou, and Waldkirch 2021; Sun 2019).

In this section, we will discuss selected tools of algorithmic management, discuss how workers investigate about them and adjust their behaviors to better position themselves. Three management devices best emphasize the role of data in this working relation: matching algorithms, data-driven prices, and automated working time regimes.

The matching algorithm is used by platforms to choose which courier to send an incoming order. Platforms deliberately keep it opaque, and very little information is communicated about its functioning. This difficulty has been noted in other contexts, such as in the United Kingdom (Badger 2022), in Germany (Ferrari and Graham 2021) or in China (Sun 2019). The

Swiss case in no different in this regard. Let us consider for instance a message that one platform sent its couriers by email:

Monthly Q&A

This month a question from Perpignan that couriers often ask: "How are orders attributed?"

Our answer: the algorithm attributes the order to the courier who is able to get to the restaurant as soon as the order is ready. For this reason, it is often efficient to always be on the move while waiting!

While the instructions are clear (be on the move), the reasons could not be less clear. How does the machine compute one's ability to "get to the restaurant as soon as the order is ready"? This message is very representative of platforms' reluctance to communicate about its algorithms. The reason lies in its fear of gaming: if couriers know too much about the algorithm they can identify its inevitable flaws and take advantage of them (Wachter, Mittelstadt, and Floridi 2017). This opacity however adds a new layer of work that is expected from couriers, that of investigating about the functioning of this matching algorithm. Because couriers compete for a limited amount of orders, they will try to position themselves favourably in the hope of receiving the next order (Sun, 2019). On the messaging groups of Swiss couriers, workers would spend considerable time discussing with their colleagues and share experiences in order to build a better understanding of the algorithm. The outcome of their inquiry will vary and lead to differing adjustments accordingly. Some will identify location as a main feature affecting their position vis-à-vis the algorithm, others will invest more in customer ratings and put more emotional work at the door, still others will prioritize speed and take more risks on the road. The effectiveness of each measure is impossible to assess, but opacity clearly has its toll on the gig workforce. Couriers correctly understand that their activity is quantified before being fed to the algorithm, but without more information they are left guessing about which feature is more salient.

Data-driven pricing is another feature of gig work, in which platforms will often set the price of each job automatically (Shapiro 2020). In these transactions, platforms attempt to estimate the tediousness of each job and put a price on it in the hope that couriers accept it. The formula that platforms use in this regard is often a very gross approximation of the actual tediousness of the job. Platforms for food-deliveries will come up with approximately the same formula. In our case, all four food-delivery platforms are able to compensate for the distance and give a bonus in case of bad weather. However, they are not able to reward bulkiness of the meal to carry or the elevation of the ride. Couriers are then led to accept rides that they realize afterwards is not worth the effort, as couriers would painfully recount.

Courier 1: Sometimes it was a really huge MacDonald's. One time I had to go to [the supermarket] to buy ten bottles of milk!

Courier 2: [I]f it asks me to go up to [some elevated neighbourhood], how do I do? It's only uphill! [...] You earn almost nothing and on top of that you sweat!

The payment that couriers receive is thus often detached from the effort they actually put. Labour platforms often tout that their pricing schemes are revealing market prices², but without integrating proper information about the ride, platforms are only grossly simulating a market and actually deceiving workers (Richardson 2020). In this case, couriers are forced to evaluate rides not according to their true qualities, but according to the features that the platform is able to measure. If a platform does not compensate for bulkiness or elevation, the courier will adjust their evaluation accordingly and maybe reconsider accepting a ride that is too cumbersome without being appropriately compensated.

One last relevant tool of algorithmic management to address is automated time regimes. Securing a sufficient workforce ready to work at the right time is a crucial task for platforms who wish to quickly respond to every incoming order. A major device in accomplishing this requirement is the allocation of working time slots. As Heiland (2022) rightly notes, this important managerial device has been largely left unaddressed in the literature. It is nonetheless a recurrent concern for the couriers that were interviewed. Every week, they must log into their app to select the time slots they wish to book for the coming week. These slots are limited in order to nudge workers toward slots that are less demanded. In order to make the most out of this scarcity, platforms developed a scheme which grants the best couriers a privileged access to the online schedule, a couple of hours before their colleagues. How does the platform identify the best couriers? Depending on the platform, it will be either the ones with the least average time per delivery or the ones having the best customer ratings. Once again, couriers see their working conditions defined by numbers they have little control over. On the one hand, couriers would often recount how customer ratings are unfair or unreliable. Figure 1 reproduces a comic strip that was posted on a messaging group with the caption "Rings a bell?". It shows a courier helping and overall spending quality time with a customer who ultimately grants him four stars out of five, probably thinking it's a favour when it will really lower his average rating. Needless to say, numerous couriers could relate. On the other hand, delivery time is similarly arbitrary, as it depends on the vehicle, traffic, or driving behaviour.

Under algorithmic management, workers are thus governed by a machine that only has a quantified view of their activity. In order to better understand the rules of this form of management, workers have to build on their experiences to identify which data point is measured, which is lacking, and how to improve their situation. In the next section, we will build from these insights and discuss the uses of SARs in reconstituting these datafied profiles.

Workers' inquiries using SARs

Workers are not passive under algorithmic management (Bucher, Schou, and Waldkirch 2021; Joyce et al. 2023). Without diminishing the power of platforms in defining the labour process, identifying worker leeway can provide inspiration for collective action. When riding for a

²Travis Kalanick, when CEO of Uber, once said "[The platform] is not setting the price. The market is setting the price. [...] We have algorithms to determine what that market is." Cited in Lehdonvirta (2022), p. 101.

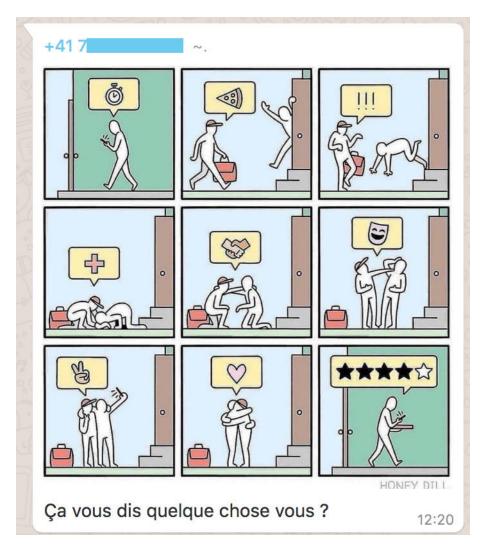


Figure 1: Popular comic strip shared on messaging groups. Credit: Ryan Harby.

platform, couriers would often share each other advice about how to game the platform. Some would argue that misleading the app by reporting using a car instead of a bicycle would put you in a more favourable position vis-à-vis the matching algorithm, because it would send you farther rides. Others would misreport their status. They would tap "arrived at restaurant" when they are actually still at the corner, to minimize their average trip time. Other scholars have found similar cases of "fissures" within algorithmic power (Ferrari and Graham 2021; Lehdonvirta 2018; Sun 2019). What these acts of resistance come down to is an attempt at improving one's data profile. Platforms "see" couriers as a profile made of numbers and categories. In the course of their work, couriers will attempt to mentally rebuild this profile and identify which feature it contains and how much it weighs in the decision processes, be it the vehicle in use or the average time per delivery.

Building from this insight, it proves helpful to reconstruct this profile in order to better identify stakes of algorithmic management. Subject Access Requests (SARs) come very valuable in this regard. As provided by the General Data Protection Regulation (GDPR), as well as the Swiss Data Protection Act, platform users have a right to access their data. By sending a request by email or through an online form, couriers can thus obtain a (supposedly accurate) copy of their data profile. By cross-referencing several of those profiles, and completing with interviews led with platform managers, we can here reconstruct the data profile that a typical platform holds about its couriers. This data comes in two files. Table 1 shows the list of attributes that are contained in the first file. It is simply a list of the personal information about the courier as well as some key figures about their performance. The second file is the historical data about their previous trips, a log file. A reconstitution is displayed on Table 2. It shows that every event in a couriers' trip is recorded as either "En route", "At restaurant", or "Idle", and for each one of these events, a timestamp as well as location data is recorded.

Table 1: Data profile

First.Name	Jorge
Last.Name	Pinto
E.Mail	josepinto@gmail.com
Mobile	0761234567
Costomer.Rating	4.82
Restaurant.Rating	4.01
Total.trips	776
Avg.trip.time	21.32
User.Type	Partner
Country	Switzerland
Language	Portuguese (Portugal)
Referral.Code	rt6v9
Signup.City	Geneva
Signup.Date	2014-12-23 23:23:10

Table 2: Data Logs

Status	Timestamps	lat	lng
En route	13:23:12	46.2013	6.1416
At restaurant	13:31:02	46.2015	6.1514
En route	13:36:13	46.2034	6.1510
At customer	13:57:36	46.1881	6.1579
Idle	13:59:49	46.1904	6.1552
En route	14:16:02	46.1944	6.1407
At restaurant	14:28:58	46.2113	6.1467
En route	14:31:01	46.2098	6.1456
At customer	14:38:42	46.2067	6.1273

These data profiles are essential for understanding algorithmic management, as they provide us with the platform's point of view. While the algorithms that process this data are inaccessible, the data that feeds them is. As numerous media scholars have pointed, fully transparency in algorithmic systems can be an illusory ideal, as machine-learning data-processing is evolving with usage, and platforms constantly update their systems using A/B testing (Ananny and Crawford 2018; Burrell 2016; Luca and Bazerman 2020). The nature of the data however can be revealing of the outcome of algorithmic decision-making (Crawford and Paglen 2021). So, what do data profiles tell us about algorithmic management? Two main points are relevant for our purposes.

First, let us note that the data available to platforms is somewhat scarce. While it is undoubtedly a lot of data with regard to privacy concerns, it is actually very little when we envision the goal of the platform, which is to automate decision-making (Richardson 2020; Shapiro 2020). Platforms will use this data in order to organise the matching of orders and couriers or the setting of prices. This is no small task, and the data that they hold is dependent on the sensors that the workers carry, i.e., their smartphones. This can be interpreted in two ways. A first is to suspect that platforms are not providing all the information they hold about the couriers. This is a well known shortcoming of SARs, as compliance is difficult to enforce. This will be addressed in more detail below. A second interpretation is to challenge the platforms in their claim to automate decision-making. Indeed, how could they appropriately conceive a matching or pricing mechanism with so little information about the market?

Second, this data comes from differing sources, is produced by different actors. Some personal information such as name and sign-up information is provided by the couriers during their registration. Some data is recorded by sensors on their smartphone, namely timestamps and location. And more importantly some information is provided by humans. The average rating is inferred from the individual ratings from customers, the vehicle is informed by couriers themselves, and so is the status ("En route", "At restaurant", or "Idle"). When arriving or leaving a restaurant, or when completing the delivery, couriers are informing the platform

of each stage by tapping their screen. These human-generated data points are the reason couriers can somewhat influence their profile. As recounted above, couriers will try to adjust their behaviour and sometimes cheat in order to build a better profile. The platform thus does not produce the data that it uses. This raises issues of fairness and legitimacy. Can platforms ensure fair working conditions when the data it relies on for essential decision-making is sensitive to manipulation by third actors? Our purpose here will not be to answer these questions, but rather to highlight how personal data can help identify those "algorithmic fissures" (Ferrari and Graham 2021).

One can now see how SARs are also a tool that researchers can leverage. As Ausloos and Veale (2021) note, research using data rights is still in its infancy. However, previous cases show that researchers can sometimes be leading the front for more transparency. The case of Sandvig v. Barr in the United States is a good example in this regard, which ruled that researchers had a right to scrape public data in order to infer potential racial discrimination in artificial intelligence (AI).³ In recent years, there has been a multiplication of research initiatives addressing the issue of AI and labour organisation (Dencik 2021). One risk of such endeavors however is that it leads to a disconnection between the needs of a labouring class and the drive of researchers to publish about the intricacies of the technologies at use (Englert, Woodcock, and Cant 2020).

Collective uses of SARs

This section will identify the possible uses of requesting workers' personal data for collective action. First, we should identify the benefits of data inquiries. Second, we will review the uses of SARs as observed in the case of Switzerland. Third, we will identify the limitations of this strategy.

Let us first highlight the procedural benefits of analysing personal data. Using SARs can be a useful tool for workers to regain some sense of control over their working tools. By exercising their right of access, workers are engaging in form of sousveillance in the sense that they aim at "uncovering the panopticon" of algorithmic management as well as "relocating the relationship of surveillance" (Mann et al., 2002, p. 333). By asking for their personal data, workers are indeed asking some form of accountability towards platforms. This opens some room for discussion and provides a welcome pedagogical tool for understanding the functioning of algorithmic systems.

As mentioned above, personal data also shows the limitations of platforms in their endeavour to automate decision-making (Exchange 2021). In this sense, they provide essential elements to counter the case for independent contracting. Indeed, platforms keep legitimising this practice

 $^{^3}$ See 'Big Association of Civil Liberties Union, "Federal Court Rules Data' Dis-Law". crimination Studies Do Not Violate Federal Anti-Hacking Accessible https://web.archive.org/web/20231109164845/https://www.aclu.org/press-releases/federal-court-rules-rebig-data-discrimination-studies-do-not-violate-federal-anti. Archived November 9, 2023.

by arguing that artificial intelligence "[helps] automate marketplace decisions".⁴ But relying on data to authoritatively match couriers with jobs and set their pay can hardly be considered a free market. Personal data in this sense allows workers to unveil the fragility of algorithmic management and counter the discourse of platforms as market enablers.

Another useful way to use this access right is to leverage data rights to identify platforms engaging in fraudulent behaviour. Platforms are notoriously ruthless when trying to secure network effects and market power against their competitors (Shapiro 2023). Platforms are known for their numerous anti-competitive practices. Among other misdeeds, let us remind ourselves that Uber used ghost cars in order to fake its supply of drivers, and tweaked its apps to decline rides to regulators (Isaac, 2019). It also aggressively lobbied governments in order to settle favourable laws (Davies et al. 2022). It has been years now that Uber is suspected of exploiting low battery in riders' phones to set higher prices (Vedantam and Penman 2016). Having an eye on the data that platforms use can help prevent similar behaviour. For instance, the recording of battery life or demographic data could be questioned, as it might not be relevant for daily operations but potentially harmful when fed to machine learning algorithms.

A successful use of SARs in this regard is provided by Worker Info Exchange, a UK-based initiative led by former Uber Driver James Farrar, that has been at the forefront of this novel form of data activism in a labour context (Doorn and Badger 2021). In a recent report, their researchers built a case denouncing the "robo-firing" of Just Eat couriers using their personal data (Exchange 2023). By comparing tracking data obtained from couriers, they were able to show the abusing practices of Just Eat, which automatically "deactivates" workers using data without any ground knowledge of the actually work situation they are in.

The case of Switzerland that was covered for this study is similar to many other jurisdictions in this regard (see Cini 2023). At first, the question of algorithmic management was not addressed by trade unions. When food-delivery platforms arrived in the city, they were quick to respond. However, they focused on worker misclassification (Pärli, 2022). This was soon after the arrival of Uber and their ride-hailing services, and their stance was very much inspired by this first mobilisation. Just like taxi drivers were at the forefront of the case against Uber, the trade unions tried to mobilise traditional parcel couriers against food-delivery platforms. The parallel however did not hold, as traditional couriers are already a precarious workforce, not as well established as taxi drivers, and so were not as forceful in their claims.

The trade unions were nevertheless ultimately successful and obtained the employment status they sought. The intricacies of algorithmic management however were addressed only in rare cases of grassroots mobilisation and dealt at the firm level (Bonvin, Cianferoni, and Perrig 2023). Things took a turn when a local digital rights association reached the trade union in charge of the dossier. It was initially dismissed as out of touch with the realities of the

⁴See Uber Technology Inc.'s initial public offering documents, p. 156. Accessible at https://www.sec.gov/Archives/edgar/data/0001543151/000119312519103850/d647752ds1.htm. Accessed May 24, 2023.

ground. However, after some insisting and a change in the trade union leadership, a meeting was convened. By convincing the trade unionists of the importance of data rights and the uses of SARs, the expertise of digital rights activists was able to bring data profiles to the centre stage and make it a contentious object. This unexpected alliance culminated in the debate being brought to the parliament in September 2022 with a motion that sought to enshrine into law a right to data access for platform workers.⁵ In this sense, our case study is in line with the experiences of resistance to the gig economy in other European countries (Woodcock 2021).

A constructive use of SARs should however be aware of its limitations. Let us identify three for our purposes. First, the GDPR only provides a right to individual data (Mahieu and Ausloos 2020). It focuses on a "data subject" whereas collective bargaining in the gig economy would benefit from making a collective use of data access (Moore 2022). An effective use of workers' data for collective bargaining could be to grant a right of trade unions to aggregate data. As Calacci and Stein (2023) make clear however, there are legal hurdles to such a solution, as aggregate data is often considered the company's property and protected by trade secrecy.

Second, holding information in the form of data does not provide information about its processing or storage. We can see that language is included in the profile above-mentioned and infer that it must be used to automatically set the language of the courier's app. But is it fed to the matching algorithm? And if so, what impact does it have on his chances of obtaining an upcoming order? Access to personal data only allows us to speculate and imagine plausible scenarios. The right to explanation of algorithmic systems is debated among legal scholars (Wachter, Mittelstadt, and Floridi 2017), and for the moment gig workers must rely on the meagre information that platforms provide (Abraha 2023). As Colclough (2022) rightly notes, "unions should negotiate across the entire data life cycle" (p. 293).

A third and major limitation of SARs is obviously that it relies on the platforms' compliance, and it is difficult to assess the quality and completeness of the data that they contain. When requesting their personal data for this study, couriers faced unresponsive or outright reluctant platform employees. And when the data was provided, it was impossible to assess their completeness. The few SARs that were requested to UberEats for this study for example contained several discrepancies. Some data points were missing on early requests and later included. Other platforms lacked proper procedures and were ill-equipped for such requests. As revealed by (Exchange 2023) in their inquiry of Just Eat, the platform regularly fails to abide to its duty to explain automated decision-making. Data protection law remains to be properly implemented, especially in small and medium-sized enterprises (Freitas and Mira Da Silva 2018).

⁵Initiative 22.463 by member of parliament Christian Dandrès.

Conclusion

Some decisive battles have been won by trade unions regarding worker misclassification in the gig economy. Numerous courts around the world have enshrined their employee status in law. However, much remains to be done in addressing algorithmic management, which remains a source of injustice and suffering for the workers involved. This paper makes the case for the use of SARs as useful tools for leading workers' inquiries. Despite significant flaws, they provide a fertile ground to understand and put pressure on platforms. They can be used to ask for legal improvements, but also to question the legitimacy of their business model altogether.

Through some insight from an extensive fieldwork, this paper showed that SARs can be a promising tool of inquiry. It first showed that data profiles were indeed the site of a struggle, as couriers would often themselves engage in an investigation about the role of data in governing their work. Second, it provided some insights into the uses of SARs for researchers. The role of the researcher in a workers' inquiry is to accompany workers and build from their insights. In our case, it means reconstituting the data profiles that they identified as an core device of algorithmic management. Third, we discussed the uses of SARs in collective bargaining. Here, access rights can help provide a finer understanding of novel management practices, but adequate personal data can also serve as evidence in court cases.

However, data access rights still need to be properly implemented. Recent court cases are paving the way in the European context, most notably the recent *Uber/Ola* judgements (Li and Toh 2023). In the meantime, gig workers are making sense of their working tools with the information available. In this sense, this study sought to provide a view of access rights as they are currently employed, thus displaying their promising benefits as well as their inevitable limitations.

Abraha, Halefom. 2023. "Regulating Algorithmic Employment Decisions Through Data Protection Law." European Labour Law Journal, April. https://doi.org/10.1177/2031952523 1167317.

Adams, Zoe, and Johanna Wenckebach. 2023. "Collective Regulation of Algorithmic Management." European Labour Law Journal 14 (2): 211–29. https://doi.org/10.1177/20319525 231167477.

Ajunwa, Ifeoma. 2020. "The 'Black Box' at Work." Big Data & Society 7 (2). https://doi.org/10.1177/2053951720938093.

Ananny, Mike, and Kate Crawford. 2018. "Seeing Without Knowing: Limitations of the Transparency Ideal and Its Application to Algorithmic Accountability." New Media & Society 20 (3): 973–89. https://doi.org/10.1177/1461444816676645.

Ausloos, Jef, and Michael Veale. 2021. "Researching with Data Rights." *Technology and Regulation*, January, 136–157 Pages. https://doi.org/10.26116/TECHREG.2020.010.

Badger, Adam. 2022. "Labouring at the Interface: Exploring the Rhythms and Resistances of Working in London's Food Delivery Gig Economy." PhD thesis, Royal Holloway, University of London.

- Bonvin, Jean-Michel, Nicola Cianferoni, and Luca Perrig. 2023. "Regulating the Gig Economy: Promises and Limits of Social Dialogue in Switzerland." In *Social Dialogue in the Gig Economy: A Comparative Empirical Analysis*, edited by Jean-Michel Bonvin and Nicola Cianferoni, 67–89. Cheltenham: Edward Elgar.
- Bucher, Eliane Léontine, Peter Kalum Schou, and Matthias Waldkirch. 2021. "Pacifying the Algorithm Anticipatory Compliance in the Face of Algorithmic Management in the Gig Economy." Organization 28 (1): 44–67. https://doi.org/10.1177/1350508420961531.
- Burrell, Jenna. 2016. "How the Machine 'Thinks': Understanding Opacity in Machine Learning Algorithms." Big Data & Society 3 (1). https://doi.org/10.1177/2053951715622512.
- Calacci, Dan, and Jake Stein. 2023. "From Access to Understanding: Collective Data Governance for Workers." European Labour Law Journal 14 (2): 253–82. https://doi.org/10.1177/20319525231167981.
- Cant, Callum. 2020. Riding for Deliveroo: Resistance in the New Economy. Cambridge, UK; Medford, MA: Polity.
- Cheney-Lippold, John. 2011. "A New Algorithmic Identity: Soft Biopolitics and the Modulation of Control." Theory, Culture & Society 28 (6): 164–81. https://doi.org/10.1177/0263 276411424420.
- Cianferoni, Nicola, Luca Perrig, and Jean-Michel Bonvin. 2022. "When Voices from Below Are Heard: The Case of a Swiss Online Food-Delivery Platform." In *Missing Voice? Worker Voice and Social Dialogue in the Platform Economy*. Cheltenham: Edward Elgar.
- Cini, Lorenzo. 2023. "Resisting Algorithmic Control: Understanding the Rise and Variety of Platform Worker Mobilisations." New Technology, Work and Employment 38 (1): 125–44. https://doi.org/10.1111/ntwe.12257.
- Colclough, Christina J. 2022. "Righting the Wrong: Putting Workers' Data Rights Firmly on the Table." In *Digital Work in the Planetary Market*, edited by Mark Graham and Fabian Ferrari, 291–302. The MIT Press. https://doi.org/10.7551/mitpress/13835.003.0023.
- Crawford, Kate, and Trevor Paglen. 2021. "Excavating AI: The Politics of Images in Machine Learning Training Sets." AI & Society 36 (June): 1105–16. https://doi.org/10.1007/s00146-021-01162-8.
- Davies, Harry, Simon Goodley, Felicity Lawrence, Paul Lewis, and Lisa O'Carroll. 2022. "Uber Broke Laws, Duped Police and Secretly Lobbied Governments, Leak Reveals." *The Guardian*, July 11, 2022. https://web.archive.org/web/20231114154524/https://www.theguardian.com/news/2022/jul/10/uber-files-leak-reveals-global-lobbying-campaign.
- Dencik, Lina. 2021. "Towards Data Justice Unionism? A Labour Perspective on AI Governance." In AI for Everyone? Critical Perspectives, edited by Pieter Verdegem, 267–84. University of Westminster Press. https://doi.org/10.16997/book55.o.
- Doorn, Niels van, and Adam Badger. 2021. "Dual Value Production as Key to the Gig Economy Puzzle." In *Platform Economy Puzzles*, edited by Jeroen Meijerink, Giedo Jansen, and Victoria Daskalova. Edward Elgar Publishing. https://doi.org/10.4337/9781839100 284.00015.
- Duggan, James, Ultan Sherman, Ronan Carbery, and Anthony McDonnell. 2020. "Algorithmic Management and App-work in the Gig Economy: A Research Agenda for Employment Relations and HRM." Human Resource Management Journal 30 (1): 114–32.

- https://doi.org/10.1111/1748-8583.12258.
- Englert, Sai, Jamie Woodcock, and Callum Cant. 2020. "Digital Workerism: Technology, Platforms, and the Circulation of Workers' Struggles." tripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society 18 (1): 132–45. https://doi.org/10.31269/triplec.v18i1.1133.
- Exchange, Worker Info. 2021. "Managed by Bots: Data-driven Exploitation in the Gig Economy." https://web.archive.org/web/20231114155519/https://www.workerinfoexchange.org/wie-report-managed-by-bots.
- ——. 2023. "Just Beat It! How Just Eat Robo-Fires Its Workers." https://www.workerinfoexchange.org/just-eat-report.
- Ferrari, Fabian, and Mark Graham. 2021. "Fissures in Algorithmic Power: Platforms, Code, and Contestation." *Cultural Studies* 35 (4-5): 814–32. https://doi.org/10.1080/09502386.2 021.1895250.
- Freitas, Maria Da Conceição, and Miguel Mira Da Silva. 2018. "GDPR Compliance in SMEs: There Is Much to Be Done." *Journal of Information Systems Engineering & Management* 3 (4). https://doi.org/10.20897/jisem/3941.
- Heiland, Heiner. 2021. "Controlling Space, Controlling Labour? Contested Space in Food Delivery Gig Work." New Technology, Work and Employment 36 (1): 1–16. https://doi.org/10.1111/ntwe.12183.
- ———. 2022. "Neither Timeless, nor Placeless: Control of Food Delivery Gig Work via Place-Based Working Time Regimes." *Human Relations* 75 (9): 1824–48. https://doi.org/10.1177/00187267211025283.
- Hießl, Christina. 2022. "The Classification of Platform Workers in Case Law: A Cross-European Comparative Analysis." Comparative Labor Law and Policy Journal 42 (2). https://doi.org/10.2139/ssrn.3982738.
- Jarrahi, Mohammad Hossein, Gemma Newlands, Min Kyung Lee, Christine T. Wolf, Eliscia Kinder, and Will Sutherland. 2021. "Algorithmic Management in a Work Context." *Big Data & Society* 8 (2): 205395172110203. https://doi.org/10.1177/20539517211020332.
- Joyce, Simon, Charles Umney, Xanthe Whittaker, and Mark Stuart. 2023. "New Social Relations of Digital Technology and the Future of Work: Beyond Technological Determinism." New Technology, Work and Employment 38 (2): 145–61. https://doi.org/10.1111/ntwe.12276.
- Lee, Min Kyung, Daniel Kusbit, Evan Metsky, and Laura Dabbish. 2015. "Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers." In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*, 1603–12. Seoul Republic of Korea: ACM. https://doi.org/10.1145/2702123.2702548.
- Lehdonvirta, Vili. 2018. "Flexibility in the Gig Economy: Managing Time on Three Online Piecework Platforms." New Technology, Work and Employment 33 (1): 13–29. https://doi.org/10.1111/ntwe.12102.
- ———. 2022. Cloud Empires: How Digital Platforms Are Overtaking the State and How We Can Regain Control: How Digital Platforms Are Overtaking the State and How We Can Regain Control. Cambridge, MA: MIT Press.

- Lei, Ya-Wen. 2021. "Delivering Solidarity: Platform Architecture and Collective Contention in China's Platform Economy." *American Sociological Review* 86 (2): 279–309. https://doi.org/10.1177/0003122420979980.
- Li, Wenlong, and Jill Toh. 2023. "Data Subject Rights as a Tool for Platform Worker Resistance: Lessons from the Uber/Ola Judgments." In *Data Protection and Privacy, Volume 15:* In *Transitional Times*, by Hideyuki Matsumi, Dara Hallinan, Diana Dimitrova, Eleni Kosta, and Paul De Hert, 119–56. Hart Publishing. https://doi.org/10.5040/9781509965939.
- Luca, Michael, and Max H. Bazerman. 2020. The Power of Experiments. Cambridge, MA: The MIT Press.
- Mahieu, René L. P., and Jef Ausloos. 2020. "Harnessing the Collective Potential of GDPR Access Rights: Towards an Ecology of Transparency." *Internet Policy Review*, July 6, 2020.
- Moore, Phoebe V. 2022. "Problems in Protections for Working Data Subjects: The Social Relations of Data Production." *Global Political Economy* 1 (2): 257–70. https://doi.org/10.1332/UKGE7444.
- Naudts, Laurens, Pierre Dewitte, and Jef Ausloos. 2022. "Meaningful Transparency Through Data Rights: A Multidimensional Analysis." In *Research Handbook on EU Data Protection Law*, edited by Eleni Kosta, Ronald Leenes, and Irene Kamara. Edward Elgar Publishing. https://doi.org/10.4337/9781800371682.00030.
- Newlands, Gemma. 2021. "Algorithmic Surveillance in the Gig Economy: The Organization of Work Through Lefebvrian Conceived Space." Organization Studies 42 (5): 719–37. https://doi.org/10.1177/0170840620937900.
- Prassl, Jeremias. 2018. Humans as a Service: The Promise and Perils of Work in the Gig Economy. Oxford: Oxford University Press.
- Rahman, Hatim A. 2021. "The Invisible Cage: Workers' Reactivity to Opaque Algorithmic Evaluations." *Administrative Science Quarterly* 66 (4): 945–88. https://doi.org/10.1177/00018392211010118.
- Richardson, Lizzie. 2020. "Platforms, Markets, and Contingent Calculation: The Flexible Arrangement of the Delivered Meal." *Antipode* 52 (3): 619–36. https://doi.org/10.1111/anti.12546.
- Rosenblat, Alex. 2018. *Uberland: How Algorithms Are Rewriting the Rules of Work*. Berkeley, CA: University of California Press.
- Rosenblat, Alex, and Luke Stark. 2016. "Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers." *International Journal of Communication* 10: 3758–84. https://ijoc.org/index.php/ijoc/article/view/4892.
- Shapiro, Aaron. 2020. "Dynamic Exploits: Calculative Asymmetries in the on-demand Economy." New Technology, Work and Employment 35 (2): 162–77. https://doi.org/10.1111/ntwe.12160.
- ——. 2023. "Platform Sabotage." *Journal of Cultural Economy* 16 (2): 1–18. https://doi.org/10.1080/17530350.2022.2159495.
- Stark, David, and Ivana Pais. 2021. "Algorithmic Management in the Platform Economy." Sociologica, January, 47–72 Pages. https://doi.org/10.6092/ISSN.1971-8853/12221.
- Sun, Ping. 2019. "Your Order, Their Labor: An Exploration of Algorithms and Laboring on

- Food Delivery Platforms in China." *Chinese Journal of Communication* 12 (3): 308–23. https://doi.org/10.1080/17544750.2019.1583676.
- Vallas, Steven, and Juliet B. Schor. 2020. "What Do Platforms Do? Understanding the Gig Economy." *Annual Review of Sociology* 46 (1): 273–94. https://doi.org/10.1146/annurevsoc-121919-054857.
- Vedantam, Shankar, and Maggie Penman. 2016. "This Is Your Brain On Uber." NPR Hidden Brain, May 17, 2016. https://web.archive.org/web/20231114155021/https://www.npr.org/2016/05/17/478266839/this-is-your-brain-on-uber.
- Wachter, Sandra, Brent Mittelstadt, and Luciano Floridi. 2017. "Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation." International Data Privacy Law 7 (2): 76–99. https://doi.org/10.1093/idpl/ipx005.
- Wilkinson, Adrian, Tony Dundon, Paula K. Mowbray, and Sarah Brooks. 2022. Missing Voices? Integrating Worker Voice and Social Dialogue in the Platform Economy. Edward Elgar Publishing. https://doi.org/10.4337/9781839105548.00008.
- Wood, Alex J., Vili Lehdonvirta, and Mark Graham. 2018. "Workers of the Internet Unite? Online Freelancer Organisation Among Remote Gig Economy Workers in Six Asian and African Countries." New Technology, Work and Employment 33 (2): 95–112. https://doi.org/10.1111/ntwe.12112.
- Woodcock, Jamie. 2021. The Fight Against Platform Capitalism: An Inquiry into the Global Struggles of the Gig Economy. University of Westminster Press. https://doi.org/10.16997/book51.