

Meaningful app-work? Exploring meaningful work experiences of food delivery couriers in Poland

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Abstract

Purpose – The rise of app-based work in the gig economy, particularly within the food delivery sector, challenges traditional employment paradigms and raises questions about the potential for achieving meaningful work experiences. This study explores whether such work can be considered meaningful for food delivery couriers in Poland.

Design/methodology/approach – This research adopts a qualitative, case-study approach, conducting 30 in-depth interviews with food delivery couriers in Poland. The study investigates how these workers perceive the meaningfulness of their work, focusing on the interplay between subjective and organisational aspects of their work.

Findings – The findings reveal that despite the precarious nature of app-based work, couriers often find meaningful experiences through perceived autonomy, gamified control and the physical demands of their job. The study highlights the dual nature of app work, where the same elements that contribute to worker engagement and a sense of independence also perpetuate exploitation and job insecurity.

Research limitations/implications – The study's reliance on a convenience sample of 30 interviews conducted via social media may not represent the broader population of food delivery couriers. Future research should expand the sample size and include a more diverse range of participants to improve generalisability.

Practical implications – The insights from this study can inform platform designers and policymakers to create more supportive environments for gig workers. Enhancing algorithmic transparency, providing better social protections and implementing fair gamification strategies can help mitigate the negative aspects of gig work and improve job satisfaction.

Social implications – The study underscores the need for regulatory changes to ensure minimum guaranteed earnings and health and safety provisions for gig workers. By fostering a supportive and transparent work environment, the gig economy can better contribute to worker well-being and social equity.

Originality/value – This research contributes to the limited body of literature on meaningful work within the gig economy, particularly focusing on food delivery couriers in Poland. It provides new insights into how workers create and perceive meaningful work in a highly digitised and algorithmically managed environment.

Keywords Meaningful work, Gig economy, Food delivery, Algorithmic control, App-work

Paper type Research paper

The rise of app-work, a subset of the gig economy, facilitated through digital platforms, has contested traditional employment paradigms, marking a new type of contingent work (Jacobides, Cennamo, & Gawer, 2018; Duggan, Sherman, Carbery, & McDonnell, 2020; Cropanzano, Keplinger, Lambert, Caza, & Ashford, 2023). This mode of work intermediates the hiring process, leaving minimal control over job allocation to workers and customers. The global proliferation of app-work platforms is visible in sectors like ride-hailing and food delivery, where the use of algorithmic technology optimises service delivery while exerting

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significant managerial control over the workforce. App-work's reliance on precarious labour, coupled with algorithmic management, digital control and surveillance raises critical issues about worker autonomy and social protection (Fleming, 2017; Chen, Chevalier, Rossi, & Oehlsen, 2019; Duggan *et al.*, 2020). Algorithms dictate work patterns, tasks, and performance evaluations, often using fragmented data such as location, demand, and weather conditions to compute wages (Griesbach, Reich, Elliott-Negri, & Milkman, 2019; Amorim & Moda, 2020; Dubal, 2023). While fostering efficiency, algorithmic management is strongly criticised for limiting worker autonomy (Galiere, 2020) decreasing job satisfaction, and increasing stress, anxiety, and burnout (Hafeez, Gupta, & Sprajcer, 2022). At the same time workers navigate financial uncertainties, manage their own health and safety, and maintain their vehicles (Hall & Krueger, 2018; Tassinari & Maccarone 2020; Muszyński, Pulignano, & Marà, 2022). These characteristics of app-based work raise questions about the potential for achieving a fulfilling and rewarding work experience.

Drawing on the debate around meaningful work, our research aims to understand the experiences within the app-work sector, investigating whether such work can be considered meaningful. We follow Bailey, Lips-Wiersma, Madden, Yeoman, Thompson and Chalofsky (2019a), who called for future research to identify how work is rendered meaningful to the worker through an industry-specific, case-oriented approach. We believe that app-based work is a highly precarious model of employment, where exploring experiences of meaning could offer new insights into emerging work organisation practices. Additionally, we examine the role of technological changes in the workplace. Laaser and Karlsson (2022) identified digital technology as reshaping the subjective, individual aspects of meaningful work. For us, the food delivery sector epitomises these changes, with the broad adoption of algorithmic technology, digital control, and datafication of workplace tasks (Newlands, 2020; Gregory, 2021; Dubal, 2023). By conducting a case study of food delivery couriers in Poland, grounded in qualitative inquiry (30 in-depth interviews with delivery workers), we identify the processes through which workers create the perception of their work as meaningful. Through our research, we shed new light on the interplay between technology, precarity, and the experiences of meaningful work.

Theoretical development: can app-work be meaningful?

Existing interpretations of app-work

App-work is a variant of gig work in which digital software connects workers with tasks or services (Duggan *et al.*, 2020). App-work intermediates in hiring workers to perform simple tasks for customers placing orders through digital software, leaving both them and workers with almost no control over who receives the job (De Stefano & Aloisi, 2018). The global popularity of app-work organisations is visible in the ride-hailing (Amorim & Moda, 2020; Vasudevan & Chan, 2022) and food delivery sectors (Galiere, 2020; Griesbach *et al.*, 2019; De Krijger, 2024).

Software is the central element of management and control in app-work. It relies on algorithmic technology and big data analysis to optimise and speed up the service (Duggan *et al.*, 2020). App-work is performed by following digitally dictated work patterns, tasks, and evaluating worker performance (De Stefano & Aloisi, 2018; Rosenblat, 2018). Quantitative metrics and data measure and evaluate work activities (Wood, Graham, Lehdonvirta, & Hjorth, 2019; Newlands, 2020; Tassinari & Maccarone 2020). The literature points at the discrimination produced by the ambiguous rules of the algorithmic computations, for instance relevant to wage, based on fragmented data like location, demand, supply, and weather (Bolton, 2007; Dubal, 2023). The research has depicted the experiences of algorithmic management, as limiting the autonomy of workers adhering to algorithm's rigid structures (Newlands, 2020; Tassinari & Maccarone 2020), translating to low job satisfaction (Lee, Kusbit, Metsky, & Dabbish, 2015), and more stress, anxiety or burnout (Hafeez *et al.*, 2022).

App-work's reliance on data analytics and digital software also produces a strong gamification effect, identified in the literature as contributing to worker engagement in the gig economy (Cameron, 2022, 2024; Manriquez, 2019; Mika & Polkowska, 2024). In this context, the main object of gamification is twofold. On the one hand, app-work is designed to use work game practices to enhance engagement through ratings, badges and competitions (van Doorn & Chen, 2021). On the other, it provides opportunities for self-exploitative worker-crafted games which typically are driven by the entrepreneurial maximisation of earnings and a sense of financial and psychological achievement (Manriquez, 2019; Nemkova, Demirel, & Baines, 2019) but also, as the literature shows, it can spread to customer relations or engagement with software (Cameron, 2022). There are two divergent ways of games interpretation: as an outcome of manipulation (Schor, Attwood-Charles, Cansoy, Ladegaard, & Wengronowitz, 2020; Pulignano & Franke, 2022), or, considering individuals as fully-fledged human beings with the potential to derive meaning even from a hopeless place (Kost, Fieseler, & Wong, 2018), tolerating precarious and poor working arrangements (Wood *et al.*, 2019), as a premise of meaningful work.

App-work relies on intermediation with employment on zero-hour contracts through intermediaries (Polkowska, 2021). The literature notes that the root of this variant of app-work lies in regulatory arbitrage: app-work providers exploit gaps, inconsistencies, and ambiguities in regulatory frameworks to circumvent traditional responsibilities and obligations to the workforce, where workers are classified more as independent contractors than employees (Pollman, 2019). As an outcome, these workers lack formal social protection, their incomes fluctuate with customer demand, and despite their autonomy and flexibility, couriers work long, irregular hours to make a living income (Graham, Hjorth, & Lehdonvirta, 2017).

App-work is characterised by the “radical responsabilisation” of employment (Fleming, 2017), where the worker incurs all costs and benefits associated with their work, including own health and safety, vehicle maintenance, or financial uncertainties (Gregory, 2021). This responsabilisation blurs professional and personal commitments and raises questions about the worker perspective on the meaning of the job in the social reproductive context. This is even more apparent in the instance of food delivery work, characterised by heavy physical demands on the worker and greater physical risks tied to the work in urban environment, heavy traffic and changing weather conditions (Kenney & Zysman, 2016; Hauben, Lenaerts, & Waeyaert, 2020).

The content of app-work itself is often described as monotonous and repetitive, with tasks broken down into simple, repeatable actions (Gray & Suri, 2019; De Krijger, 2024). In food delivery, this monotony is compounded by the solitary nature of the work, where interactions are limited to brief exchanges during deliveries, potentially leading to feelings of disconnection and alienation (O'Donohue & Nelson, 2014), that have negative effects on mental health and job satisfaction (Wood *et al.*, 2019). Finally, app-work was used an example of commoditised work (Aloisi, 2015), depriving workers of cognitive engagement, problem solving opportunities, and forcing them to depend on technology. App-work also does not offer opportunities for advancement, and unlike in conventional jobs, where employees can aspire to promotions and skill development, gig workers often find themselves in a static position with limited prospects for professional growth (Wood *et al.*, 2019).

Meaningful work in app-work

These characteristics of app-work raise questions about the possibility of meaningful work. Despite some research on the meaning-making of app-work (Cameron, 2022), this paper focuses on the experiences of work that is deemed meaningful (positive meaning). Management and organisational scholars have looked into the theme of what makes work meaningful, or “experienced as particularly significant and holding more positive meaning for individuals [than other jobs]” (Rosso, Dekas, & Wrzesniewski, 2010, p. 95). The idea of the work being meaningful translates to it being considered significant, to have something that

matters to the person performing it. The concept of “meaningful work” is thus more descriptive of the way in which a worker observes one’s own work’s significance, while, as the literature distinguishes, the “meaning of work” carries more quantitative interpretation and allows for examination of the amount of significance attached to work (Rosso *et al.*, 2010, 2010), which is more reflexive of the universal process of generating meaning from any job (Lips-Wiersma & Morris, 2009). We will concentrate here on the idea of meaningful work to understand if app-work could produce the grand significance of meaningful work that has positive meaning to the workers. According to the literature, the experience and perception of meaningful work, translates to worker commitment and efficiency (Duffy & Dik, 2013; Bailey, Yeoman, Madden, Thompson, & Kerridge, 2018; Lysova, Allan, Dik, Duffy, & Steger, 2019) and might, for instance expose to extensive exploitation, with a mental and physical burden on the overly engaged worker (Florian, Costas, & Kärreman, 2019; Magrizos, Roumpi, Georgiadou, Kostopoulos, & Vrontis, 2022).

A stream of quantitative studies of meaningful work has paid significant attention to the origins of what makes work meaningful. Mousa and Chaouali (2022) show that individual and collaborative job crafting by gig workers enhances their sense of meaningful work, positively affecting their affective commitment to the crowdsourcing platform, thus expanding the relevance of social exchange and organisational commitment theories to gig work contexts. Bailey and Madden (2016) identify job tasks, employee roles, interactions with colleagues, and interactions with stakeholders as the four main sources for developing meaningful work. Rosso *et al.* (2010) emphasise that the main antecedents for experiencing work meaningfulness are the employee, stakeholders, the organisation, and spiritual life. Steger *et al.* (2012) define three dimensions of meaningful work: positive meaning (belief in job significance), meaning making (belief in job as part of a larger role), and greater-good motivations. These findings collectively highlight the complex nature of meaningful work, underscoring its importance within various work contexts.

In our paper we follow the distinction made by Laaser and Karlsson (2022), who consider meaningful work as a product of two forces. On the one hand, meaningful work is seen as of social, objective origins where institutional and contextual factors that shape the experience and the meaning (Hackman & Oldham, 1975; Pratt & Ashforth, 2003; Grant, 2008; Rosso *et al.*, 2010; Yeoman, 2014). In that view, meaningful work is related to the characteristics of the organisation: its culture, the job design, mission, work culture or company policy (Rosso *et al.*, 2010). In some jobs, meaningful work is constituted through human-oriented work environment and by supporting employee voice mechanisms (Chen, Wang, & Lee, 2018; Lysova *et al.*, 2019); or a specific constellation of elements of the job characteristics model (Bailey *et al.*, 2019b). The idea of systematic creation of meaningful jobs has been extended beyond the workplace, touching a broader sphere of public policy, where it is seen as a “moral and political project” (Yeoman, 2014, p. 236), that through institutional frameworks produces a wider social impact.

On the other hand, meaningful work is conceptualised as rooted in the individual worker’s perception and experience. For example, work might be meaningful due to its transcendent purpose in the worker’s life (Bailey & Madden, 2017); its ethical significance (Florian *et al.*, 2019); the worker’s inherent will to assign meaning to that work (Lips-Wiersma & Morris, 2009); high job autonomy (Laaser & Bolton, 2022); or the worker’s perception of job’s positive social impact (Rosso *et al.*, 2010), even considering meaningful jobs in terms of a calling (Dik, Duffy, & Eldridge, 2009; Steger, Pickering, Shin, & Dik, 2010). This subjective view could also be seen as a psychological state – an interplay of values, motivations, and beliefs (Rosso *et al.*, 2010). Some approaches have connected both streams, for instance traditional theories of job design posit that job structure, individual perceptions, or social influences contribute to the meaningfulness of work (Hackman & Oldham, 1975; Grant, 2008).

In this paper we study how meaningful work is experienced among food delivery couriers in Poland, complimenting existing research that traces meaningful work in organisational

contexts of gig economy that are typically not associated with positive work experiences (Kost *et al.*, 2018). Through our findings we show an interplay of objective forces generated by the app-work model and interviewees' individual perceptions.

Methodology

The main source of data is 30 interviews with Polish delivery couriers, conducted by the first author in 2023. App-work in Poland is experiencing dynamic growth, and peaked during the pandemic. The dominant sectors for app-work in Poland are transportation services and food delivery. Major food delivery players include global corporations such as Uber Eats, Glovo, Wolt and Pyszne.pl (Polkowska, 2020). In 2022, Poland's food delivery market was valued at nearly 9 billion PLN; the average order value in 2022 was 75 PLN and online orders constituted 42% of the restaurant market (Stava, 2023). Recent research on the food delivery sector in Poland has observed the precarious nature of these workplaces, reflecting the global trend (Muszyński, Pulignano, & Marà, 2022; Muszyński, Pulignano, Domecka, & Mrozowski, 2022). We examined meaningful work constructing a single case study (Yin, 2009) of food delivery work in Poland, based on anonymised narratives of couriers working for four major delivery platforms (Uber Eats, Glovo, Pyszne.pl, Wolt). Our triangulation strategy mitigated the limitations of reconstructing organisational practices from data collected with workers. For that reason we complemented them with observations of delivery couriers groups on social media (Facebook), followed national media and conducted desk research.

Data collection

The interviewees were recruited through social media. Convenience sampling was used, based on respondents' availability and expedience (Baltes & Ralph, 2022). We identified the largest Facebook forums of food delivery couriers in Poland. These included groups dedicated to a single specific company (e.g. Glovo) as well as nine general groups uniting couriers from several companies. We then posted an announcement about the study in one group – the first author introduced herself by name and institutional affiliation. The post could only be placed in one of the groups because most forums had an administrator that verified all posts before publication. As a result of the posted announcement, nine individuals volunteered for the study, and five of them were interviewed. Subsequently, to establish contact with informants, the researcher sent direct inquiries to members of the forums – often these were people commenting on others' posts or writing posts about their work. The criterion for conducting an interview was current employment as a courier or having worked as a courier within the past year. A total of 196 individual inquiries were sent. No incentives were provided for participating in the study. In the recruitment process, an attempt was made to reach people of nationalities other than Polish (two interviews were conducted with Ukrainian nationals who were fluent in Polish). Most interviewees were male, but there were three women, one of whom was Ukrainian. The interviewees were in the age range of 30–39 years (12 respondents), and 20–29 (12 respondents), five over 40, and one under 20 were also interviewed. Sixteen informants worked as couriers part-time; for 14 it was their primary source of income. The participant data is presented at the end of the paper in Appendix 1. All interviews were conducted in Polish over the phone, recorded with prior consent of the respondents, and transcribed verbatim.

The interview protocol was created based on literature review related to the gig economy's specificity: job design and employment characteristics, algorithmic workplace and worker's work strategies in this digital environment. We used a literature review to create categories of the protocol and then assign questions to the categories. The categories were as follows: workplace trajectory, experiences of work, labour process, job design, worker relations and employment conditions. Using these categories as well as prior desk study of Polish realities of

food delivery work, we created an interview protocol that was progressively iterated. The protocol is provided in [Appendix 2](#).

Data analysis

The data analysis process was done to identify patterns tied to instances of an examined phenomenon ([Levitt et al., 2018](#)). We have analysed the data by coding process which incorporated both deductive and inductive approaches to qualitative research ([Cassell, Cunliffe, & Grandy, 2018](#); [Saldaña, 2021](#)). We used MaxQda and a two-step coding process: we coded in a deductive way, using categories established through the literature review and illustrated in the interview protocol (such as those related to job design, algorithmic surveillance and employment conditions). The coding process followed a hermeneutic circle, involving a process of self-correcting when new data were analysed and existing findings were refined ([Levitt et al., 2018](#)). Thus, the second round has involved the creation of new codes that emerged in the study (such as “lack of boss”, “joy of work”, “algorithm manipulation”). We were then able to capture the subjective perspective of the courier’s work and conceptualise findings to develop our argument of meaningful work creation in the gig economy. Meaningful work was not explicitly described by informants, and our argument is based on the use of categories implicitly linked to meaningful work.

Results

Meaningful experiences of independence at the cost radical responsabilisation of employment

Our data from Poland reflects how within the framework of radical responsabilisation of app-work ([Fleming, 2017](#)), institutional factors such as salary (both its clear amount and assurance of timely payment), the type of contract, worker health and safety, and working hours are critically undermined for food delivery couriers. These workers lack a fixed basic salary and a specified number of guaranteed hours, exposing them to economic insecurity. This reflects a shift where the onus of work-related risks and responsibilities is transferred from the employer to the worker, leaving the worker vulnerable and unsupported in a precarious employment landscape. Passages similar to this reflection of a courier have emerged from our data: “*There are situations where I don’t get [paid] anything at all, like I don’t earn anything for an hour*” (#5, male, part-time, older). The combination of institutional factors, along with the unpredictability of earnings, frequently causes frustration: “*Unfortunately, its unknown how much one will earn, and it can never be planned. We’re on junk [precarious] contract*” (#7, male, full-time, older).

The variability of income often works to the worker’s advantage, stimulating an entrepreneurial spirit by generating more earnings than anticipated. This might be because precarious employment permits longer working hours. One interviewee compares his app-work to previous jobs.

In terms of flexibility, one can earn more than in a typical full-time job or a typical job for a [university] student, or even comparably with a typical job anywhere else, in any other restaurant that provides a contract. In the case of a student, let’s not kid ourselves, it will certainly be a civil law contract [refers to precarious employment] at the minimum wage (#19, male, part-time, younger).

As this courier reflects, his position on the labour market is limited to precarious, low paid employment, and in this context, it is possible to earn more from app-work.

We also interviewed couriers who had previously held traditional employment positions. They moved to app-work to increase their income by pursuing income. One interviewee had been an excavator operator:

I changed job, and I am very satisfied because I earn a lot more now. Last week, I earned almost four thousand. How did I do it? Working 10–12 hours a day, participating in challenges, which also provides additional income. On average, I calculated my earnings to be 41 PLN per hour (#16, male, full-time, middle-age).

The belief that through their individual efforts, workers can increase their earnings, gives them the foundation for the sense that their work is meaningful and preferable to other readily available jobs. The autonomy that is also central to meaningful work is paradoxically ensured by the very lack of guaranteed hours. In this context, such autonomy can be understood in terms of the ability to work irregular hours without being bound by a specific schedule. This prompts couriers to express their enthusiasm for flexibility, even though the work is implicitly highly exploitative.

Our interviewees also had non-financial reasons for preferring the employment conditions of app-work. For example, *“The greatest advantage of this job is such independence. I am not permanently tied to a full-time position. If I want, I go to work; if I don’t feel like it, I don’t go”* (#13, male, part-time, older). Another courier did not want to have a schedule at all, given his previous work experience:

I work and live in a way that I can’t plan for the future and when I want to work. That’s why working in a warehouse did not make sense for me because I never knew if I will feel like going to work in a week or something. Being a food delivery courier works in a way that I can literally wake up, feel like going to work, turn on the app, and I’m off, and I don’t have to arrange anything anywhere (#3, male, part-time, younger).

This passage is a bold expression of an alignment between the specific preferences of the professional work model and the conditions of app-work. For this worker, the institutional factors connected to radical responsabilisation are overshadowed by the model of autonomy. Another interviewee valued the same aspect of app-work due to the necessity of taking care of his chronically ill wife. His previous occupations as a truck driver and restaurant owner were impossible to balance with his caregiving responsibilities:

So, my day definitely looks like this because of my wife. That’s why I leave [to work] around three o’clock, because in the morning, there are some shopping, house chores, meal preparation, things like that, because unfortunately, my wife doesn’t do anything (#7, male, full-time, older).

Although the reason was different, the expression of autonomy of scheduling and aligning work with private life, was a central consideration for this interviewee.

Finally, the app-work’s model allowed workers to opt-out at any time, without the prior notice typically needed in traditional forms of employment. Our data illustrated how a decision to leave work is often based on the calculation of costs and income:

Income can be very unpredictable; there were times when I simply chose not to work for a month or even two because it just wasn’t worthwhile. The earnings would barely cover fuel costs, considering I use my own car and amounted to only a few zloty per hour (#19, male, part-time, younger).

It could be also tied to the personal preferences of whether to work or stay home:

It’s not like I always go to work with a smile on my face. I mean, I do go, but there are just days when an hour passes, and it’s already not great. And... that’s where the flexibility comes in, you know? I say, okay, it’s not working out for me, I’m going offline, thank you, I’m going home (#1, male, full-time, middle-age).

These expressions point at the perception of app-work as less coercive than other, locally available jobs utilising traditional forms of employment, with both its benefits and responsibilities.

Our case points at a paradox: The radical responsabilisation of employment supports workers’ perception of independence and fosters an entrepreneurial, neoliberal spirit in the workforce. Our interviewees display a pragmatic approach to the inherent variability in their earnings and are enthusiastic about not being tied to a regular work schedule. Instead of perceiving the lack of guaranteed income as a drawback, they strategise to compensate for uncertainty, such as by aligning work schedules with periods of higher per-piece rates, thereby increasing the likelihood of consistent earnings. In this respect, their work is rendered

meaningful due to the fact that they are given autonomy without an obligation to work. While app-work provides almost no social protection, its model gives workers the meaningful experience of independence that would otherwise be not accessible to them.

Gamification and control under the algorithmic management

The app-work model relies on software that dictates routes, tasks, and conducts performance evaluations. It uses location data, weather information and data points to perform wage computations based on algorithms. Our interviewees experienced no other means of managerial supervision than through the app. And paradoxically, that was seen as a tremendous advantage. One interviewee valued the limited scope of communication through the app: *“This application is like my boss – but it’s just artificial intelligence programmed for a dozen commands, and it won’t do anything more”* (#17, male, part-time, younger). In this view, management through software emerges as more transparent and predictable than a human supervisor, who might come up with new, complicated tasks or ideas.

Our data provides insights on the absence of traditional management, which according to workers were highly advantageous. Some interviewees mentioned their experiences in past jobs, where they had clashed with their supervisors. In that sense, app-work is free from the bias of human assessment and the technological layer protects workers from potential conflict, including unpleasant communication, shouting, or bullying (#6, #17, #19, #21). One interviewee appreciated the communication being limited to simple tasking in the software: *“No one stands over me, and no one shouts: ‘You have to do this, this, this, and this!’”* (#5, male, part-time, older). Another interviewee expressed his traumatising experiences with management in warehouse jobs, and appreciated not having a manager in app-work:

It gives me so much joy that there is no boss over my head because working in those warehouses [refers to his previous job experience], there was such tremendous pressure that regardless of the pace, what I did, and how many things at once, it was always wrong, always not enough, they always want more. . . (#8, male, full-time, younger).

Lack of direct human control supports workers’ sense of independence, built at the price of datafication of all work activity and extensive workplace tracking. When asked, our interviewees accepted the persistent digital surveillance, and dismissed its effects on their privacy: *“For me it’s not a problem that an algorithm watches over me. Which apps nowadays don’t track us? There are many applications in the world that track us”* (#5, male-part-time, older).

While workers did not see the surveillance as disadvantageous, they engaged in gamified control over their wage, based on their interaction with the software. The drive to control and perform agency, was reported in other works on app-work (De Krijger, 2024). In our study, it emerged as illusory, but was a frequently mentioned aspect of app-work. On the one hand, gamified control occurred through the development of strategies aimed at manipulating the data fed to the algorithm to increasing per-piece wage. One courier describes manipulating with his location data as such strategy:

For instance, if we have an expressway somewhere, crossing our city roads, you can go under the overpass of the expressway and then the GPS catches that you are on the expressway and you will get more travel money to the point, because it calculates a longer route (#19, male, part-time, younger).

Experiential learning, as well as consulting with other delivery couriers, gave our interviewees an opportunity to increase their income. A similar approach was taken by another courier who uses his knowledge of software to expand his profits.

The most significant factor is the delivery time which is calculated from the moment of acceptance to the completion of the course settlement. So, each application provides some time to accept the order; in Glovo, sometimes it’s even around a minute. I use one trick — when I receive an order, I take a screenshot, drive a bit, and only accept the order at the last moment. That way, I already have covered

some distance, and then I accept it. I've saved some time. However, whether this is really the case or not, these are just my speculations (#7, male, full-time, older).

This passage contains an expression of doubt about the effectiveness of these strategies. Our data shows that experiences of app-work are tied to worker efforts of understanding and outmanoeuvring the algorithmic rules of their work. Our data points at uncertainty: workers often speculate about the role of certain variables in the process of algorithmic computation of wages. They include location (#7, #14, #30), delivery timing (#7, #17), or order rejections (#4, #10). For instance, a common belief says that shorter delivery times could lead to more orders (#7, #12, #27).

This gamified control is inscribed into the model of app-work. While working, couriers' software provides them with additional voluntary opportunities of increasing their per-piece wage. The bonuses might involve being present in understaffed locations, working during specified peak hours or delivering certain quantities of orders. These bonuses, called "challenges", enable couriers to increase their earnings through enhanced effort. As one of the courier enthusiastically comments:

The rating system is super motivating. I've always thought that money is the best work motivator, and all the challenges and hourly bonuses from Glovo just make me want to keep going (#17, male, part-time, younger).

The gamified control fosters competition and replaces the role of opponents, maintaining motivation by offering more opportunities to earn through increased effort. Another tool of gamified control is the rating system in the application, but the interpretation of its role remains speculative. Most of our interviewees believe that the rating system does not play a significant role (#9, #11, #17).

Customer ratings mean nothing, they don't affect anything. Maybe they exist to encourage couriers, or to give a false sense that they need to maintain high ratings, otherwise they'll get fewer orders. Maybe it's some kind of psychological game? There are couriers with acceptance rates 20 or 30%, and they still receive orders just as often, if not more often, than couriers with high ratings (#19, male, part-time, younger).

This aspect of gamified control sustains couriers' belief that they need to keep working to receive orders, although the passage raises doubts about its actual impact on order distribution. Our case points to app-work's contradiction where the replacement of human supervision with algorithmic management enhances workers' perception of independence and autonomy. Our interviewees display a pragmatic approach to the inherent oversight by the app. They value the limited scope of communication of the app, viewing it as less intrusive and more predictable than human supervision. While workers do not see the surveillance as disadvantageous, they keenly engage in gamified control over their piece wage, based on their interaction with the software. This control, often illusory, is a crucial and frequently mentioned aspect of the app-work experience. Experiential learning and consulting with peers allowed them to pursue higher earnings. This gamified control, combined with voluntary opportunities to boost earnings through bonuses, renders the work meaningful by conferring a sense of entrepreneurial experiences achieved through data input to the app.

Meaningful experiences of effort in a repetitive cycle of app-work delivery

The food delivery work studied here consists of an endless reiteration of one deskilled process: picking up meals at a restaurant, transporting them to customers, then waiting for the next order. Within this cycle of delivery, workers experience physical effort as a significant aspect of their work. The strenuous nature of their work is exacerbated by the constant pressure to maximise delivery speed and efficiency, pushing them to physically exert themselves to meet demands. Physical stamina is crucial in maintaining a high delivery rate and indirectly translates to higher wages. At the same time, our interviewees cite the physical challenges of

the job as very appealing to them. For instance, *“I am a sports enthusiast and work as a fitness instructor on a daily basis. Engaging in delivery work allows me to stay in shape”* (#4, female, part-time, younger). For other workers, this aspect of app-work gives them some relief from at-home duties: *“In my case, this work is also a form of relaxation, because at home, I have a lot of work, so going to work it’s also a form of relaxation for me”* (#7, male, full-time, older). While the physical aspect of the delivery cycle exploits the worker body, our data finds that it also translates to highly valued experiences of effort.

Another courier connects his physical activity with unique on-the-job experiences from app-work.

I really liked that I was moving around, talking to many people, delivering food to various customers. They were nice, and, of course, there were some who were not so pleasant, a bit peculiar, but there was always some human interaction. And, you know, there was always something happening, whether it was paying attention on the road, on the streets, or being aware of orders, how much time is left, and so on. So, it was a job, I would say, activating even the brain, to organise everything. But what I liked the most about this job was that something was always happening (#17, male, part-time, younger).

This interviewee, while remarking on the delivery cycle, describes the process as the flow of continuous and engaging activities. While the delivery cycle itself is monotonous, he appreciates the physical movement and positively describes diverse customer interactions, and the effort required to manage orders and navigate the streets. Despite the repetitive nature of the job, the ever-present effort and need for constant awareness make the work stimulating to him.

Physical urgency is driven by the algorithmic pressure to meet delivery times and earn higher wages. For that reason app-work does not actively encourage much of social interaction, emphasising speed of delivery over personal experiences. The only channel of benefiting from the interaction is the tips section, where customers can pay the couriers extra.

Customers do leave tips sometimes. Every second or third order comes with a tip, usually, it’s two or five zlotys. Additionally, I notice that foreign customers, like those from the U.S., are very willing to tip because they are accustomed to service charges (#15, male, part-time, middle-age).

Although couriers gain from tips, their perception of this aspect differs since the circumstances have evolved over the last few years:

In the past, especially during the pandemic and before inflation, customers were more eager to give tips. Nowadays, it’s worse because customers simply don’t have money, and they have to spend more on orders because they are more expensive and delivery costs more. That’s why they are reluctant to tip (#4, female, part-time, younger).

Our data, however, show that for our interviewees, social contact while on the job was equally important and provided a sense of fulfilment. As one interviewee commented:

Generally, customer contact is the most pleasant aspect because there is often visible gratitude or simply a pleasant interaction. Many people express gratitude, saying things like ‘thanks for bringing such heavy groceries’ because, for example, they have a broken leg or are unwell. During the coronavirus, it was very often the case that you could feel this gratitude because someone brought them groceries when it would have been difficult for them. These are either older people, isolated individuals, or those with some injury (#14, male, part-time, middle-age).

While app-work does only give a possibility of brief personal interactions with clients, to our interviewees they give a sense of social engagement.

In the context of an ongoing physical effort, the interactions typically come into play in the rest or waiting time. While regular orders to the same customers are rare, couriers often wait together to pick up orders. Our interviewees commented on talking to other couriers (#5, #11, #17,), or sharing work strategies (#13, #15, #26). These contacts, occurring during the moments of inactivity, consist of brief interactions, as well as more systematic relationships, such as the exchange of courier experiences on for a and online groups. The fieldwork has

shown a virtual spirit of community among couriers. For instance, they kept each other apprised of road conditions (respondent #9, below), earnings, and other matters. One interviewee who works in a small town that had a vibrant community of couriers, summed it up:

We know each other because it's quite a small town and it's hard not to bump into each other in the city or not to meet at [restaurant name] when we're waiting for an order. And generally, there is more of a stable group, new people rarely appear, and we have our group on Messenger, and we also write there, exchange views, some work stuff, and generally chat (#9, male, full-time, younger).

Our data highlighted a contradiction where the monotonous nature of food delivery work is interwoven with elements that couriers find engaging. The physical effort, though demanding, is seen as a positive aspect, providing them stimulation because of the need to navigate streets, manage orders, and engage in brief social interactions. This blend of physical exertion, mental engagement, and social interaction renders the work meaningful, offering unique experiences that compensate for the monotony.

Discussion

By exploring how food delivery couriers find meaning in their work despite its precarious nature, the research expands the understanding of meaningful work to include non-traditional, gig economy contexts (Rosso *et al.*, 2010; Bailey *et al.*, 2019a, 2019b; Lysova *et al.*, 2019). We empirically investigated the realities of app-work in Poland's food delivery sector. Our analysis has produced a complex nexus of experiences linked to the worker expressions that can be categorised as meaningful work, complementing existing theorisations of how meaning is made in app-work (Cameron, 2022). Such experiences were based on a sense of independence, connected to a specific model of app-work entrepreneurship and linked to the positive views of physical effort. These experiences emerged despite being embedded in the widespread reiteration of one deskilled work process, technological surveillance and control, and radical responsibilities of employment.

Theoretical implications

These insights advance the theoretical debate on the evolution of workplaces in multiple related ways. First, we observed how global capital transforms workplace practices to govern labour. We have identified organisational practices upon which app-work rests (Laaser & Karlsson, 2022). In the data we saw how workers do not compete with each other but rather engage in a gamified interaction with the software (Cameron, 2022, 2024; Manriquez, 2019; van Doorn & Chen, 2021). It is individuality that supports worker engagement and resilience, and, in parallel, subjectively constructed meaningful experiences of app-work. This engagement is seen as both a source of motivation and a way to exercise control, offering insights into the dual nature of app-work's labour process as both empowering and potentially exploitative.

Our analysis reveals that meaningful experiences of app-work rest on multiple mechanisms and its central role in our case was played by the local realities (Bailey *et al.*, 2019b). We discovered that expressions of meaningful work are often based on the distinction between the app-work's work model and the remaining (or previously experienced) jobs in the region. The data, paradoxically, offers a perspective that app-work promises somewhat better employment conditions than what workers expect from other employers. Despite the minimal amount of social security that app-work jobs offer, they are still regarded as valuable and permitting the work model that would otherwise be unavailable. For example, despite the surveillance, app-work is free from autocratic, toxic bosses. This is an important argument in regards to low social protection of gig work, which sheds a new light on the regions with weaker institutional protection of work (Fleming, 2017).

We have also learned how much these workers value flexible working hours and independence. The data reflects the changes that have had a profound impact on the contemporary job market since the pandemic. In low-skilled jobs available locally, flexible working hours are scarce and direct management is unavoidable. App-work fills that niche – offering what is otherwise not easily accessible. We see through our findings that app-work is often interpreted through the criteria commonly associated with other occupations (ILO, 2017; McKinsey, 2022). These observations imply that workers' general acceptance of highly exploitative work and employment conditions is not sustained solely through coercion but also through the allure of autonomy and flexibility that such work arrangements appear to offer.

The research provides a nuanced view of the physical demands of food delivery work, showing that couriers often perceive the physical activity involved as beneficial. This finding challenges the notion that physically demanding jobs are universally undesirable and low paid (Muszyński, Pulignano, & Marà, 2022); instead, these physical demands can contribute to the experience of meaningful work. Similar aspects of app-work, centred on individual worker needs, emerge from our data. By describing how the work fits into their lifestyles, we gained important insights linking meaningful work with personal motivations, attitudes and experiences. In that sense we hope to contribute to the ongoing conversations on the shifting relationship between private and professional life (Sirgy & Lee, 2018; Kelliher, Richardson, & Boiarintseva, 2019; Chung & Van der Lippe, 2020), as well as to the broader social reproductive sphere and the domain of well-being (Sonntag, 2015; Diener, Oishi, & Tay, 2018).

Lastly, our case adds to the conversation about meaningful work as a moral and political project (Yeoman, 2014). By relating to the broader social and institutional context, the article shows how meaningful work can emerge even in precarious gig economy jobs, suggesting that meaningful work can be fostered through policy and organisational changes. Our text supports this understanding by illustrating how perceived autonomy and meaningful physical effort can enhance commitment and job satisfaction, despite the exploitative work environment (Florian et al., 2019; Magrizos et al., 2022). This underscores the importance of considering workers' perspectives and experiences in developing policies that promote job satisfaction and meaningful work.

Practical implications

Platform designers and policymakers can use these insights to create more supportive environments for gig workers by enhancing the transparency of algorithmic decisions and providing clearer channels for job crafting and communication, which could help mitigate feelings of isolation and improve job satisfaction (Mousa & Chaouali, 2022). The findings underscore the need for regulatory changes to improve social protections for gig workers, including policies to ensure minimum guaranteed earnings, health and safety provisions, and other benefits typically associated with traditional employment, thereby addressing the precarious nature of gig work. Delivery platforms could also implement support systems that acknowledge the physical and mental demands of the job and community-building initiatives that foster a sense of belonging among couriers. Furthermore, while gamification can drive engagement, platforms should ensure its ethical use. By incorporating fair and transparent gamified elements that genuinely enhance worker well-being and satisfaction, platforms can harness the motivational benefits of gamification without exacerbating stress and burnout.

Limitations and future recommendations

The study's reliance on 30 in-depth interviews with convenience sampling via social media may not represent the full population of food delivery couriers, so there is a potential selection bias. The subjective nature of qualitative research, influenced by researchers' own biases, affects data interpretation and may shape the conclusions about meaningful work.

Additionally, the context-specific focus on Poland's food delivery sector and the study period limits the generalisability of the findings to other regions or sectors of the gig economy.

Future research should expand sample size and diversity by including more couriers from other regions and backgrounds to improve representativeness. Implementing longitudinal studies can track changes in couriers' experiences over time, while comparative studies can identify common themes and unique challenges across countries and gig economy sectors. Combining qualitative and quantitative methods, as well as exploring related workplace concepts like work alienation and job satisfaction, will provide a more comprehensive understanding of gig economy workers' well-being and job perceptions.

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Appendix 1

Table A1. List of participants

No	Age	Gender	Nationality	Part time/full time	City/Town
1	30–39	M	Polish	Full time	City
2	30–39	M	Polish	Part time	City
3	under 20	M	Polish	Part time	City
4	20–29	F	Polish	Part time	City
5	above 40	M	Polish	Part time	Town
6	20–29	M	Polish	Full time	Town
7	above 40	M	Polish	Full time	City
8	20–29	M	Polish	Full time	Town
9	20–29	M	Polish	Full time	Town
10	20–29	M	Polish	Full time	Town
11	30–39	F	Ukrainian	Full time	Town
12	30–39	M	Polish	Part time	Town
13	above 40	M	Polish	Part time	Town
14	30–39	M	Polish	Part time	City
15	30–39	M	Polish	Part time	City
16	30–39	M	Polish	Full time	City
17	20–29	M	Polish	Part time	Town
18	20–29	M	Polish	Full time	City
19	20–29	M	Polish	Part time	City
20	30–39	M	Ukrainian	Full time	City
21	30–39	M	Polish	Part time	City
22	20–29	M	Polish	Part time	Town
23	above 40	M	Polish	Full time	Town
24	30–39	M	Polish	Full time	City
25	30–39	F	Polish	Full time	Town
26	20–29	M	Polish	Part time	Town
27	20–29	M	Polish	Full time	Town
28	30–39	M	Polish	Part time	Town
29	above 40	M	Polish	Part time	City
30	20–29	M	Polish	Part time	City

Source(s): Authors' elaboration

Appendix 2 Interview scenario

(1) Workplace Trajectory:

- Career Path: Can you share the journey that led you to become a food delivery courier?
- Initial Understanding: Before you started, what did you know about food delivery courier work?
- Daily Routine: Can you describe what a typical day looks like for you as a food delivery courier?

(2) Experiences of Work:

- Challenges Faced: What are some of the biggest challenges you encounter in your role as a food delivery courier?
- Memorable Experiences: Can you share a particularly memorable experience or story from your time working as a food delivery courier?
- Customer Interactions: How would you describe your interactions with customers? Are there any notable positive or negative experiences?
- Job Satisfaction: What aspects of your job as a food delivery courier do you find most satisfying, and which aspects do you find most frustrating?
- General impression: What are the advantages and disadvantages of this work?

(3) Labour process:

- Application Usage: Can you walk us through the steps you take to use the delivery application? What functions does the delivery application offer to support your work?
- Interactions with Application: How would you describe your interactions with the delivery application? Have you ever experienced issues like getting banned? If so, what was it like?
- Earnings Calculation: How are your earnings calculated in this job? Are your wages dependent on particular conditions or factors? Are you able to calculate your salary in advance?
- Order Rules: What are the rules or criteria for receiving an order through the application?

(4) Job design:

- Support System: What kind of support do you receive when you encounter obstacles or challenges while working?
- Work Environment: How do you perceive and find your workplace environment? How do you approach your tasks each day?
- Monotony and Repetition: Do you find this job to be monotonous or repetitive? If so, what strategies do you use to handle this aspect of the job?
- Autonomy: To what extent would you describe your level of autonomy in the workplace? Are you able to refuse taking an order if needed?
- Self-Development: Do you see any opportunities for personal or professional development in this work? How do you approach your tasks to potentially grow in your role?

(5) Worker Relations:

- Interactions with Other Couriers: How do you interact with other couriers? What are your relationships with them like?
- Client Relations: Do you have any direct interactions with your clients? If so, how do you perceive those interactions?
- Workplace Interactions: Do you interact with other people during your workday, such as restaurant staff or support teams? How do you perceive these interactions?

- Professional Community: Do you feel the need to be part of a professional community or network of couriers? If so, how does this community support or impact your work?
- (6) Employment conditions:
- Job Security: How do you feel about working without guaranteed hours and a fixed salary? What impact does this have on your daily life and work?
 - EU Law Changes: What are your thoughts on the proposed EU changes aimed at providing more protection for workers in this industry, such as guaranteed hours, fixed salary, and social coverage?
 - Accident Protocol: What steps would you take if you were to have an accident while working? Are there specific procedures or support systems in place for such situations?

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