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# The role of organizational settings in social learning: An ethnographic focus on food-delivery platform work

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## Abstract

How do organizational settings influence learning mechanisms and their outcomes? Based on a 26-month online and offline ethnography, the article specifically analyses couriers' learning in the context of food-delivery platform work, marked by the heterogeneity of the working crowd, the gig nature of the job and the digitally mediated, individualized and automated management apparatus. Drawing on social learning theory, and in particular on communities of practice (CoPs), the results of the study unpack how the digital nature of online peer discussion groups enables three interrelated learning mechanisms (*sharing, symphonizing* and *shaping*). The digitalness of CoPs indeed allows for a high degree of responsiveness in exchanges and a commutativity of shared knowledge that overcome the structural barriers to social learning inherent in the low-skilled platform context. The present study finally challenges the widespread approach that views online worker groups as a potential locus for resistance; its findings suggest that they also indirectly contribute to maintaining power relations through the social learning processes they enable.

## Keywords

ethnography, learning, new technology, power, social media

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## Introduction

How do organizational settings impact learning mechanisms and their outcomes? Our article addresses this issue by examining the independent online groups of French food-delivery platform workers. This question is of particular importance in a context where platforms, as the main operational model adopted by many gig work companies (Tassinari and Maccarrone, 2020) have been identified as a new form of organizing that challenges traditional ways of working (Kaine and Josserand, 2019), and thereby of learning at work (Grugulis and Stoyanova, 2011). When addressing learning in platform work, studies on the topic have, to date, mostly linked platform workers' practices to an experiential knowledge of the algorithm (Lee et al., 2015; Shapiro, 2018). Rather than locating the learning processes for individual workers (see, for instance, Curchod et al., 2020; Petriglieri et al., 2019), we focus on how they unfold in online discussions with their peers. In this article, we refer to the outcomes of this learning as 'practices', defined as the 'accepted ways of doing things, embodied and materially mediated, that are shared between actors and routinized over time' (Vaara and Whittington, 2012: 286). We engage with social learning theory, particularly its focus on communities of practice (CoPs), to examine the creation and development of online groups as the locus of learning in a specific organizational context marked by the heterogeneity of the working crowd, the gig nature of the job and the digitally mediated, individualized and automatized management apparatus. Defined as a group of workers who share a concern for deepening their knowledge by interacting on an ongoing basis (Wenger et al., 2002), CoPs can form online or offline. The online groups we studied correspond to what the literature has defined as CoPs as they display their definitional characteristics: mutual engagement, joint enterprise and a shared repertoire (Wenger, 1999). Our 26-month online and offline immersion in the field enabled the collection of a large amount of qualitative data from four main sources: in situ participant observation of food-delivery platform work; online participant observation of discussion groups; lexicometric analysis of posts on a national online space; and interviews.

Our results shed light on three interdependent mechanisms that enable social learning through digital CoPs: (1) *sharing*, which refers to the efforts made by couriers to secure a space where they can exchange individual experiences and needs; (2) *symphonizing*, which is the mechanism by which online courier groups evolve from merely using the space for the exchange of scattered information to using it to synergize different experiences; and (3) *shaping*, which corresponds to how the knowledge exchanged and created in online groups translates into concrete practices that have an impact on food-delivery platform work. We articulate how the actors (anybody can register as a partnering worker, so the crowd is highly heterogeneous), the nature of the job (low skilled, individualized tasks, payment by the gig) and the apparatus (the organizing happens through an automatized digital app-based system focused on controlling and assessing work processes on an individual worker-basis) that structure low-skilled platforms as specific organizational settings impact the way partnering couriers engage in and develop learning.

We complement the literature on social learning, which is generally focused on the role of interpersonal phenomena (see, for instance, Babinski et al., 2001; Hafeez et al., 2019), by articulating the ways the organizational context structurally shapes learning

emergence, development and outcomes. In doing so, we refer to the digital CoP idea as a digitally based social configuration that reflects 'the wider social structures and institutions, or lack of them, evident in the broader context within which it is situated' (Roberts, 2006: 632). Thereby, we complement the literature that tends to employ the CoP framework for any kind of online interaction, without opening the black box of its specificities (Barcellini et al., 2016), by considering the context in which digital CoPs are embedded as well as the role of their digital nature. Digitalness is indeed a key mediator of the sharing mechanism that, in our case, enables social learning (by allowing for a high responsivity of exchanges and for the cumulativity of shared knowledge), and of the symphonizing mechanism. By permitting CoP members to be anonymous, digitalness transforms the heterogeneity of the working crowd from impeding collective endeavour (Nelson and Vallas, 2021) to enabling social learning. In addition, while the literature on CoPs mostly neglects issues of power (Rennstam and Kärreman, 2020) or refers to their associated mechanisms within the communities under study (Contu, 2014; Mäkinen, 2021; Roberts, 2006) or in the relation between management and CoPs (Rennstam and Kärreman, 2020; Swan, 2002), we push the link between social learning processes in CoPs and power to a more macro level. This article articulates how the learning processes developed in digital groups of couriers contribute to the power relations that structure platform work. We explain how online groups, as collective endeavours, allow couriers to individually adapt to the organizational context in which they work, hence indirectly contributing to maintaining a system heavily criticized for the domination of platforms over their partnering workers (Schüßler et al., 2021). Thereby, we enrich studies on platform work by diverging from the common view that opposes individual and collective mechanisms through an analysis of collective endeavours in terms of resistance (Cant, 2019; Stewart et al., 2020; Tassinari and Maccarrone, 2020).

In the remainder of this article, we rely on the existing literature to unpack the role of organizational settings in learning. We thus describe platforms as specific organizational settings and frame online groups of platform workers as digital CoPs created to complement a need for independent learning processes in a specific work context. Then, we explain how our ethnographic methodology led to the structuring of our findings and theoretical model by triangulating multiple sources of qualitative data. Next, we present our findings, showing how social learning occurs in online groups of couriers through sharing, symphonizing and shaping, three interdependent mechanisms. The article ends with a discussion about how the mechanisms we identified leverage the specificities of the organizational setting they answer to and contribute to transforming the experiences and advice exchanged in digital CoPs into shared knowledge. The resulting learning, by allowing them to navigate their environment, indirectly contributes to maintaining platform organizing as a henceforth functional yet heavily criticized system.

## Literature review

### *Learning at work: The role of organizational settings*

The literature on learning at work identifies two main dimensions of learning processes: a cognitive dimension, whereby knowledge is embedded in the invisible mental world of

individual actors (Richter, 1998), and a social dimension, in which learning is continuous through interpersonal relationships and sensemaking activities at work. Drawing from Lave and Wenger (1991) and Orr (1996), 'social learning theory' focuses on the role of practice in the unfolding of learning and knowledge in social contexts (see, for instance, Brown and Duguid, 1991; Gherardi, 2000, 2001; Jacobs and Coghlan, 2005; Pyrko et al., 2017). Contrary to the knowledge as a cognition approach, social learning theory locates learning and knowing not in the mind of the individual but in a 'collective subject [. . .] that simultaneously thinks, learns and innovates' (Gherardi, 2001: 133). Paavola et al. (2004) complement this view of learning as participation in a social group by considering the dynamic process behind what they call learning as knowledge creation as a search for novelty, beyond the mere transmission of information. Knowledge creation combines three different models of social learning; those of Bereiter (2002), Engeström (1999) and Nonaka and Takeuchi (1995). According to Paavola et al. (2004), these theories converge in defining social learning as the collaborative effort to develop knowledge, ideas, practices and material or conceptual artefacts.

Some proponents of social learning theory have crafted the notion of CoPs to refer to any 'group of people who share a concern, a set of problems, or a passion about a topic and who deepen their knowledge and expertise in this area by interacting on an ongoing basis' (Wenger et al., 2002: 4). According to this definition, CoPs can, for example, be nurses discussing patient cases over lunch (Wenger, 1998) or a group of Xerox photocopier technicians (Orr, 1996): 'the notion of community of practice marks the passage from a cognitive and individual vision of learning to a social and situated one' (Corradi et al., 2010: 267). As learning takes place in the context of collective endeavours and in practice, a stream of organizational literature calls for addressing its unfolding in various social settings (Gherardi, 2001; Jacobs and Coghlan, 2005). While the role of individual and organizational culture is often analysed when studying learning at work (see, for instance, Alavi et al., 2005; Barney, 1986; Sackmann, 1992), the importance of structural dimensions – although pointed out – remains to be thoroughly addressed. This means that within research on CoPs, even though the CoP framework relies, per the definition, on a situated approach, many studies note that its articulation with contextual elements still needs to be examined (Pyrko et al., 2017). Among others, Roberts (2006) notes the importance of studying the context within which CoPs are embedded to understand the modalities by which they enable learning. To bridge these gaps, our article focuses on the interface between organizational settings and social learning.

## *Platform work as a specific organizational context for learning*

Specifically, we focus on digital CoPs created in the rapidly developing platform settings as an app-mediated operational model adopted by many gig work companies (Tassinari and Maccarrone, 2020). We draw from the literature to describe the context of platforms, questioning how the actors (anybody can register as a partnering worker, so the crowd is highly heterogeneous), the nature of the job (low skilled, individualized tasks, payment by the gig) and the apparatus (the organizing happens through an automatized digital app-based system focused on controlling and assessing work processes on an individual worker-basis) might play a role in social learning. Platforms do not require workers to have any particular degree or qualifications, do not take account of experience or

expertise for promotion and provide no opportunity for upward social mobility. Although it has been portrayed as mostly attracting socially marginalized groups, such as the 'lumpen proletariat' (Kidder, 2006: 356), unemployed, formerly incarcerated people or refugees (De Stefano, 2015), in practice, unskilled platform work brings together a disparate and uncoordinated crowd of individuals where the only thing they share is their legal status (Abdelnour and Lambert, 2014). Contrary to other 'precarious' (Schor and Attwood-Charles, 2017; Srnicek, 2017) and 'working-class' (Robinson, 2017) occupations, based on a socially homogeneous crowd of relatively low rank in the social hierarchies, unskilled platform work is marked by singular heterogeneity; workers come from diverse social backgrounds, and their investment in the job differs greatly depending on their immediate needs and situations (Broughton et al., 2018; Vallas, 2019; Veen et al., 2020). The work mediated by platforms is organized through an app that assigns specific tasks and measures individual performance. Defined as 'a system of control where self-learning algorithms are given the responsibility for making and executing decisions affecting labour, thereby limiting human involvement and oversight of the labour process' (Duggan et al., 2020: 119), algorithmic management enables the remote coordination of work. It puts independent workers in contact with clients, while offering automatized channels for managing the consequent work processes (Kellogg et al., 2020).

Yet, the literature mentions that algorithmic management, by providing 'a set of anonymous notifications' (Gandini, 2019: 1051), which are focused on control and task assessment (Kellogg et al., 2020; Newlands, 2021; Rosenblat and Stark, 2016), is maladjusted to learning. Although platforms establish compensating services, such as chatbots and call centres, to help couriers deal with unexpected situations, this infrastructure is inefficient and distant from the reality in the field. Since platforms do not educate or support workers to navigate the system they formulate and maintain, workers themselves develop the skills and know-how required to complete their tasks. In this regard, Shapiro (2018) explains, among others, how their experience of the field allows workers to acquire individual knowledge about algorithmic management and company strategies. Lee et al. (2015), in particular, show how Uber drivers individually adjust to the algorithm to obtain the types of requests and passengers they prefer without lowering their acceptance rate and, therefore, without risking being 'deactivated' by the platform. The organizational structure described in the previous paragraph indeed induces structural competition between workers for turnover, hence encouraging individual performance rather than sharing good practice or engaging in collective efforts (Curchod et al., 2020). This individualization of trajectories, along with the racial and social diversity of the platform crowd, is thought to hinder the emergence of collective efforts (De Vaujany et al., 2019; Gandini, 2019; Kaine and Josserand, 2019; Kellogg et al., 2020; Petriglieri et al., 2019; Rosenblat, 2018; Vallas, 2019). The socio-technical configuration of platforms, based on individualized tasks and assessment processes, structurally isolates workers (Irani, 2015), hence a priori favouring individual over social learning processes.

## *Learning in platform work and its challenges*

Emerging literature, nevertheless, shows that platform workers find ways to exchange information and views, and even to coordinate, in virtual discussion spaces. Examples in the literature include 'The Rideshare Guy', a blog that tells platform rideshare drivers

how to maximize their income depending on the marketplace (Campbell, 2018), or Turkopticon and Dynamo, online activist spaces that enable gig workers to organize collectively (Martin et al., 2014; Schwartz, 2018). Soriano and Cabañes (2020) frame Facebook groups for online freelance workers in the Philippines as unique forms of solidarity that emerge among geographically spread out individuals. Karanović et al. (2021) distinguish between two types of workers' responses to platform organizing on dedicated online forums. They explain that workers either compensate for platforms' shortcomings by forming 'supplementing' responses, or by engaging in 'opposing' responses that aim to question or actively resist platform organizing. In their work, they interpret 'opposing' responses as instances such as when workers complain about their earnings, the arrival of payments or the ratings system, and when expressing their frustration with the app's malfunctioning. Conversely, 'supplementing' responses pertain to workers' practices and discourses that *in fine* contribute to the platform's organizing solutions. While these studies explain that these endeavours compensate for a management that is too distant and standardized, such as the lack of onboarding or information asymmetries, most do not go further and only gloss over the issue of learning in these peculiar and app-mediated organizing structures (see, for instance, Karanović et al., 2021; Kellogg et al., 2020; Wood et al., 2019).

Interestingly, however, almost all these articles link online groups of workers with power and control issues in the platform economy; they frame these online groups as collective reactions in a destabilizing context in which control is standardized and guidelines are distant from the reality in the field. Algorithmic functioning has indeed been criticized for parameterizing the rules and practices realized within its ecosystem so tightly that these 'regulatory structures' (Kenney and Zysman, 2016) dictate the terms of the interactions that they enable. When algorithmic management literally structures platform work, Aneesh (2009) defines 'algocracy' as the system in which algorithmic platforms rely, per the definition, on pre-programmed paths of action that strictly hinder unplanned alternatives. In these algocratic organizations, data-driven automated messaging systems influence workers' behaviour through pop-ups and reminders (Griesbach et al., 2019; Van Doorn, 2017). These mechanisms, for instance, induce workers to work longer or change their work location depending on the market demand (Rosenblat and Stark, 2016), hence voiding the distinction between independent work and employment by strongly suggesting work times and rhythms. As one of the most widespread organizing settings of the platform industry, algorithmic management has been shown to induce unbalanced power relations between workers and platforms.

On the one hand, the literature suggests that online groups of platform workers emerge from a certain dissatisfaction, or at least, unease, with platform settings. On the other hand, it mentions the standardization of work processes, individualization of task control and assessment and fragmentation of the working crowd. Our article engages with social learning theory to draw from these insights and examine the creation and development of online groups as a locus of learning in a specific organizational context marked by the heterogeneity of the working crowd, the gig nature of the job and the digitally mediated, individualized and automatized management apparatus. In doing so, it pays particular attention to the institutional, social and economic context in which CoPs are embedded, and thereby takes into consideration power relations as a structural issue in platform work and digitalness as a mediator of the mechanisms under study.

## Methodology

This article analyses qualitative elements to examine the online discussion groups of food-delivery platform workers in France from a social learning theory perspective. Our ethnographic fieldwork enabled the collection of large quantities of data from four main sources: in situ participant observation of food-delivery platform work; online participant observation of discussion groups; lexicometric analysis of posts from a national online space; and interviews.

Food-delivery platforms, such as UberEats or Deliveroo, provide restaurants with independent couriers to deliver the food ordered by clients. Food-delivery couriers are legally self-employed and are paid by the delivery by the platform with whom they partner. To work as a courier, workers must have, or acquire, a bicycle, electric bike or motorbike, which they use to make deliveries. They also need to have a smartphone with (unlimited) data access. In the context of scarce, and even absent, managerial support, food-delivery workers create online groups on social media, such as Telegram or Facebook. Some discussion groups are local, with a few hundred members, and/or deal with specific issues. Others are national, international or more general and attract thousands of members. Couriers tend to engage with these groups while waiting for orders at restaurants or during the day in the gaps between busy hours; in France, there are almost no orders outside of lunch (12–2 p.m.) and dinner times (7–10 p.m.). While some groups are officially managed by identified participants, others are created by anonymous individuals whose aim is to open a new space for discussion rather than build an organized network. It is difficult to determine the exact number of French online groups for food-delivery couriers, as they are mostly private or secret to avoid platform representatives and journalists accessing them; they are invisible to anyone who is not invited to join through a dedicated link. In this context, and as developed in the subsection below, our ethnographic immersion allowed us to participate in several of these spaces that are otherwise difficult or even impossible to access.

### *Data collection*

We collected a diverse range of data: screenshots, images, videos, field note extracts, words and sentences from discussions with couriers. This rich collection was made possible by the privileged access we had to the research field. The first author worked in a French city as a food-delivery courier for 18 months. Through this, she gained access to closed courier groups as she was working as a courier for two food-delivery platforms as part of a larger ethnographic project. Indeed, most of these groups are only accessible to active couriers; the links for joining are passed on by acquaintances, and members verify new members by asking them questions on food-delivery activity or looking at their profile picture. While individual characteristics and motivations do not matter for entering the groups under study, new members, even though they generally remain anonymous, have to be identified by their peers as ‘genuine couriers’, as opposed to platform employees, journalists or police officers. Our ethnographic fieldwork opened up a variety of qualitative and quantitative data, which we treated as inseparable and complementary throughout the analysis. This enabled us to triangulate multiple sources of data to ensure greater corroboration of our results.

Our ethnographic efforts enabled us to conduct 40 interviews with food-delivery couriers who were using at least one type of social media of interest. We approached our respondents through various channels (courier meetings, social media and the snowball effect) and held interviews both in situ in public spaces or at interviewees' homes and by videoconference. We made sure we had the informed consent of the respondents by systematically presenting the purpose of our fieldwork and requesting permission to record the discussion for transcription purposes. In presenting our findings, we took great care not to divulge any information that could compromise the anonymity of our informants. We asked the informants several questions to understand their motivations for engaging and participating in online discussion groups. These included: 'Why did you join the group?'; 'Can you tell me about one exchange that was striking to you?'; 'Do you personally know the other members?' Along with specific questions about their relation to online discussion groups, we made sure we gathered background information about the interviewees' motivations, social positioning and personal history, which was of great assistance later in understanding their use of social media and experience of platform organizing. These interviews, which lasted between 50 and 180 minutes, also allowed us to later integrate other online groups that we did not previously know about.

Along with these interviews, we had the opportunity to discuss and develop a deeper research relationship with the administrator of a national Facebook discussion group. As well as providing valuable information about the reasons for creating and developing this group, this enabled us to obtain his consent for conducting a lexicometric analysis of all the posts and comments in the group over a six-month period (from October 2018 to March 2019). This discussion space particularly suited our research ambition because of its high responsiveness; it had the most members at the time (2300 members) and the strongest discussion dynamics when compared with other Facebook groups that focus on courier-related issues. Over six months, we collected 1057 different texts. We used lexicometric analysis to efficiently process this large amount of data and systematically highlight the main themes in the group's discussions over the period of the study, which our interviews and ethnographic observations refined and enriched.

In addition to the formal interviews and systematic gathering of online content, our ethnographic entry to the field enabled us to conduct a 26-month observation, from February 2018 to April 2020, of five (public and private) Facebook groups, six private Telegram groups, as well as blogs and Twitter accounts related to courier work. Observing interactions and sporadically participating in them provided a deep understanding of online sociality and its dynamics. An ethical note is necessary here; as Boyd and Crawford (2012) point out, just because data are accessible does not necessarily make them usable for research purposes. Although we were able to participate in these online discussion groups with the informed consent of a few key informants, most participants were not aware that we were collecting and analysing their archived messages. For logistical reasons frequently addressed in the literature on digital ethnography, it is almost impossible to obtain the informed consent of all participants when investigating online discussion groups with hundreds or even thousands of members (Salganik, 2019). Knowing that 'netnographic incursions have the potential to be as invasive as their ethnographic equivalents' (Kozinets, 2015: 129), we took specific measures to ensure the anonymity of the uninformed individuals studied. In our findings, we mixed

sources from different groups, times and individuals so that the verbatims cannot be associated with specific couriers. When this was not possible or when it might have blurred the nature of the original data, we kept the necessary level of detail to allow readers to follow our argument and make their own interpretation of our materials. Nevertheless, verbatims result from a 'fabrication' process (Markham, 2012) as they are derived from conscious choices in the translation from French to English, which, by definition, create distance from the initial data. More generally, as our data result from a longitudinal inquiry and mostly reflect discussions about work practices or anecdotal events, they do not, in our opinion, reveal sensitive information that could be prejudicial to their authors. This justifies our choice of a 'flexible and responsive form of ethical research' (Ravn et al., 2020: 40), which protects our participants' privacy despite being unable to obtain the informed consent of all.

## *Data analysis*

We followed a grounded theory approach to analyse the data (Walsh et al., 2015), entering the field without any preconceived ideas, hence allowing theoretical constructs on learning mechanisms to emerge from the empirics. Our lexicometric analysis, in particular, facilitated this inductive process by providing us with the main themes of discussion between couriers directly from the collected data. Our first emerging theoretical constructs thus pertained to how online discussions deal with the work practices of couriers (and not, for example, militant activities) and the administrative procedures related to their independent status. Our lexicometric analysis drew from Reinert's (1983) method, which comprises an analysis based on the proximities between the words used and frequency statistics:

> The technique is iterative: initially all the textual units are grouped into a single class; at each stage, the two classes that are most different from each other in terms of vocabulary are highlighted. (. . .) The resulting classification tree gives a schematic representation of the constitution of the classes and their relative importance. (Garnier and Guérin-Pace, 2010: 24)

Importantly, therefore, Reinert's classification is a basis for interpretation rather than an end in itself. The results do not speak by themselves and must be further investigated by the researchers to reveal their richness. Therefore, our data analysis consisted of going back and forth on the Iramuteq software between words, lexical universes and their context.

We complemented and compared the results of this lexicometric analysis with our insights from qualitative methods (in situ participant observation of food-delivery platform work, online participant observation of discussion groups and interviews). The ethnographer's experience as a food-delivery courier and her status as such in the online groups studied provided an informed perspective when selecting pieces of information from the large amount of data gathered from her in-depth immersion. Without this insider filter, the data gathered would have amounted to thousands of pages and would have been painstaking (and somewhat irrelevant) to analyse. We also relied on this immersion and the data collected from it to make sense of the lexicometric analysis and to highlight

the meanings behind the statistical data. For example, our Iramuteq analysis showed that 19.7% of discussions addressed the issue of choosing the right work tools, including the right smartphone or external battery. These empirical elements, which might have otherwise seemed trivial, took on a different meaning through the ethnographic experience. Through informal discussions with couriers, we understood that battery issues were crucial to enable them to work long hours. Many couriers told us they had learned from online groups that power-sapping apps could run in airplane mode, making the battery last longer. Hence, we realized that online discussions were not just about exchanging one-off information but about learning how to use the equipment to be able to work efficiently.[1]

Also, we constantly compared our field materials with theoretical insights on social learning and digital-based CoPs to refine our contributions to the existing literature. These comparisons led us to wonder about the link between platform structures and the social learning processes developed on these groups. The multiplicity of our data sources, combining online and in situ ethnography and qualitative and quantitative elements, triangulated our interpretation of events to protect us from funnel thinking. Taken together, these various and rich data, for instance, demonstrated the importance of interactions between heterogeneous profiles of couriers (structurally induced by platform settings, as explained in the literature review section) in the development of social learning processes. Returning to the previous example, it was the synergy between experienced and newbie, full-time and occasional couriers, individuals who had previous experience with handling technological devices (because of their studies, professional or personal instances) that contributed to shaping good practices in the efficient use of smartphone batteries. Analysing and combining our various data sources following these methodological processes ultimately led us to locate social learning processes within the CoPs studied and allowed us to draw the contributions that we develop in the discussion section. In the next section, we rely on the empirical elements described above to unpack these three interdependent mechanisms (sharing, symphonizing and shaping), which enable social learning processes through digital CoPs.

## Findings

This findings section first details the need for couriers to turn to online groups to navigate their daily tasks and then unpacks the three interdependent mechanisms that enable social learning in the context of platforms, marked by the heterogeneity of the working crowd, gig tasks and an algorithmic management that is distant from the reality in the field. Our data suggest that online groups of couriers enable sharing (experiences and questions), symphonizing (benefiting from synergies and complementarities from heterogeneous profiles, experiences) and shaping (practices, routines and strategies).

French platform workers are ‘micro-entrepreneurs’; they are not employed by the organization with which they partner and hence have to take responsibility for the many tasks that fall outside the limited scope of platforms. Couriers are told which restaurant to pick up their order from and the address they should deliver to via a dedicated app on their smartphone. They also use the app to accept or decline deliveries and to manage their revenue and professional profile. However, while this algorithm-based framework

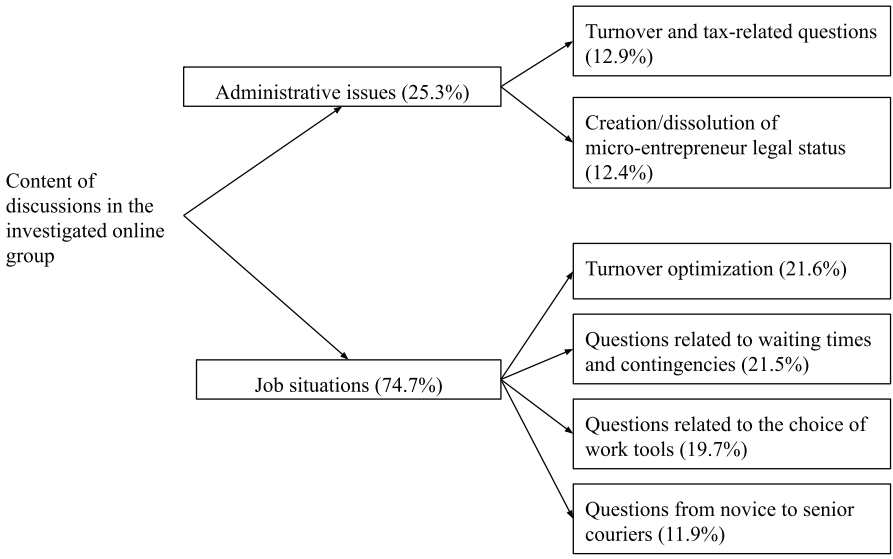


**Figure 1.** Results of the lexicometric analysis and the need for engaging in CoPs.

outlines the main tasks, it is silent on the logistical details. In this context, our data suggest that online groups of couriers play the role of compensating solutions. Figure 1 thus exposes the results of our lexicometric analysis and indicates that 25.3% of the discussions in the Facebook group studied address administrative issues (creation and dissolution of micro-entrepreneur legal status, declaration of turnover, tax-related questions) and 74.7% are related to learning-on-the-job situations (turnover optimization through strategizing around geolocation and choice of slots, questions related to waiting times and the choice of work tools, questions from novice to more-experienced couriers).

Our ethnographic observations corroborate these results by suggesting that a lack of frontline management in the platform structure triggers a need to exchange views about concrete work practices. This section first presents how online groups of couriers develop as an answer to a context in which algorithmic management fails to provide workers with the necessary support and managerial assistance. It then delineates how they develop and organize to share qualitative information that would otherwise remain scattered.

First, to be able to operate as couriers, these independent workers are required to handle legal and administrative tasks themselves. However, they may not be used to filling in bureaucratic forms that ask them to classify their activity in the same way other small businesses are asked to do. Platform workers rarely take on the job because of entrepreneurial ambition; they create an enterprise to be able to register on platforms because it is a legal requirement rather than as part of a broader entrepreneurial project. In many cases, these individuals are unemployed, or students or have previously worked in other low-skilled jobs (Abdelnour and Lambert, 2014; Rosenblat and Stark, 2016). Hence, they mostly lack basic knowledge about managing entrepreneurial activity and discover the challenges and specificities in the course of their work. To be able to navigate their

independent worker status and earn money within this legal framework, couriers are supposed to know how to complete and submit their tax return, who to contact for assistance, how to file a complaint and so on: 'I have a question about income tax . . . What are we supposed to declare in the net taxable amount? How do we find it?' (a courier on a closed Telegram group). Submitting a poorly completed tax return can lead to a fine, and failing to account for the amount of turnover to be allocated to taxes can lead to final earnings being overestimated and hence to accountability issues and so on. Without any experience, prior investment or professional advice, these administrative tasks take time and, if poorly executed, can even put the worker in legal danger.

Second, and because of their independent worker legal status, couriers 'learn on the job' a professional activity that they usually have no experience of when they start working with a food-delivery platform. In a context where there is no organizational measure to compensate for the shortcomings of algorithmic management, platforms set up compensatory chat and call centres to guide workers when they encounter an unusual situation. However, our data suggest that these solutions are unsatisfactory. Chats rely on algorithms, which are generalized for all the cities where platforms operate and thus fail to address specific issues, as exemplified by the comment:

> You can always ask on the chat, but a robot answers with general and impersonal advice. When they tell me not to cancel the delivery, they do not understand that I just fell on the pavement while climbing a hellish hill in the rain in a city that a chat bot will never experience. (Extract from an interview with a male courier who had been working full time for almost two years at the time of the study)

Even when workers interact with a human in the platforms' call centres, the data show that the discussions rarely meet expectations: 'When we call them, either nobody answers, or someone based in Madagascar tells us they don't understand the issue, or gives a general guideline that leads to nothing' (extract from an interview with a male courier working part time while finishing his studies in engineering). This reference to a call centre based in Madagascar relates to a widespread myth, which we witnessed on several occasions during our ethnographic observation. We do not know whether the platform's call centre is actually located in Madagascar, but the fact that couriers talk about it in this way shows that they perceive frontline management to be a distant concept; even when human-based, the alternative to algorithmic management still lacks the ability to solve concrete issues in the field. Couriers express common concerns about the algorithmic management structure of food-delivery platforms, especially the lack of efficient support to deal with unexpected events. The next three subsections therefore unpack the mechanisms that enable social learning in the context of an algorithmic management, which does not support workers to navigate and improve their daily tasks.

## *Sharing*

As explained in the previous paragraphs, our data suggest that online discussion groups mostly emerge from the discrepancy between the needs of workers and the way platforms function. Couriers rely on these spaces to exchange experiences, insights,

questions, anxieties and satisfactions about a job that is structurally individualized and task-based. At the time of our data collection, questions were usually answered within an hour, the response time being quicker than when contacting the platforms themselves, organized through an automatized, digitally based managerial apparatus:

> When I need help, I'm supposed to 'ask the platform'. I tried the call centre, but nobody was answering. I didn't know what to do. So, I asked people online if the same problem had ever happened to them, and I got the answer a few minutes later. (Extract from an interview with a male courier who had just started the job at the time of the study)

A further advantage of asking questions in online groups is that the answers remain accessible after they have been given, unlike in one-to-one informal discussions in the street or through corporate chatbots or call centres. A courier who asks for assistance creates a learning situation that can benefit 'everyone', that is, other members of the group, as illustrated in the following ethnographic vignette:

> While waiting, I was scrolling through my phone and saw a notification from a Telegram group. I looked up; the order wasn't ready yet. I thought I'd kill time by reading it. I read the message posted by Biba23: 'Hi everyone, when the clients give you a wrong address and the platform assures you that you will get compensation for the extra kilometres . . . do they really give it to you? Please let me know. I drove two extra kilometres and I don't know how to get paid for that.' Oh great, I always wondered what to do if it happened to me. I saw that 'Koko' was 'writing', and hopefully had some advice on the matter. The restaurant employee came to me with the brown bag. I took it, put my phone back in my pocket, promising myself to look at the answer in the group later on. (Extract from the ethnographer's fieldnotes)

The online structure of the groups studied thus enables active couriers to efficiently share information and more passive ones to benefit from the exchanges even without participating themselves.

While some posts only need a short answer, others can spark important debate between members whose interests and views differ greatly. As this extract from our lexicometric analysis suggests, relations between members of the community can become stormy, such as here when discussing couriers' choices of mode of transportation: 'Too many couriers use motorbikes. In this age of ecology, using these motorized modes of transportation . . . it makes me sick, really.' This exchange reveals the significant division between the proponents of bicycles as ecological and worthy means of transportation and the advocates of more-efficient and less-strenuous delivery by scooter, with the former strongly rejecting the latter who they do not consider to have the same commendable professional standards. In such instances, moderators or group creators generally intervene, either to calm the tone of the conversation or to expel any couriers making discriminatory or violent comments. One group administrator even indicated that he had created a formal 'code of good conduct' that specified the required standards of behaviour, such as 'always be courteous and respectful and avoid unnecessary polemics'. Formal or informal rules in online groups thus aim to make it possible to ensure trust and peaceful and fruitful exchanges that allow sharing among a potentially heterogeneous crowd.

Interestingly, in this context, the high number of online communities for food-delivery workers in France has come about because of several crises of confidence. Internal scandals showed that some groups had admitted 'informers' from the platforms or had negotiated partnerships with platforms, which had resulted in many workers disengaging from these online spaces that they judged untrustworthy. In this context, suspicious or threatening members are ostracized in order to ensure perpetuation of the online space. In a closed Telegram group, we observed that an individual, who used the pseudonym 'Maxx', never posted questions but used the opportunity to take part in ongoing discussions to politely interrogate the reasoning behind each proponent's opinion. After some weeks, an active member called Maxx out, asking: 'Are you a cop or something?' Others also commented with remarks such as: 'Always asking for more, but never risking anything' or 'Snitches get the fuck out of here.' Maxx did not respond to the attacks and never participated again. Because these online groups function as communities that formally and informally regulate the exchanges between their members, they last over time and develop as relatively safe environments for open discussion about food-delivery work. These boundaries allow participants to collectively share and learn practices.

## *Symphonizing*

This section unpacks the mechanism by which online groups of couriers not only enable the sharing of otherwise scattered experiences and questions, but also leverage a group's heterogeneity to create synergies and complementarities between workers with different profiles in terms of their social background, geographical location, investment and/or experience in the job. As almost anyone can register with food-delivery platforms and start making deliveries, differences in education, professional paths and lifestyles create great heterogeneity among the food-delivery platform workforce. Also, while some work full time as platform couriers, most combine deliveries with another status (as a part-time employee or student, for instance). In this context, the online groups studied enable couriers with different profiles to be connected. This means that newbies can be put in touch with more-experienced workers, cyclists with motorbikers, UberEats devotees with multi-platform aficionados and suburban couriers with those who work in city centres. When compared with a physical group of eight couriers, an online community of 2500 couriers (as in the larger ones) has a greater diversity of profiles, hence increasing the potential for support, information and advice.

The heterogeneity of online groups translates into 2.0 complementarities according to which combining the profiles of strangers bears synergies. For instance, couriers who also work as freelance designers know how to navigate the micro-entrepreneurial administrative system (even though they might be novices in food delivery per se) and can therefore teach members who have no previous experience in the matter. When combined with the instant and collective dimension of online exchanges, this heterogeneity of profiles enables couriers to address various issues by adding their own insights: 'When I'm scrolling through and I see that I have a solution right away, then I share it! I have encountered tricky situations too, so if I can help someone else to get out of hot water, so much the better!' (extract from an interview with a male courier who had been working part time for two years while finishing his studies in social sciences). For example, when

couriers' bikes are stolen, they post photos on the social network with a description of the bike and the location where it went missing. As food-delivery couriers work at different times and in different areas of the city depending on their social background and their activity besides food delivery (part-time employees, students, migrants generally do not live in the same neighbourhood and this influences where they deliver), posting the description of a stolen bike on an online group increases the number of eyes that might spot it in the city. In our ethnographic journey, we witnessed two instances where a stolen bike was actually found and identified by another member of a group in which the courier had posted a message about it. Interestingly, the bike was found by a motorbike courier in a neighbourhood where the victim never made deliveries as it was too remote to be profitable to cycle there. Here, the fact that group members work in different parts of the city using different modes of transport enables symphonizing mechanisms. As the bike is one of the courier's main work tools (along with their smartphone), losing it jeopardizes their delivery activity.

Our lexicometric analysis also highlights that 11.9% of exchanges specifically involve getting feedback from more-experienced workers. Newbies rely on online groups to help them get started; for example, by asking for general feedback or information about equipment, such as: 'I'm new to the group and I'm soon going to start working as a courier. I want to buy my own bag and I would like to get some advice.' This received the reply: 'I worked for Stuart, and dude, believe me, don't buy their bag. It weighs far too much, even when empty' (extract from lexicometric analysis). Here, a more-experienced courier answers the question, stopping the newbie from falling into the same trap he fell into when he signed up with Deliveroo years earlier. Newbies learn not only which bag is best, but also, more generally, the importance of considering the weight of their equipment when purchasing it for their activity. Making use of an online space therefore enables platform workers to get direct support, and hence continue with and/or improve their practices. In this example, the learning also involves them getting information about the best places to park or not park their bike; this pertains to the shaping mechanisms that we unpack in the next subsection. The heterogeneity of group members, when channelled through efficient sharing mechanisms, creates complementarities and synergies between workers with different profiles, needs and experience. The symphonizing mechanisms, which this section highlights, leverage the sharing properties of the online groups studied to go beyond the mere exchange of scattered information, enabling social learning.

## *Shaping*

The aforementioned qualitative exchanges contribute to shaping concrete practices. Using the information efficiently shared in the online groups, couriers develop ways to do the job, such as engaging in specific delivery routines, or avoiding restaurants they have been told are late in preparing orders or areas where couriers report there is a lot of bike theft. Social learning is completed through the translation of online discussions between anonymous workers (who mostly use a pseudonym in the groups studied and/or live in different parts of the country and will never meet in person) into practices that shape how food-delivery work is performed, experienced and shown to external audiences.

According to our lexicometric analysis, 19.7% of the discussions address how to choose the right tools for specific work situations. In this regard, the management of smartphone batteries often came up in our observations. Indeed, food-delivery platform apps use up a great deal of power, particularly when used along with a geolocation app. Most smartphone batteries therefore last for no more than three hours, even less in cold weather. To make them work longer, couriers try to find solutions and share feedback about their equipment in the groups studied:

> Do you have insights on the new [new smartphone model]? Does it have enough battery power?
>
> I have the [previous model], the battery lasts for the whole day with Deliveroo. I guess the [new smartphone model] might be even better.
>
> Can anyone recommend a particular external battery? Yesterday I had to stop my delivery night just because of battery issues, I am fed up with it. (Extract from the lexicometric analysis)

From these discussions, couriers learn to identify the appropriate equipment for avoiding untimely battery failure and how to use it better to extend its performance. The following fieldnote extract narrates an exchange between the ethnographer and a courier in learning about battery economy strategies:

> I told him that I opted for an external battery and that I charged my smartphone with it while waiting at restaurants. He chuckled and said to me, 'I've stopped doing that since my bag got stolen with the expensive external battery in it!' I asked him how, then, he was able to last the whole evening with several apps turned on, and he replied, 'I rarely use the geolocation, I've learned how to navigate the city by myself. It is cleverer not to rely on the phone for everything, you never know. Also, I use airplane mode quite often, now that I know that the app still functions that way [referring to an anecdote he previously told the ethnographer about a discussion in a closed Telegram group]. It uses up less battery that way, and, well, they can't spy on me if I'm on airplane mode, right?' [amused smile].

It was through online discussions that the courier learned that his food-delivery platform app could still function when his phone was in airplane mode while biking to the restaurant. Hence, he adapted his practice and started turning on airplane mode to save battery rather than relying on an expensive external, additional device. Many couriers we talked to mentioned regularly switching their phone to airplane mode; this practice, when shared by several workers, impacts the quality and quantity of data recorded by the platform's apps and has potential consequences for their organizational model.

Couriers' concrete practices have an impact on, but also depend on, how platforms structure their activity. In food-delivery platform work, the algorithm calculates when couriers should receive orders and when they should head to the restaurant so they arrive when the order is ready. The algorithm theoretically optimizes a just-in-time process according to which no time is lost by any party. However, in the field, this process unfolds less optimally and the couriers frequently have to wait outside the restaurant for the order to be ready:

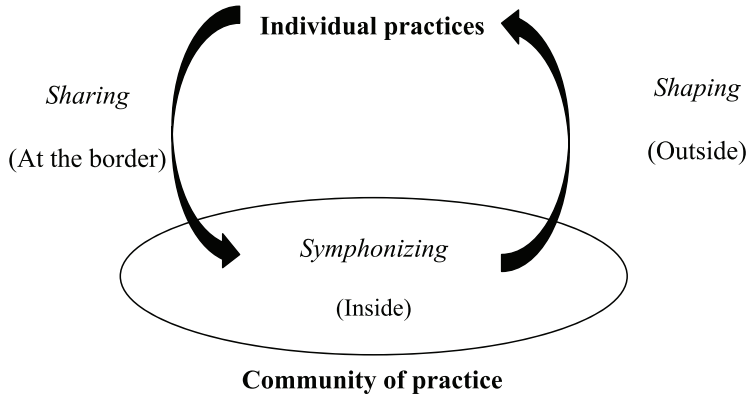


**Figure 2.** The main locations replacing CoPs in the organizational environment.

> The worst is when we have to wait for, like, half an hour at each restaurant. Sometimes when we arrive, the guy hasn't even started to prepare the meal! So, you wait. You wait. And then, by the end of the hour, you've only made like 5 euros. It's, like, wasting your time, right? Better to stay home, at that rate. (Extract from an interview with a male courier who had been working full time for a few months at the time of the study)

On several occasions, we observed how couriers share their experiences about the waiting times at specific restaurants in the online groups. When they have repeatedly waited at a particular place for a long time, the couriers report the restaurant to the group: 'Guys, do not accept orders from McDo Grange Blanche. They take half an hour to give you a filthy burger' (extract from observation notes in a closed Telegram group). As a consequence, couriers who have never experienced these misfortunes learn from the testimony of others and avoid accepting orders from such restaurants:

> I know that they [a snack bar] make you wait outside in the cold for more than 20 minutes. So, when I see an order request from there, I decline it. I have better things to do than waste my time waiting without getting paid. (Extract from an interview with a female courier who had been working part time for a year while also working as a freelancer designer)

This practice impacts the structure of the local food-delivery platform market by increasing the time needed for the algorithm to find available couriers for specific restaurants (which have been highlighted as being 'slow to prepare the food'). Hence, the information shared in the online groups translates into practices that impact food-delivery platform work.

In particular, we noticed that the development of learning was simultaneously nourished at three main locations, replacing CoPs in the organizational environment: at the border of the CoP (through efforts to define its goals, functioning and limits); inside it (through synergies between heterogeneous profiles); and outside it (by impacting practices in the field). Figure 2 presents these dynamic relations.

The digital nature of CoPs, by facilitating the exchange of knowledge among a heterogeneous crowd of anonymous couriers, promotes synergies that translate into concrete practices. Our results thereby highlighted the mediating role of digitalness in fostering the development of learning mechanisms and enabling shared, rather than solely atomized, experiences, discussions and development of work practices. These mechanisms should, however, be replaced in the organizational context in which the CoPs under study evolve; the observed social learning remains a compensatory solution to the deficiencies of platform organizing, and contributes to maintaining the associated power asymmetries.

## Discussion

Our results contribute both to the social learning framework and to studies on platform work. In this section, we explain how the empirical elements collected along our ethnographic project resonate with both areas of literature, thereby considering two important topics (learning and new forms of work) that would benefit from being considered together. We discuss how the actors (anybody can register as a partnering worker, therefore the crowd is highly heterogeneous), the nature of the job (low skilled, individualized tasks, payment by the gig) and the apparatus (the organizing happens through an automatized digital app-based system focused on controlling and assessing work processes on an individual worker-basis) that structure low-skilled platforms as specific organizational settings impact the way partnering couriers engage with and develop learning. Unlike approaches that insist on the individual dimension of platform work (Lam and Lau, 2012; Petriglieri et al., 2019), our study emphasizes that many practices emerge from the shared experiences and discussions in digital CoPs. We first discuss how the three mechanisms unveiled by our findings interlace with the structural context of food-delivery platform work to enable social learning processes through digital CoPs. We discuss, in the second part, the indirect role of social learning processes in maintaining the power relations that structure platform work.

### *Articulating organizational setting and social learning processes*

The first mechanism is what we called sharing, whereby couriers secure a space where they can exchange individual experiences and needs, outside of the structure of the platform they partner with. The online groups under study are managed by the workers themselves, members collectively determine the groups' purpose and boundaries, and they hold each other accountable for this understanding as a collective response to the shortcomings of algorithmic management. This mechanism locates the social learning processes at the interface between the communities under study and their work environment. Our results indeed expose how, by forbidding certain attitudes and excluding deviant or suspicious members, couriers establish safe boundaries around the discussion groups that can then thrive to become spaces for learning; this thus sheds light on how trust, mentioned in the literature as important for CoPs to develop (Roberts, 2006), articulates with learning processes. When applied to digital spaces, studies tend to employ the CoP framework for any kind of online interaction, based on an oversimplified definition

of the concept and without opening the black box of its specific functioning (Barcellini et al., 2016). In contrast, we articulated how the digital nature of the CoP facilitates the development of the sharing mechanism. The instantaneous dimension of online groups means that specific questions are being answered more quickly than through formal platform solutions. Unlike informal one-to-one discussions in the street or through corporate chatbots or call centres, automatic archiving on online groups keeps the information accessible even long after it has been addressed, thus ensuring the cumulativity of social learning processes. Allowing for a high responsiveness of exchanges between members of the CoP and for the cumulativity of shared knowledge that remains available on the online space, digitalness is a key component of the sharing mechanism that enables social learning in our case.

The second mechanism is that of symphonizing; that is, the mechanism by which online groups evolve from merely being spaces for the exchange of scattered information to providing opportunities for synergizing different experiences. The diversity of the workers' profiles in the group, structurally induced by the organizational model of food-delivery platforms, leads to complementary dynamics that facilitate the exchange of information and the development of practices. Vallas and Schor (2020: 16.9) call for this structural heterogeneity of workers to be at the heart of research on platforms, as neglecting 'this feature of platforms is to misspecify their effects on work and employment'. The empirical components that constructed the symphonizing mechanism in our findings section answer this call by explaining how the digitalness of online groups leverages the heterogeneity of couriers' profiles to enable social learning processes in a new form of work characterized by social atomization and a lack of managerial support. Our findings have highlighted the various ways in which couriers' profiles differ and complement each other to generate learning. In particular, we mentioned the heterogeneity of the professional and personal paths that led individuals to practise the activity studied; the different levels of investment both in their food-delivery platform work, depending on whether their financial situation depended solely on it or not, and in the online groups themselves (some new part-time members seem to participate much more than full-time experienced couriers); and the heterogeneity in the geographical coverage of couriers depending on where they live and their mode of transportation (motorbike or bicycle). Even though the literature has long established that group heterogeneity often enables innovation, learning and performance (Cox and Blake, 1991; Edmondson, 2003; Page, 2007; Waters-Lynch and Duff, 2021), these insights are hardly transferable to the context of unskilled platform work. These studies indeed suggest that to transform group diversity from a potential hurdle to an asset, certain forms of management are needed, whether through leadership or formalization of complementary roles, for instance (Cox and Blake, 1991; Edmondson, 2003). Since these managerial solutions remain absent in the organizational context of food-delivery platform work, the heterogeneity of the workforce might be thought of as a barrier to collective phenomena (Berg et al., 2018; Nelson and Vallas, 2021; Vallas, 2019). The symphonizing mechanism that our findings articulated nevertheless suggests that this variety can, instead, sow the seeds for the creation of functional CoPs that enable social learning processes. Here, the digital dimension of the groups under study indeed permits the anonymity of members (as we explained, the identity of members does not matter, as long as they pass as food-delivery platform

couriers among their peers) and thereby transforms the high heterogeneity of the working crowd from an obstacle to a facilitator of social learning.

The third mechanism, which we called shaping, is where the knowledge exchanged and created in online groups translates into concrete practices, defined as the 'accepted ways of doing things, embodied and materially mediated, that are shared between actors and routinized over time' (Vaara and Whittington, 2012: 286). Taking into account the context in which CoPs develop and enable social learning indeed pertains to a broader practice-based approach (Pyrko et al., 2017). Yet, the main knowledge-creation models tend to view the translation of learning into concrete practices as requiring the intervention of third parties, as part of a knowledge management process at work (Paavola et al., 2004). In contrast, our case examined social learning processes in a context with a lack of managerial intervention, where knowledge is implemented without the intervention of an identified figure or institutionalized apparatus. In this apparently floating situation, the discussions and seemingly casual exchanges that take place within the digital groups shape what happens in the field. The heterogeneity of members' investment in the group does not imply that the less talkative members, who rarely post anything in the group, do not contribute to the development of social learning. Rather, they put into practice the various suggestions and tips given in the groups, thereby contributing to the translation of virtual exchanges into the practical reality of food-delivery platform work. Importantly, social learning happens in online groups of couriers because their digital dimension permits participation and implementation to coexist without necessarily interlacing.

The mechanisms we unpacked in our findings interlace with the settings in which digital CoPs develop. In particular, as explained in the previous paragraphs, the symphonizing mechanism focuses on the CoP itself, the sharing mechanism is located at the border between the inside and the outside of the group and the shaping mechanism refers to how what happens within the CoP impacts its environment. As these findings articulate how social learning emerges in relation to the settings in which digital CoPs develop, the next section exposes how our work contributes to bridging studies on social learning and platform work as a context that has been heavily criticized for the imbalance of its underlying power relations.

## *When social learning and power interlace: Understanding the status quo in platform work*

We contribute to the literature that examines platform workers' practices by explaining how they are derived from social processes rather than solely from individual experiential knowledge of the algorithm, as existing studies suggest (see, for instance, Curchod et al., 2020). It is worth noting that, unlike the online forums for platform workers that are often studied in the literature (Gegenhüber et al., 2021; Martin et al., 2014; Schwartz, 2018), the groups we studied in this article are not set up by the platforms themselves. While chatbots and call centres aim to assist workers in their daily situations and the online spaces created by the platforms enable corporate administrators to take the comments of workers into account and potentially integrate them into their functioning (Gegenhüber et al., 2021), our findings show that these solutions are, at best, distant from

the reality in the field and even prevent exchanges between workers. Rather, social learning processes emerge here from independent spaces for discussion. Yet, one should remain cautious about extending the link between online groups and collective endeavours to collective emancipation. Beyond the widespread approach that focuses on social phenomena in platform work as a means of resistance that potentially threatens the corresponding organizational model (Cant, 2019; Shapiro, 2018; Stewart et al., 2020; Tassinari and Maccarrone, 2020; Vallas and Schor, 2020), we found that platform workers are embedded in an 'autonomy paradox', quite common in digitally structured organizational settings (Mazmanian et al., 2013). The specificities of the platform model indeed bear paradoxical effects. On the one hand, they allow for greater flexibility in schedules and investment in the job; even though profitable slots remain concentrated around lunch and dinner hours (12–2 p.m. and 7–10 p.m.), couriers can choose when and how much they connect on the platform. They also have slack to determine ways of doing and experiencing work, beyond the framework determined by the algorithm, and this relative autonomy partly explains why individuals enrol and keep engaging in unskilled platform work despite the criticism towards this industry (Berger et al., 2019; Purcell and Brook, 2020; Shanahan and Smith, 2021). Yet, on the other hand, the organizational form of unskilled platform work, developed through a digitally based and individualizing structure, actually induces a heavy, individualized and automatized form of control (Rosenblat, 2018). By blurring spatial, temporal and social boundaries (Dale, 2001), platforms thereby force workers to engage in separate efforts to learn by themselves how to perform their task; that is, to internalize several norms to cope with an unclear work situation. Platform structure delegates constraints through specific organizing choices such as the outsourcing of labour or algorithmic management (Abdelnour and Lambert, 2014); this functioning actually contradicts a widespread myth according to which platforms exert direct control over independent workers as in a dystopian Orwellian fantasy.

Some studies have indeed pointed to platforms' 'infrastructural power' (Rahman and Thelen, 2019: 184) over their partnering workers (Kellogg et al., 2020; Rahman and Thelen, 2019; Ravenelle, 2017; Rosenblat and Stark, 2016; Schor and Attwood-Charles, 2017; Srnicek, 2017; Wood et al., 2019). However, they tend to focus on the role of algorithmic management in maintaining platform domination and they rarely explore the mechanisms by which workers themselves indirectly contribute to this situation. Rennstam and Kärreman (2020) address the link between learning in CoPs and power. They explain how, in CoPs, endeavours that a priori oppose managerial interests might actually contribute to them, and link these processes of what they call 'collective disobedience' with social learning outcomes. When it takes into consideration the issues of power and control in examining CoPs, the literature mostly refers to their associated mechanisms within the communities under study (Roberts, 2006), for instance, between its members (Contu, 2014; Mäkinen, 2021) or in the relation between the management and the CoPs (Rennstam and Kärreman, 2020; Swan, 2002). Our work contributes to these insights by pushing the link between social learning processes in CoPs and power to a more structural level; while Rennstam and Kärreman (2020) focus on the interlacing between managerial guidelines and social learning emerging through CoPs, we suggest that the learning processes developed in digital groups of couriers contribute to the power

relations that structure platform work. These accounts call for thinking beyond the widespread approach that focuses on social phenomena in platform work as means of resistance that can threaten the corresponding organizational model (Cant, 2019; Shapiro, 2018; Stewart et al., 2020; Tassinari and Maccarrone, 2020; Vallas and Schor, 2020). In line with Barratt et al. (2020), Karanović et al. (2021) and Soriano and Cabañes (2020), we suggest instead that the online groups studied as digital CoPs contribute to maintaining and reproducing the platform's domination over its partnering workers, and our article unpacks the social learning mechanisms by which this happens. This work thereby answers the calls to consider CoPs as spaces in which 'meanings may continue to be merely a reflection of the dominant source of power' (Roberts, 2006: 632) for these social configurations to remain embedded in institutional, social and economic structures (Pyrko et al., 2017; Roberts, 2006: 632).

## Conclusion

From building on the literature on digital CoPs as a locus of collective knowledge development at work to concluding about power relations in platform work, this article examined how organizational settings interlace with social learning. It drew on a 26-month online and offline ethnography of food-delivery platform work in France, which enabled the collection of large amounts of data through in situ participant observation of the work itself and its spatial and social environments, online participant observation of courier discussion groups, lexicometric analysis of posts in a national online space and interviews. The groups under study pertain to what the literature has defined as CoPs. They ensure the 'mutual engagement' (i.e. a minimal level of belonging and solidarity) of members, which allows for the development of a shared repertoire and joint enterprise. Couriers need to help each other to compensate for an organizational context that triggers a need to independently learn work practices. In this vein, they share a 'joint enterprise', which pertains to the enactment and boundary setting of common tasks that members can influence; here, negotiating this joint enterprise represents a collective response to the characteristics of the food-delivery platform model. The pursuit of a joint enterprise creates resources for negotiating meanings, called a 'shared repertoire', which corresponds to the shared reifications communicated within the group, and serves as a communicative vocabulary that often acts as a symbol of membership. The results of this article shed light on three mechanisms that enable social learning processes through digital CoPs: sharing, symphonizing and shaping.

Gegenhüber et al. (2021) suggest that platforms use 'microphones' rather than 'megaphones' to give a voice to partnering workers by setting up dedicated forums and chatbots. However, our results point to the relative inefficiency of these corporate solutions, at least regarding the development of learning at work and practices adapted to the activity. As our research focused on workers, it did not address how platforms treat these digital spaces. Do they try to integrate the practices that emerge from this social learning into their guidelines? Could platforms integrate, or at least access, the information shared in these functional groups without then voiding the very mechanisms by which they efficiently allow social learning? Do they rely on workers' independent efforts and ignore the underlying voids in their organizing that induce workers to learn by themselves?

These questions directly address how platform organizing adapts to its workforce and environment, and thereby ensures its perpetuation. Future research could therefore examine how platforms react to these organizing endeavours that emerge independently of their structure. The ways platforms react to workers' responses indeed strongly matter in shaping the power relations that structure this rapidly developing industry.

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## Note

1 This example aims to illustrate the methodological process through which we analysed our data.

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