

PLATFORM LABOUR: CONTINGENT HISTORIES AND NEW TECHNOLOGIES

Valentin Niebler

(Leuphana University of Lüneburg)

Moritz Altenried

(Leuphana University of Lüneburg)

Jude Macannuco

(Leuphana University of Lüneburg)

The rise of the platform economy has had enormous influence on the world of work in the recent decade. Despite its often relatively small size in the overall labour market, its paradigms have served as inspiration or laboratories of experimentation for the transformation of workplaces and management in various industries. It is therefore important to describe and contextualize the logics of platform labour, and the ways workers deal with these circumstances⁵. To provide a thorough account of this phenomenon, it is essential to interrogate both the technological and political features that permit it. On the one hand, the labour arrangements of platforms like Uber or Helpling have been made possible by new algorithmic technologies. On the other hand, they have been enabled by broader economic and social transformations on a global level in the wake of the crisis of Fordism and the rise of Post-Fordist regimes of labour and accumulation.

Amongst other things, these turbulent crises and transformations have brought about a loosening of the worker rights and labour market regulations that had been

5 Research has employed different terms for work on digital platforms, among them 'crowdwork' (Ross et al. 2010; Berg et al. 2019), 'digital labour' (Scholz 2012) or 'gig-work' (Crouch 2019; Gandini 2019). However, the explanatory power of these terms appears limited as they only describe specific aspects of platform-mediated work. We therefore employ the term platform labour in order to capture the full range of activities possible through these business models.

established in the post-war period in Europe and North America. The period between 1945 and 1973 was marked by a „normative model” of labour in which most occupations were defined as full-time, permanent and backed up by access to social security systems. While this normative model has always been a reality only for a certain segment of the working class (stratified by vectors such as gender and race), it served as a „powerful aspiration” for workers and a normative model for the understanding of labour in Western societies (Huws, 2016). The rise of platform labour has to be located in the demise of this normative model through the multiple crises shaking the global economy since the 1970s up to the economic and financial crises that became visible in 2007. These crises and the consequent reconfiguration of labour relations are the context in which we observe both a rise of multiple forms of contingent work and the use of new technologies in order to re-organize and intensify the labour process resulting in profound and global processes of the re-composition of class. Platform labour and its specificities have to be discussed accordingly in the context of these re-composition including both the rise of new technologies (as many of its characteristics rely on digital technology) and fiercely contested the decade-long reconfiguration of labour relations. While the global economic and financial crises after 2007 plays a crucial role in the rise of platform labour it is important to also situate it in the long history of contingent labour, which is, to a great extent, also a history of migrant and female labour.

A crucial characteristic of platform labour is the implementation of digital technologies to organize, supervise and automate control over the labour process in the combination with flexible and contingent contractual arrangements. The latter is not only a tool employed by companies to keep labour costs and risks low, but is also crucial for the everyday management of its workers. An analysis of the labour process in digital platforms must accordingly look not only at the ways digital technology is used to manage labour, but also at the crucial function of flexible contractual arrangements. Arguably, it is only this very combination that makes platform labour possible and efficient (Altenried, 2017).

Technology and the Labour Process

This section concentrates on the labour process in digital platforms with a focus on Uber, Deliveroo, Helpling and, to a lesser extent, Airbnb. Many of the arguments can, however, be extended to other labour platforms (both offline and online) and other

forms of contingent work. The analysis is oriented on the framework of Labour Process Theory (LPT), which aims to describe the interplay of labour, technology and management within and beyond the capitalist workplace (Thompson, 1990). Main issues from this angle are the function of labour at the point of production, the role of worker's skills in this process, managerial control mechanisms and the relations between capital and labour. The section starts with the role of digital technologies, moves on to argue how these can only enact themselves in combination with flexible forms of employment and closes with a short view at the conflicts that have arisen around the specific features of platform labour.

The use of digital technology to organize the labour process and control workers is a crucial feature of practically all platform companies. Digital technology allows for the systematic registration, ordering, and aggregation of large quantities of data and the almost automatic incentivizing and directing of workers via the apps they use to connect to the platforms (Schreyer and Schrape, 2018). It also streamlines the transaction process between users of the platforms and workers. The software architectures employed by the platforms allow for the organization of the labour process increasingly with little or no direct oversight of human managers, a form of automated management often referred to as “algorithmic management” (Lee et al., 2015). This term strives to describe algorithms that take on “managerial functions”. In the case of food delivery, Ivanova et al. (2018) analyze “application-based management” in order to underline the importance of the applications that platform companies provide their workers, who need to have access to them on their personal smartphones. From the perspective of Labour Process Theory, it can be argued that the point of production in platform labour resides, at least partly, in the app itself, translates consumer demand into orders for the worker, organizes the execution of tasks and oversees a worker's performance and often determines the amount of payment (Gandini, 2018, p. 7) —see also (Veen, Barratt and Good, 2019)—.

While human management is still important in many cases and the extent and precision to which the singular working steps are organized by digital technology vary greatly across different platforms, it has to be underlined that the role of software architectures in organizing, managing and controlling labour is absolutely crucial to most digital platforms (Ivanova et al., 2018, Rosenblat, 2018, Schreyer and Schrape, 2018). Software allows for a great number of things, from (automated) shift planning and communications to the tracking, tracing and rating of workers. These new methods of organizing, monitoring, and measuring labour allow for tight control of platform workers across, even if their workplace is out of the direct sight of management. In this

way, digital technology allows for the extension of forms and practices of organization and control into urban spaces hitherto only conceivable in the disciplinary spaces of factories (Altenried, 2019).

As the software organizing the labour process is controlled by the platforms, both workers and customers can at best only partially understand its workings, as the software remains “black-boxed” (Rossiter, 2016). For example, as Rosenblat and Stark (2016) show in the case of Uber, information asymmetries are normally inscribed in the software architectures of digital platforms and serve as an important tool for the control of labour. Information about routes, payment or rating systems are kept from platform workers in order to shape workers’ behavior across different platforms (Waters and Woodcock, 2017; Veen, Barratt and Good, 2019). Moreover, platforms can change algorithms at will (which happens regularly in many platforms) without informing workers, allowing for swift and unexpected implementation of the platform providers’ wishes without worker consent or input (Degner and Kocher, 2018). These information asymmetries also allow for forms of incentives or nudging, which can be understood as “soft control”. For example, Uber’s algorithms will at times generate „surge price” zones based on the supply and demand of a particular area, where fares for drivers are higher (Guda and Subramanian, 2019; Rosenblat and Stark, 2016). The app thus directs drivers toward this area via algorithmic management in order to fill the lack of supply to meet customer demand. However, drivers do not necessarily benefit from this surge pricing for a variety of reasons, such as subsequent oversupply of drivers in a particular area, or from traveling long distances to reach a surge area only to discover that the surge has since ended. Thus, Uber can dynamically manipulate and redirect its labour pool via algorithms.

Surge pricing constitutes a part of what Rosenblat and Stark (2016) deem “soft control”. Other methods of soft control include heat maps, incentives, and frequent messaging. These incentives and frequent messaging, generated via algorithms, include predictions of possible surge pricing and nudging drivers to stay online via the Uber app itself, in the event that surge pricing does occur in a driver’s vicinity. Deliveroo employs similar tactics in the management of their workers. As with Uber, the nexus of these managerial tactics lies within the Deliveroo app itself. The managerial options and software used varies according to country and time, as Deliveroo is experimenting with different forms of payment, incentives and control. Most importantly, access to shifts and therefore to further possibilities to earn money is based on performance metrics thus serving as a powerful tool of soft control. In some places,

Deliveroo riders have received personalized monthly assessments on their average ‘time to accept orders’, ‘travel time to restaurant’, ‘travel time to customer’, ‘time at customer’, ‘late orders’ and ‘unassigned orders’. Deliveroo also responds to unsatisfactory performance, which, because it is algorithmically determined, is often inaccessible to the workers themselves (Gandini, 2018).

Another method that platforms use is discussed as “gamification” (Woodcock and Johnson, 2018). In the context of digital platforms, gamification operates through algorithmic collection and synthesis of the data of workers (Sun, 2019; Schmidt, 2017). In this method, platform algorithms track ranking and rate workers, for example on public leader boards or reward workers with “virtual credit points”, which in turn motivates workers to improve their performance in a competitive, yet playful, manner (Schmidt, 2017). The purpose of gamification in work therefore lies in the attribution of game-like qualities to work tasks, which is thought to increase productivity (Koivisto and Hamari, 2015). By transforming platform labour into a “game,” platform providers add an intrinsic motivational component to this labour, which could increase worker productivity (Sun, 2019). Moreover, it makes workers more competitive amongst themselves by increasing workers’ awareness of their peers’ performances (Schreyer and Schrape, 2018).

In many cases, customer feedback is another tool used to manage and discipline platform labour. In the case of Helpling, where the labour process is much less dependent on digital technology, the customer rating system is a crucial tool to discipline workers. As customer rating is often crucial to secure access to further jobs, workers need to be able to ensure their customers are content with their labour (Bor, 2018). The rating system serves a similarly critical function in the case of Uber (Rosenblat, 2018). The role of Airbnb home renters differs somewhat from Uber, Deliveroo, and Helpling workers in that the former does not constitute a clear labour relation. Airbnb does, however, employ similar forms of algorithmic management to ensure that home renters abide by Airbnb’s standards without directly surveying or managing them. For example, Airbnb hosts must respond within 24 hours to requests from a potential guest, or they risk the deactivation of their account (Ravenelle, 2017). This is similar to the mechanism by which Uber drivers’ accounts are deactivated if they do not accept at least 80% of rides (Ravenelle, 2017). In addition to these parameters, ranking plays a large role in the economic outcomes for Airbnb hosts, who must maintain a high rating in order for Airbnb’s algorithms to display their listings before others (Celata et al, 2020).

Tied to the importance of ratings and rankings in the performance of platform laborers is the issue of emotional labour, understood as the self-management of worker’s

emotional expressions towards a customer or boss (Hochschild, 1983). Airbnb hosts exert emotional energy in order to maintain positive feedback and ratings from their customers. Hosts report that they often have to “suppress their feelings” in order to please their guests and maintain a good rating (Nemer, Spangler and Dye, 2018, p. 247). Hosts also understand that Airbnb’s algorithms rank their properties in some way when displaying them to potential guests, which in turn exerts a constant pressure on hosts to maintain their listing’s top position in the platform’s search engine (Jhaver, Karpfen and Antin, 2018). By accumulating good ratings and hosting experiences, hosts acquire a degree of prestige capital, which can eventually translate to economic capital for the host (O’Regan and Choe, 2017). Hosts are aware that the more positive ratings, and thereby prestige capital, that they accumulate, the higher they can price their listings (Ikkala and Lampinen, 2014). Hosts recognize the role of their performance in their future economic prospects, and thus constantly strive to maintain their precarious position in Airbnb’s platform. Similar questions arise in the cases of Uber and Helpling, where customer feedback plays an important role managing workers by determining their access to further jobs.

The Role of Self-employment and Emerging Platform Struggles

While the possibilities of digital technology organising and distributing workers are one important aspect of platform labour, the way in which it is formally regulated represent another significant facet to the platform labour process. Many platforms, such as Uber or Deliveroo, consider their workers as “independent contractors,” which in turn deprives them of the protection of standard employment, including those of their position (Poon, 2019, Schmidt, 2017). The independent contractor legal status is closely bound up with a digital renaissance of a seemingly outdated wage relation: the piece wage, once described by Karl Marx (1990) as “the form of wage most appropriate to the capitalist mode of production” (p. 698). Payment by the piece is a common system in platform labour, for example, workers from Uber and Deliveroo are normally paid by singular “drops” or “rides”. These constructs are not only a means of creating a flexible and scalable workforce, but also crucial tools in organising and disciplining living labour (Altenried, 2017). This form of contract and wage is not only functional by providing flexibility for employers, but also as a method to organize labour process in the absence of managerial oversight. Duration and intensity of labour are directly

reflected in the amount of income a worker is able to generate, which serves as an incentive for workers and pushes costs for downtime, insurance, and work equipment onto the workers themselves. As there is no basic cost for their workers, platforms, on the other hand, often accept more workers than necessary, which often leads to harsh competition for shifts and serves as another tool to discipline labour and make it more efficient (Ivanova et al., 2018, Altenried 2019).

The result is a form of contingent labour pushing most of the entrepreneurial and social risks onto the platform workers. These forms of precarity are precisely what have been challenged by numerous struggles of platform workers in Europe and around the globe, the different conditions for struggles faced by casualized workers notwithstanding. The paradigms of platform work described above render collective resistance of platforms more difficult than in most conventional industries. Three forms of worker's fragmentation appear to be combined: organizational, technological and spatial. The prevalence of self-employment excludes workers from integration into the corporation and also from entitlements to social and legal security, including the right to organize in many jurisdictions. The ubiquity of algorithmic management through the digital tracking, rating and 'soft control' technologies laid out above leads to the atomization of workers, who are pitted against each other on the platform's market infrastructure. With the ability of algorithmic management to assess and discipline worker's beyond geographical limits, platforms can command tight control of their workplace by maintaining workers spatially separated from each other. For many workers, this means they lack the physical co-presence that factory and service workers usually share, and have only little or no ties to each other when conflicts arise.

Nonetheless, various forms of resistance have emerged. Both forms of individual strategies of resistance and refusal (Sun, 2019, Veen, Barratt and Good, 2019) as well as forms of collective action (Marrone and Finotto, 2019; Degner and Kocher, 2018; Woodcock, 2016; Animento, Di Cesare and Sica, 2017) have emerged. Platform companies have reacted in various ways to the protests of its workers. Some have simply tried to ignore them, as was the case with Berlin's Deliver union, which has received little public acknowledgment from Deliveroo. On the other hand, there are many successful protests and strikes such as in 2016 in the UK when Deliveroo withdrew its intended changes to compensation in London after Deliveroo riders held a strike in protest (Waters and Woodcock, 2017). Other platforms, like Uber, have also faced protests, strikes, and lawsuits from workers. The protest, especially carried by food delivery riders, but also other platform workers, have been going on for several years

and entered into a new phase in the context of the global Covid-19 crisis. During the contagion emergency, both risks and precarity, as well as the often-crucial social functions of platform workers and infrastructures, became evident. Even before the pandemic, platform labour was in an early, experimental and increasingly contested stage, and its future will accordingly be tied up more than ever with the outcome of these new labour and social conflicts.

References

- Altenried, M. (2017). Die Plattform als Fabrik. Crowdwork, Digitaler Taylorismus und die Vervielfältigung der Arbeit. *PROKLA. Zeitschrift für kritische Sozialwissenschaft*, 47(2), 175-192.
- Altenried, M. (2019). On the last mile: logistical urbanism and the transformation of labour. *Work Organisation. Labour & Globalisation*, 13(1), 114-129.
- Animento, S., Di Cesare, G., & Sica, C. (2017). Total Eclipse of Work? *PROKLA. Zeitschrift für kritische Sozialwissenschaft*, 47(187), 271-290.
- Berg, J., Furrer, M., Harmon, E., Rani, U., & Silberman, M. (2019). Working conditions on digital labour platforms. *VOX - CEPR Policy Portal*. Retrieved from <https://voxeu.org/article/working-conditions-digital-labour-platforms>
- Bor, L. (2018, November). Wisch und Weg? Welche Chancen bietet die Online-Plattform Helpling für eine gerechtere Verteilung von Hausarbeit? Retrieved from <https://www.zeitschrift-luxemburg.de/lisa-bor/>.
- Celata, F., Capineri, C., & Romano, A. (2020). A room with a (re)view. Short-term rentals, digital reputation and the uneven spatiality of platform-mediated tourism. *Geoforum*, 112, 129-138.
- Crouch, C. (2019). *Will the gig economy prevail?* Cambridge, UK - Medford, MA: Polity Press.
- Chapman, B. (2019, May 13). Uber drivers in the UK are going on strike today in protest over pay. Retrieved from <https://www.independent.co.uk/news/business/news/uber-drivers-strike-london-birmingham-glasgow-nottingham-pay-rights-a8898791.html>
- Degner, A., & Kocher, E. (2018). Arbeitskämpfe in der „Gig-Economy“? Die Protestbewegungen der Foodora- und Deliveroo-„Riders“ und Rechtsfragen ihrer kollektiven Selbstorganisation. *Kritische Justiz*, 51(3), 247-265.

- Gandini, A. (2018). Labour process theory and the gig economy. *Human Relations*, 72(6), 1039-1056.
- Guda, H. & Subramanian, U. (2019). Your Uber Is Arriving: Managing On-Demand Workers Through Surge Pricing, Forecast Communication, and Worker Incentives. *Management Science*, 65(5), 1995-2014.
- Hochschild, A. (1983). *The Managed Heart. Commercialization of Human Feeling*. Berkeley: University of California Press.
- Huws, U. (2016). Logged labour: A new paradigm of work organisation? *Work Organisation, Labour & Globalisation*, 10(1), 7-26.
- Ikkala, T., & Lampinen, A. (2014, February). Defining the price of hospitality: networked hospitality exchange via Airbnb. In *Proceedings of the companion publication of the 17th ACM conference on Computer supported cooperative work & social computing* (pp. 173-176).
- Ivanova, M., Bronowicka, J., Kocher, E., & Degner, A. (2018). The App as a Boss? Control and Autonomy in Application-Based Management. *Arbeit | Grenze | Fluss - Work in Progress Interdisziplinärer Arbeitsforschung*, (2).
- Jhaver, S., Karpfen, Y., & Antin, J. (2018). Algorithmic Anxiety and Coping Strategies of Airbnb Hosts. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems - CHI 18*. doi:10.1145/3173574.3173995
- Koivisto, J., & Hamari, J. (2017). The Rise of Motivational Information Systems: A Review of Gamification Research. *SSRN Electronic Journal*, 45, 191-210.
- Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with Machines. *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI 15*. doi:10.1145/2702123.2702548
- Marrone, M., & Finotto, V. (2019). Challenging Goliath. *Informal Unionism and Digital Platforms in the Food Delivery Sector. The Case of Riders Union Bologna. Partecipazione e conflitto*, 12(3), 691-716.
- Marx, K. (1990). *Capital. A critique of political economy*. London - New York: Penguin Books in association with New Left Review.
- Nemer, D., Spangler, I., & Dye, M. (2018). Airbnb and the Costs of Emotional Labor in Havana, Cuba. *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing - CSCW 18*. doi:10.1145/3272973.3274066
- Poon, T. S. (2019). Independent Workers: Growth Trends, Categories, and Employee Relations Implications in the Emerging Gig Economy. *Employee Responsibilities and Rights Journal*, 31(1), 63-69.

- Ravenelle, A. J. (2017). Sharing economy workers: Selling, not sharing. *Cambridge Journal of Regions. Economy and Society*, 10(2), 281-295.
- Regan, M. O., & Choe, J. (2017). Airbnb and cultural capitalism: Enclosure and control within the sharing economy. *Anatolia*, 28(2), 163-172.
- Rosenblat, A. (2018). *Uberland: how algorithms are rewriting the rules of work*. Oakland: University of California Press.
- Roelofsen, M. (2018). Performing “home” in the sharing economies of tourism: The Airbnb experience in Sofia, Bulgaria. *Fennia*, 196(1), 24-42.
- Rosenblat, A., & Stark, L. (2016). Algorithmic labor and information asymmetries: A case study of Uber’s drivers. *International Journal of Communication*, 10, 3758-3784.
- Ross, J., Irani, L., Silberman, M., Zaldivar, A., & Tomlinson, B. (2010): Who are the crowdworkers? In E. Mynatt (Ed.), *CHI ‘10 Extended Abstracts on Human Factors in Computing Systems*. the 28th of the international conference extended abstracts (p. 2863). Atlanta - New York: ACM.
- Rossiter, N. (2016). *Software, Infrastructure, Labor: A Media Theory of Logistical Nightmares*. New York: Routledge.
- Scholz, T. (Ed.). (2012): *Digital labor. The Internet as playground and factory*. New York: Routledge.
- Schmidt, F. (2017): *Digital Labour Markets in the Platform Economy: Mapping the Political Challenges of Crowd Work and Gig Work*. Bonn: Friedrich Ebert Stiftung.
- Schor, J. B., & Attwood-Charles, W. (2017). The “sharing” economy: Labor, inequality, and social connection on for-profit platforms. *Sociology Compass*, 11(8).
- Schreyer, J., & Schrape, J. F. (2018). *Plattformökonomie und Erwerbsarbeit: Auswirkungen algorithmischer Arbeitskoordination—das Beispiel Foodora* (No. 087). Working Paper Forschungsförderung.
- Sun, P. (2019). Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in china. *Chinese Journal of Communication*, 12(3), 308-323.
- Thompson, P. (1990): *Crawling from the Wreckage: The Labour Process and the Politics of Production*. In D. Knights (Ed.), *Labour process theory* (pp. 95-124). Basingstoke: Macmillan.
- Van Doorn, N. (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.

- Veen, A., Barratt, T., & Goods, C. (2020). Platform-Capital's 'App-etite' for Control: A Labour Process Analysis of Food-Delivery Work in Australia. *Work, Employment and Society*, 34(3), 388-406.
- Woodcock, J. & Johnson, M.R. (2018). Gamification: What it is, and how to fight it. *The Sociological Review*, 66(3), 542–558.
- Woodcock, J., (2016, November 11). Deliveroo and UberEATS: organising in the gig economy in the UK. Retrieved from <http://www.conessioniprecarie.org/2016/11/11/deliveroo-and-ubereats-organising-in-the-gig-economy-in-the-uk/>.
- Waters, F. & Woodcock, J. (2017, September 20). Far from Seamless: a Worker's Inquiry at Deliveroo. Retrieved from <https://www.viewpointmag.com/2017/09/20/far-seamless-workers-inquiry-deliveroo/>.

The Journal is hosted by a Creative Commons Attribution – Noncommercial – ShareAlike License, 4.0 Internacional: “The material created can be distributed, copied and displayed by third parties if it is shown in the credits. No commercial benefit can be obtained and derivative works must be under the same license terms as the original work. “