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Organization (preprint)

Resistance to economic exploitation or religious oppression?

A sociomaterial analysis of the agency of Muslim food-delivery workers facing algorithmic management

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Abstract

This qualitative case study examines food-delivery platforms in France in order to reveal how gig workers, lacking traditional employment protections and collective bargaining, rely on informal community mechanisms to develop collective agency that is closely linked to the materiality of platforms. Drawing upon sociomaterial theory and the concept of affordance, our results show that religious affiliation plays a crucial role in the actualization of algorithmic management artifacts by Muslim migrant workers and leads to a sense of emancipation and reconciliation between their religious and work identities. Religious communities, often overlooked or avoided by traditional organizations, act as mediators in the gig economy. Because it uses ‘*post-diversity*’ organizational practices that are indifferent to marginal socio-demographic categories, the gig economy provides workers with material, emotional and informational resources that facilitate identity agency and prioritize it over algorithmic management. The present study contributes to the literature on platform work by illuminating the intricate duality of agency experienced by Muslim migrant workers in the food-delivery sector and developed through community-built resources. It highlights the prioritization of freedom from religious oppression in the labor market over economic considerations, which leads to the acceptance of exploitative working conditions and peer control.

Key words: gig economy; platform work; agency; algorithmic management; religion; affordance

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Resistance to economic exploitation or religious oppression?

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1. Introduction

Food-delivery platform work, which consists of low-paid tasks distributed to a multiplicity of workers through algorithms, has grown rapidly around the globe and particularly in France, where the number of food-delivery riders surged more than fivefold between 2019 and 2022, amounting to almost 180,000 operating accounts (see Compas report, 2022) and 84,000 regular workers² as of January 2022. Food-delivery work has emerged within the ambiguous legal framework often referred to as the ‘grey zone’ (Supiot, 2000; Pichault and McKeown, 2019; Dieuaide and Azaïs, 2020), situated between independent contracting and formal employment. Platforms have positioned themselves as intermediaries within this space, thereby sidestepping their responsibilities as employers and leaving riders in a precarious position. This destabilization of legal norms has led European countries to gradually acknowledge salaried employment relationships between workers and platforms (Aloisi, 2022). However, unlike the jurisprudence of the European Court of Justice, the French context favors specific rights for riders, who are still categorized as self-employed (article L.8221-6 of the Labor Code³). This legal classification hinders collective action, as it deprives riders of established structures of representation and negotiation (Borghi et al., 2021). The geographical dispersion of their work and the diversity of their profiles further complicate their ability to form and maintain collectives (Newlands et al., 2018). Although there are some efforts at self-organization (see Bouvier, 2018 for French initiatives), activist collectives struggle to mobilize a workforce that is largely “*depoliticized*” (Rosenblat, 2018) and influenced by platform rhetoric promoting self-entrepreneurship (Galière, 2020). Yet, rather than self-entrepreneurs, food-delivery workers more closely resemble “*sub-entrepreneurs*” (Josserand and Kaine, 2019) with limited autonomy due to algorithmic management – described as “*a system of control in which self-learning algorithms are given responsibility for making and executing decisions affecting work*” (Duggan et al., 2020: 6) – and precarious working conditions. Given these tight socio-economic constraints, organization studies aim to comprehend how food-delivery workers cultivate both individual and collective agency (Barratt et al., 2020; Sutherland et al., 2020). Here, agency pertains to their coordinated and intentional actions in response to their perceptions of the materiality of the technology implemented on platforms (Leonardi, 2012). Agency is manifested not only as overt resistance, but denotes a dynamic interplay of continuous and sometimes subtle changes within the socio-material environment, driven by the actors (Leonardi, 2023).

² Vie Publique (2022), Première élection pour désigner les représentants des travailleurs des plateformes : le vote est ouvert. <https://www.vie-publique.fr/en-bref/285072-livreurs-et-vtc-premieres-elections-professionnelles-du-9-au-16-mai>

³ https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000031104496/

Further examination of food-delivery workers' exercise of agency is particularly important because existing research often overlooks key socio-demographic and political aspects of this type of work (Holtum et al., 2022), especially as platforms increasingly act as “*absorbers of migrant labor*” (van Doorn and Vijay, 2021: 16). In France, the food-delivery sector has undergone significant changes since the early 2010s, and now predominantly employs workers from precarious backgrounds, with a fivefold increase in the number of delivery workers residing in ‘*priority neighborhoods*’ of major French cities, characterized by high poverty rates, unemployment, and a high proportion of migrants (Compas report, 2022). According to the same report, the typical profile of a food-delivery worker is a young migrant man (40% of migrants) in a precarious employment situation. Given that food-delivery platforms implement organizational practices such as non-selective recruitment, algorithmic management, and self-employment, they can be seen as operating in a “*post-diversity*” context (Zanoni and Mischzynski, 2024) that is indifferent to socio-demographic categories. Operating on a business model centered on competition among precarious workers for tasks and earnings, food-delivery platforms have faced accusations of turning a blind eye to the unauthorized sub-leasing of accounts to undocumented migrants. This practice involves workers, whether French or legally entered migrants in France, lending their account and identity to an undocumented migrant, who in turn works on behalf of the original account holder for wages below the platform's set rates, thus generating profit margins for the account holder. This illicit activity persisted for a significant period, involving as much as half of the delivery workforce in some cities⁴, before attracting the attention of the media and law enforcement agencies.

Migration is not only widespread in food-delivery work but also introduces specific labor issues, since platform work is often described as “*simultaneously a site of degradation and opportunity*” for migrant workers (van Doorn et al., 2023). Research has mainly focused on depicting platforms as spaces of economic and social precarity, yet how migrants might also exercise forms of agency within these platforms remains largely unexplored (van Doorn, 2023). On the one hand, migrant workers may find themselves with limited agency compared to their non-migrant counterparts (Berntsen, 2016; Holtum et al., 2022). On the other, the question arises as to whether their shared identity might serve as a catalyst for collective agency, although the mechanisms for such collective action remain unclear. Our study endeavors to carry out this inquiry into migrants' agency by examining the dynamics between migrant food-delivery workers and the algorithmic infrastructure of platforms, and by seeking to understand how migrants individually and collectively navigate the numerous challenges they face (Bucher et al., 2021). Our research question is as follows: How do migrant food-delivery workers actualize algorithmic management possibilities for agency, and to what extent do they rely on community to facilitate this actualization?

⁴ https://www.francetvinfo.fr/societe/immigration/livraison-a-domicile-les-dessous-dun-traffic-de-main-d-oeuvre_5491080.html

To answer this question, we employ the socio-material concept of affordance actualization (Hutchby, 2001; Strong et al., 2014), which describes how users utilize the unique capabilities of a technology to achieve social goals. This framework enables us to understand how the technical functionalities of the platform – what we refer to as the artifacts of algorithmic management, representing the intrinsic characteristics of the technology – influence certain behaviors among workers, and how workers, in response, engage in agency practices facilitated by the technical features of the platform. Our study shows that the specific organizational context of the gig economy, characterized by the absence of a legal framework and organizational flexibility, may foster this actualization.

To explore these dynamics, we conducted a qualitative case study of French food-delivery platforms, utilizing non-participant observations and 24 semi-structured interviews and employing an emergent thematic analysis approach. Initially, our focus, in line with the existing literature, was on the migrant status of the majority of our interviewees. In this study, we define ‘migrant’ as any foreign-born person working in a host country, regardless of when they migrated. As our research progressed, we discerned the pivotal role of religious affiliation among gig workers in understanding their relationship to work. Despite their varied backgrounds in terms of origins, ethnicities, and nationalities, we discovered that religious identity acted as a unifying factor influencing the community dynamics among food-delivery workers. This became especially evident as our participants comprised both migrants and a few descendants of migrants, yet shared a common understanding of their religion, albeit with diverse practices. By heeding these empirical cues, our findings elucidate how algorithmic management artifacts – specifically key technical functionalities like the assignment algorithm, real-time monitoring of cancellation and rejection rates, and the rating algorithm – afford interpretive flexibility. This concept implies that the functionalities of the platform can be interpreted and utilized differently depending on individual experiences and contextual factors. In our case study, this flexibility supports the development of community belonging, particularly religious belonging, which is frequently marginalized in traditional organizational settings with direct management supervision.

In refining our understanding of the exercise of agency by migrant food-delivery workers, we make two contributions to the literature. Firstly, we advance research on platform workers’ agency by elucidating how the interpretive flexibility of algorithmic management enables religious workers to exert critical agency (Rebughini, 2018). Critical agency is the ability of individuals to act independently and make choices that reflect their values and beliefs, even within restrictive environments. Our research specifically illustrates how these workers use their critical agency to reconcile their professional and religious identities, providing insight into why migrant workers, particularly those from religious backgrounds such as Islam, continue in platform work despite facing extremely precarious conditions. Secondly, our article contributes to the literature on sociomateriality by highlighting the mediating role of community in the actualization of algorithmic management affordances. We demonstrate how communities

provide crucial material, emotional, and informational resources that facilitate agency patterns and create emancipatory spaces, especially in relation to identity and religious expression, through the use of algorithmic management.

2. Literature review

2.1 Platform workers' agency in the face of algorithmic management

Digital platforms initially emerged with the sharing economy paradigm (Botsman and Rogers, 2010; Frenken and Schor, 2019) as flexible and structurally agentic entities, facilitating work freed from hierarchical constraints and performed by independent workers (Cherry, 2015; Prassl and Risak, 2015). However, beneath this apparent flexibility lie forms of control of workers manifested through the technical infrastructure of these platforms (Duggan et al., 2020; Kellogg et al., 2020). Food-delivery platforms constitute a typical area of investigation for dissecting these new forms of control (see Barratt et al., 2020; Griesbach et al., 2019; Veen et al., 2020), where algorithmic management dictates individuals' actions in real-time based on factors such as order acceptance rates, customer and restaurant ratings, and GPS data. Algorithmic management is not confined to food-delivery platforms but permeates various digital work platforms. For instance, extensive analyses of Uber's algorithmic management reveal how drivers are incentivized to work longer hours through systematic notifications of potential rewards upon meeting revenue targets (Rosenblat, 2018; Gandini, 2019).

The disciplinary impact of algorithmic management on “*powerless and isolated*” workers (Glavin et al., 2021) is further compounded by the structural isolation from their peers and customers of atomized platform workers, who to a large extent interact solely with the app assigning them tasks. Recent studies emphasize the need for a nuanced understanding of the interpretive flexibility of algorithmic management (Meijerink and Boundarouk, 2021). Such an understanding goes beyond merely considering the intrinsic and technical features of algorithmic management, but it involves examining how gig workers perceive these features differently and sometimes exploit its materiality – its technical functionalities – to assert forms of agency (Sutherland et al., 2020; Bucher et al., 2021). For instance, Barratt et al. (2019: 9) demonstrate how food-delivery riders navigate platform artifacts to “*find ways to generate income and support themselves by finding better ways to be assigned, and then to perform, “chunks” of work*”. While individual agency may be manifested in acts of micro-resistance against algorithmic constraints (Lee et al., 2015), it often fails to challenge the entrenched power structures within algorithmic management. Gig workers, particularly in food delivery, predominantly exhibit what is termed ‘entrepreneurial agency’, which entails a “*low-level expression of agency aimed at materially improving individual conditions and aligning with rather than challenging the business models of platforms*” (Barratt et al., 2020: 13). This form of agency aims to ‘pacify’ the algorithm to evade scrutiny and penalties, thereby ensuring a

continuous stream of work opportunities (Bucher et al., 2021). Research on the interpretive flexibility of algorithmic management assumes, however, that all gig workers respond to shared struggles with equal capacities for individual agency, regardless of their socio-demographic profile.

In the context of labor migration, scholarly discourse remains limited, with the predominant focus on the precarity of migrant platform workers rather than on their agency (Van Doorn, 2023). Despite potential empowerment narratives surrounding digital entrepreneurship (Martinez Dy et al., 2018) and the sharing economy (Zanoni, 2019), migrant workers in traditional organizations often experience diminished agency compared to their non-migrant counterparts (Berntsen, 2016). This disparity is attributed to the prevalent economic insecurity among migrants, which accentuates fears of income loss (Kalleberg, 2009). Several studies conducted in the French context reveal that people perceived as Muslim migrants feel and experience exclusion from the traditional labor market (Adida et al., 2014; Gaillard, 2021). This exclusion appears to be all the greater among men perceived as Muslim migrants (Valfort, 2017).

To date, the study by Holtum et al. (2022) stands out as the only empirical investigation into the agency of migrant Uber drivers. Its findings show that due to limited alternative employment options, migrant drivers face heightened vulnerability to customer ratings and have less flexibility in managing their work schedules. Despite these challenges inherent in platform operations, instances of resistance are rare, albeit not nonexistent (Tassinari and Maccarone, 2020). Van Doorn et al. (2023) posit that migrant gig workers persist in platform work because, despite unsatisfactory working conditions, it simultaneously offers livelihood opportunities. Gig workers are attracted to platform work due to its non-discriminatory entry system, providing an initial income stream partially exempt from taxes along with modest performance bonuses. Van Doorn et al. (2023) also highlights the potential for flexibility and diversified use of platform functionalities by workers, independently of the managerial objectives for which the functionalities were originally designed. Building upon van Doorn's (2023:159) exploration of the *“relatively minor and everyday modes of agency that are less spectacular than efforts at organized resistance yet are still critical to how migrants manage to sustain their livelihoods”*, our study delves deeper into how this agency is intricately intertwined with workers' utilization of platform artifacts. Recognizing the limited understanding of how gig workers, particularly the marginalized, navigate the algorithmic landscape of platforms to cope with myriad challenges (Bucher et al., 2021), our objective is to investigate how migrant workers' agency occurs through the actualization of affordances. In short, we seek to reveal how, despite being under-resourced, migrant workers manage to carve out space for maneuverability and autonomy within the technical frameworks of platforms.

2.2 The actualization of algorithmic management affordances

Inspired by Giddens' (1984) structuration theory, the socio-material approach (Orlikowski, 1992) seeks to go beyond the partial viewpoints of prior conceptualizations of technology, which selectively focused on the technological determinism of users' behaviors or on social constructivism of technology through users' interpretations and sensemaking alone. Focusing instead on the "*mutual interactions between human agents and technology*" (Orlikowski, 1992: 403), socio-materiality emerged as a strong alternative theory for incorporating the objective and subjective dimensions of technology. Following Leonardi (2013), we adopt a critical realist approach to socio-materiality, positing that artifacts are more than simply relational entities, but possess intrinsic properties that pre-exist and pre-configure usage patterns, and influence and constrain action. The effects and uses of artifacts vary depending on the spatio-temporal context and the aims of social actors (see also Hutchby, 2001). Thus *pace* Norman (1999), any object can provide multiple affordances that extend beyond its intended purposes (Faraj and Azad, 2012). While the early literature focused on the cognitive processes of perceiving affordances (Pozzi et al., 2014), current research has shifted towards exploring actualization behaviors, particularly in the context of organizational change (Volkoff and Strong, 2013; Leonardi, 2013). Actualization refers to "*the actions taken by actors as they take advantage of one or more affordances through their use of technology to achieve immediate concrete outcomes*" in support of personal or organizational goals (Strong et al., 2014: 70). Understanding the actualization of affordances – how users exploit technology's potential according to their goals – provides insight into how technology users' agency emerges from the interaction between technical and social factors (Leonardi, 2023). Despite its importance, "*the processes and actions in organizations that lead to the actualisation of affordances are little studied*" (Strauss et al., 2024: 2) in the literature, which predominantly focuses on affordances as potential actions, assuming users can readily actualize them when they have clear objectives.

The affordance perspective provides a valuable lens for analyzing "*the duality of algorithmic management*" (Meijerink and Bondarouk, 2021). Algorithmic management systems, driven by data that is inherently partial and incomplete, simultaneously constrain and enable worker behavior. For instance, freelance professionals in fields like graphic design or software development, upon reaching a 'mature' understanding of algorithmic processes, interpret affordances of algorithmic management as ways to bolster personal visibility and devise financial strategies (Bellesia et al., 2023). Responding to the call for "*better theoretical and empirical understanding of why workers behave differently*" within similar algorithmically-mediated work environments (Bellesia et al., 2023: 2), our research aims to explore how users interpret the affordances of algorithmic management. We investigate how users perceive the technical properties of algorithmic management and leverage them to make platforms not only constraining but also enabling and aligned with their personal goals, in the context of low-skilled and migrant food-delivery work. By adopting a processual approach, we analyze how food-delivery workers, both individually and collectively, develop practices of agency as they engage with and adapt to algorithmic management.

While the process of affordance actualization is often depicted as an “individual journey” (Strong et al., 2014: 72), recent studies have highlighted the role of communities, particularly online communities (Meurer et al., 2022), in facilitating the actualization of affordances for gig workers by enabling the sharing of resources, especially informational resources. Furthermore, we know that communities of identity (*e.g.*, religious) co-exist and develop both online and offline (Lundby, 2011), but little is known about how these communities operate in the context of work, or whether they play a role in affordance actualization. With regard to the gig economy, there is ongoing debate surrounding how platform workers can form collectives. The heterogeneity of gig workers’ experiences, their inter-individual competition and their geographical dispersion undermine the development of a sense of collective identity (Newlands et al., 2018), a situation that is viewed as problematic for the expression of unified interests, the development of collective action (Gandini, 2019; Wood et al., 2019) and collective forms of agency (Glavin et al., 2021). Yet by engaging in online communities (Le Breton and Galière, 2022) or by using offline spaces free from algorithmic control (Tassinari and Maccarone, 2020), gig workers can build a shared identity and values. Given the emergence of fragile community logics and the paucity of research on the identity work of gig workers, we raise questions regarding the extent to which identity affiliations with socio-demographic categories such as gender, nationality, and political or religious beliefs may facilitate convergence towards forms of collective agency. We also investigate whether these forms of collective agency might surpass reactive responses to the constraints of algorithmic management, leveraging it as a tool for expressing personal values or conciliating work with personal identity. Our research seeks to go further than the incomplete representation of migrant food-delivery riders’ experiences of platform work by exploring how the pursuit of agency may influence their interpretation and utilization of algorithmic management artifacts. Thus, our central research question is: How do migrant food-delivery workers actualize algorithmic management affordances for the purpose of agency, and to what extent do they rely on community to facilitate this actualization?

3. Methodology

This paper draws on a case study of food-delivery platforms to investigate the underexplored issue of actualizing the affordances of algorithmic management for developing individual and collective agency among migrant workers. We selected food-delivery work as our case study for two reasons: (1) the case’s relevance to our research question, given that a significant proportion of such workers are migrants from impoverished neighborhoods in France (according to the Compas report, 2022); (2) the availability of information on these platforms and greater accessibility to the research field due to the stationary positions these delivery workers frequently occupy in public space.

Research field. The emergence of food-delivery platforms in France during the mid-2010s began with the entry of the Belgian company Take Eat Easy, which is now out of business after going

into receivership. Other players quickly entered the market and eventually dominated it, such as Foodora (which no longer operates in France), Uber Eats and Deliveroo. Given the high legal risks associated with this industry, platforms have adapted their algorithmic management practices to avoid the subordinate relationship of their workers being recognized, thereby limiting their control over behavior they consider deviant (e.g. account lending, long delivery times, high order cancellation rate, etc.). While the food-delivery sector has numerous participants, platforms are converging towards a unified and flexible model that gives greater prominence to agency behavior. We propose to investigate this new unified model, as it seems to us to offer strong potential for generalization. Moreover, the socio-material aspects of the permissive algorithmic management artifacts and the ambiguity surrounding their uses remain largely unexplored in current research.

Data collection. We used three ethnographic methods to ensure data triangulation.

(1) One year of non-participant observation of five autonomous Facebook groups moderated by food-delivery workers. To ensure confidentiality, we strictly limited our observations to public groups and abstained from accessing any private conversations, both online and offline, unless explicit consent was obtained. Upon joining these groups, we transparently communicated to the moderators that we were researchers interested in studying their profession, not actual food-delivery workers. We did not interact with other group members, as our aim was to focus on religious exchanges to assess whether this aspect warranted further exploration through participant observation and interviews, and we do not cite any social network group exchanges in our final findings. Our observations were initially focused on migrant status, in relation to the literature. However, we swiftly recognized the significance of shared religious affiliation, particularly Islam, which served as a unifying factor among migrants and their descendants. Subsequent interviews further validated this observation (see paragraph (3) below).

(2) 29 hours of participant observation of food-delivery workers, involving 85 individuals in three French cities: Paris (2.16M inhabitants - Gare Montparnasse sector); Tours (135,000 inhabitants - Place des Halles sector); Le Mans (143,000 inhabitants - Place de la République sector). These cities were selected for their geographical diversity and population size; and the observation sites were well-known high-traffic areas where food-delivery workers frequently gathered while waiting for orders. During these observations, we noticed a consistent trend of ethnic and religious affinity among the groups present and observed that a very large majority of food-deliverers were migrants. To gain a deeper understanding of their behaviors, the researcher typically joined the group of workers while they were waiting for orders and, with their consent, followed them to the restaurants where they picked up their orders. These observations provided an opportunity to ask more about the observed behaviors, and to request translations of any exchanges that were misunderstood. In order to be fully informed about the different artifacts of

the platform and their interpretations, the researcher regularly asked respondents to demonstrate on their phones how they used the platform.

(3) 24 semi-structured interviews with food-delivery workers with religious affiliation. We selected our 24 interviewees in accordance with two cumulative conditions: they self-identified as practicing believers and had at least one year's experience of platform work. All 24 respondents described themselves as migrants (22/24) or descendants of migrants (2/24). To ensure geographical diversity, our sample encompassed three cities: Paris (n=11); Tours (n=6); Le Mans (n=7). As Appendix 1 shows, most of our respondents were Maghrebi men under the age of 30. Twenty-three of them identified as Muslims, while one identified as a practicing Christian. Initially, the inclusion of the Christian respondent was based on his status as a migrant worker and his frequent interactions with an observed group of Muslim migrant workers. However, after observation and the interview, it became evident that his involvement in the community dynamics, rooted in Islam and based on religion, was non-existent. He was therefore excluded from the data analysis. A single researcher conducted the interviews, taking floating notes as there were many refusals to record, and recruited respondents during the periods of observation, while taking care not to interfere with their work or impede their income. As the respondents came from countries where French is the administrative language or is taught in elementary school (Morocco, Algeria, Tunisia, Senegal, Congo, etc.) they had mastered the French language to varying degrees and most of them were able to express themselves sufficiently well in French for the researcher to understand them. In the two cases where comprehension was more difficult, we systematically rephrased what had been said in simpler words, to ensure that the respondent understood. For example, with one of the respondents, we had to agree on terms and their meaning: he didn't understand the word '*application*', which he knew by its standard diminutive '*app*'. Similarly, he used Arabic terms to express himself about his religion: religion was translated '*dîn*' (دين), prayer was translated '*salât*' (صلاة), fasting was translated '*sawm*' (صَوْم). After these linguistic adjustments, the interview proceeded smoothly. On one occasion, we relied on another worker to translate, on the advice of a respondent, and specifying that non-judgment was a prerequisite. This approach helped gain the interviewees' trust and preserved their anonymity while clarifying the intentions of our research.

As well as primary data collected from the interviews and observations, we also collected secondary data on food-delivery work from platform websites and various national and international press sources.

Data analysis. The interviews were conducted in several phases, with different objectives for each. In the initial interviews, our primary goal was to gain insight into how food-delivery workers utilized the platform artifacts to perform their job. Throughout this phase, we documented detailed descriptions of key algorithmic management artifacts intrinsic to food-delivery platforms – namely, the free shift assignment algorithm, real-time calculation of cancellation rates, and customer and restaurant rating algorithms – illuminating their intended

functionalities. For instance, the free shift mechanism is designed to facilitate connections during peak delivery periods, while the cancellation rate calculation aims to reduce delivery cancellations, and the ratings to enhance the delivery service quality. In this phase of elucidating these technical details, we observed behaviors linked to the religious affiliations of food-delivery workers, which influenced their platform utilization. We then understood that this flexibility played a role in the decision-making process for riders opting to engage with food-delivery platforms.

This awareness prompted us, in the second phase, to deepen our understanding of the impacts of religious affiliation by identifying common examples of religious practices, obligations, prohibitions and symbols, and by focusing on understanding how religious affiliation affected workers' engagement with algorithmic management artifacts. Moreover, we discovered that our respondents were engaged in constant negotiation between their professional and religious objectives, resulting in interactions and mutual influence to navigate this tension. Our attention then shifted to collective dynamics in the third phase, where we identified forms of spiritual leadership and spiritual debt within the community of food-delivery workers.

Throughout these phases, we conducted an emergent thematic analysis and engaged in a peer debriefing process to consolidate the collected data. Employing an iterative approach, we re-analyzed our data drawing on the sociomaterial framework and analyzing the main platforms artifacts in terms of three dimensions: their intrinsic properties, the (religious) actualization process, and the immediate outcomes this process generated. In other words, facilitated by our access to a religious community with shared spiritual objectives, we show how the artifacts of algorithmic management are perceived as affordances and subsequently actualized as such by these workers. In this way, Muslim food-delivery workers are able to discover a religious space within their work that they might not encounter in other forms of employment. Consequently, we were able to highlight the role of collective religious dynamics in the actualization of algorithmic management, by categorizing three emerging types of actualization, relating to the temporal and spatial aspects, work-related content, and interactive dimensions of their work.

4. Findings

This section explains how Muslim food-delivery workers utilize algorithmic management affordances to enhance their agency and express their religious identity. Our data suggest a two-step process: first, individual actualization occurs, followed by the development of collective dynamics within their community.

The majority of our respondents perceive the traditional labor market tends to marginalize workers who openly express their faith, leading many to conceal their personal values and spiritual identity: *“I have friends who earn more [i.e. in other jobs], but for that, they have to shave the walls [i.e. make themselves discreet], hide, not be themselves, put aside the dīn (i.e.*

religion, دين). *As for me, no thanks, I'm happy with what I've got here*" (Brahim, Tours). Thus gig work is regarded as a preferable alternative to other forms of work, as remote coordination via algorithmic management is perceived as less restrictive than direct supervision by local managers. Many religious food-delivery riders consider their situation to be more advantageous than other low-skilled jobs: *"My cousin, he works for a big pizza chain, what do you think he can do? Nothing. He works fewer hours and earns the same, but he is not free, they are always on his back! At least we can dodge, with no boss on our backs"* (Ahmed, Le Mans). As a result, when evaluating the quality of their jobs, these workers prioritize freedom of religious expression over traditional factors such as pay or working hours when comparing their roles to similar positions outside the gig economy.

Nevertheless, religious food-delivery riders are well aware of the precariousness of their status, of the *"hardship"* (Bakar, Paris) they endure, including hourly pay lower than the minimum wage, working weeks exceeding 35 hours, and unpaid waiting time between deliveries. For these workers, who have a transactional attitude towards platforms, the possibility of religious expression is viewed as compensation for their precariousness: *"We work like dogs, but it's a plus to be able to do what we want, and we don't to have to answer to anyone about our faith"* (Omar, Le Mans). The flexibility of gig work also fosters the development of community bonds, resulting in a distinctive form of solidarity among co-religionists on the platform: *"Being recognized as a Muslim, and not just as a colleague, creates strong links, it's like a commitment. We say that we are an ummah, that means a community in the Arabic language. When you are in the ummah (i.e. the community of believers, أمة), you have to show solidarity with each other"* (Omar, Le Mans). This solidarity emerges during exchanges following a religious practice, as Bakar from Paris notes: *"During Ramadan we see those who do it, and we talk, we exchange things, food, you know, and then there is prayer too. In fact it's closely connected to our practice as Muslims"*.

Initially, we questioned the appropriateness of the term 'religious community' used in this article, in view of the frequent overlap between ethnicity and religion among food-delivery workers. However, our observations of ethnic subgroups, such as those from the Maghreb, Central Africa, and West Africa, show that shared religious practices often serve as the primary unifying factor. Indeed, due to globalization, religion is gradually becoming detached from ethnic cultural influences and coalesces around specific pillars. For example, Ramadan, prayer, and the consumption of halal meat are common sociological markers of globalized Islam (Roy, 2015). Thus, religion transcends ethnic or cultural differences, acting as a cohesive force that unites individuals from diverse backgrounds.

The following sub-sections examine the mechanisms by which food-delivery workers individually and collectively develop spaces for religious expression through the actualization of algorithmic management artifacts. We first present the intrinsic properties of three digital artifacts that are central to the efficiency and quality of the food delivery service. Then, for each

artifact, we describe the social factors that influence the process of actualization by the workers and, finally, we outline the immediate outcomes of this actualization in terms of religious expression.

(1) *The assignment algorithm allows for temporal flexibility and is actualized to respect religious practices and occasions*

Intrinsic Properties. In 2019, food-delivery riders gained more autonomy with the introduction of the ‘free-shift’ (or ‘no shift’) algorithm, replacing the previous system of time slot reservations which required meeting performance objectives such as punctuality, attendance, and working during peak demand periods (Galière, 2020). With the free-shift artifact, delivery riders can log in anywhere in their city when they are available, and then wait for assignment proposals from the platform. The platform’s algorithm automatically assigns orders to riders based on their proximity to the restaurant, as well as estimated preparation and waiting times. From the application, riders can view a map, and see all the orders to be handled in their immediate vicinity.⁵ They can choose to accept it by ‘clicking’ on the order, to ignore it, or to accept it and then cancel it.⁶ This system enables the platform to operate with greater logistical efficiency, providing a more continuous service as riders promptly respond to peaks in activity and reduce customers’ waiting time. To maximize their earnings, riders need to stay close to busy restaurant areas where pricing is more attractive [*“you go where it pays, and the app tells you anyway, then you do as you please”* (Brahim, Paris)] and to wait in a scattered way so as to obtain orders more quickly. This artifact encourages delivery drivers to gather in certain places, as well as to be highly reactive, since acceptance of orders is competitive.

Actualization process. For workers who are religious, the flexibility offered by the assignment algorithm provides an opportunity to respect prayer times. Prayer is very important for the majority of these workers and must be observed at specific times in accordance with a predefined schedule. However, despite the facilitation of working hour arrangements through the free-shift system, finding suitable prayer locations near restaurants becomes a logistical challenge if disruptions to work and earnings are to be minimized. Riders engage in discussions about these constraints at waiting points and gradually establish connections with other rider who have similar religious concerns. The respondents say they interact more easily and naturally with food-delivery workers who are *“like [us], Muslims! It’s brotherhood, we talk easily, and it’s natural. [...] What I mean is that it’s easier to talk because we understand each other more quickly. We have the same vision of religion most of the time, so we also know what issues come up a lot. [...]. Prayer is a typical case that comes up a lot, because you have to pray on time when you can. Some people say that you can postpone prayer, but that’s only in certain cases*

⁵ <https://youtu.be/IWwxCh2vURc>

⁶ https://help.uber.com/fr-FR/driving-and-delivering/article/que-faire-si-jai-besoin-dannuler-une-commande-de-livraison-que-jai-accept%C3%A9e%C2%A0?nodeId=53face98-77c0-41ac-b117-847d1a60d0cb&_csid=GjW-cegc-zWAXiV224qVMQ&state=wG0DasO_poXVcnw8iS0ZwtbSvPVMTZIFilJkZlghJcc%3D&effect=

and if there's no other solution. When you're religiously observant, you prefer to avoid postponing prayer" (Omar, Le Mans). A feeling of *brotherhood*⁷ is thus fostered among fellow Muslim workers, and over time, these individual contacts become a cohesive group of like-minded professionals and believers who offer support and solidarity. During this integration process, workers collaboratively organize themselves to share useful information (*e.g.*, about nearby places of worship, restaurants, or religious customers who can adjust to prayer times) and material resources (*e.g.*, lending apartment keys for prayer). Although lending accounts is prohibited⁸, delivery drivers occasionally assist each other by lending accepted orders to facilitate religious practice without compromising their overall activity volume: *"Sometimes I keep a guy's phone so he can go to pray, so he stays connected you see, it's better"* (Bakar, Paris).

Box 1: Ethnographic insights. Account sharing for religious practice

Account sharing was a recurring phenomenon that we closely observed during our research. These were quick transactions, typically limited to one or two orders. Food-delivery workers would first find colleagues willing to participate in this practice, through offline or online interactions, and maintain direct communication through instant messaging. It is important to note that account sharing does not involve any financial transactions, but rather aims to facilitate the management of spiritual time. Through account sharing, a sense of trust and the establishment of spiritual debt develops between food-delivery workers engaged in this practice. In some cases, account sharing occurs several times a day or on a daily basis between two workers. However, the duration has to be kept brief due to platform measures implemented to combat account sharing, including the random verification of identity through the submission of 'selfies'. Interestingly, our observations revealed instances of account sharing among delivery drivers with varying levels of religious practice. Even those who do not engage in daily or timely prayer willingly offer their assistance to those who do, viewing it as a means of obtaining spiritual benefits for themselves. Prayer sessions take place in various settings, such as nearby places of worship, the homes of food-delivery workers, or other suitable spaces.

⁷ The use of '*brotherhood*' refers to the community of believers. It has also been used in its Arabic translation *ummah* (أمة) and is not in itself a gendered expression. It refers to the feeling of 'fraternity', felt between members of the community studied. We've noticed that when delivery drivers use the word 'brothers', they're not just talking about men, but about all believers who share their faith, including women (one in our sample).

⁸ To tackle account lending, which can also mean subletting an account to encourage concealed work, Uber introduced a 'selfie' verification system in 2019. The account lending practiced here by delivery drivers for religious reasons exposes them to being banned from the platform: <https://www.uber.com/fr/newsroom/quand-selfie-rime-avec-safety-uber-lance-un-systeme-didentification-en-temps-reel-pour-lutter-contre-la-fraude-sur-uber-eats-et-uber/>

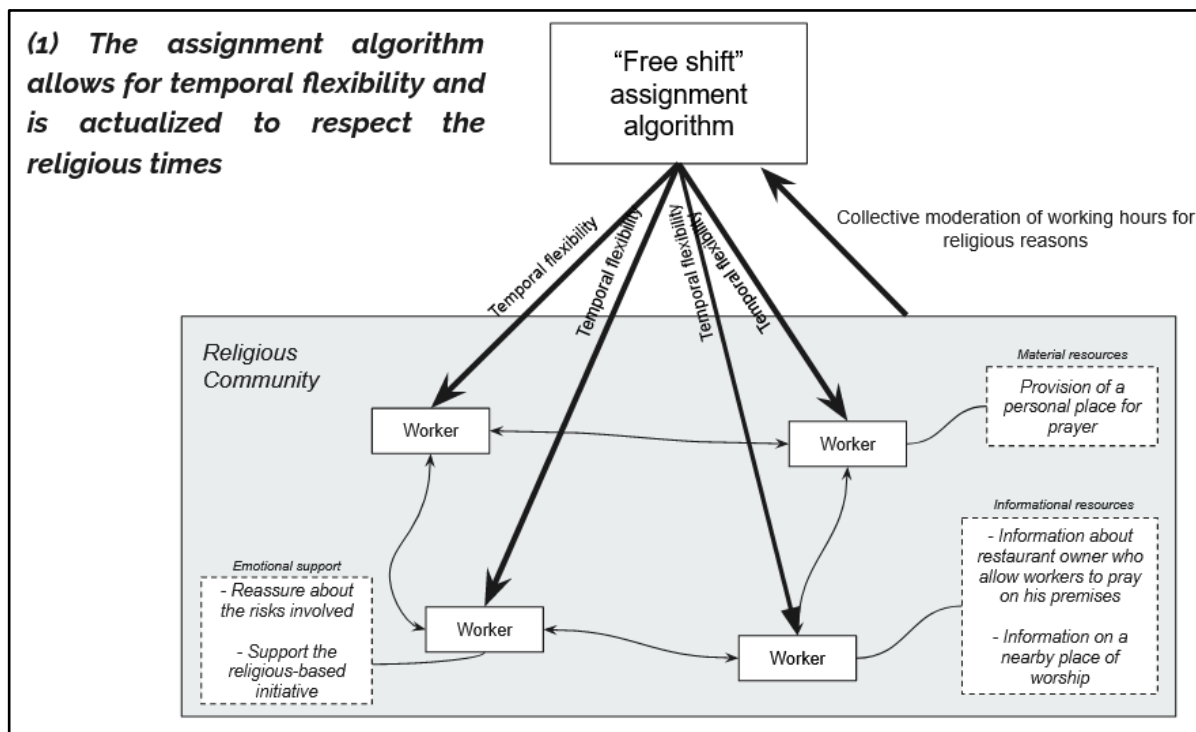
This intra-community dynamic serves as a conduit for religious guidance, reminding food-delivery workers of prayer times and encouraging them to allocate time for prayer. Such guidance typically originates from workers who demonstrate extensive religious knowledge or are recognized as possessing spiritual leadership within the community. With solutions being tested and proven effective by a few, their practice becomes widespread through cross-exchanges and is gradually institutionalized among community members: *“There are one or two guys who know a lot about dîn [i.e. religion, دین], they sometimes give us the Darwa [i.e. the reminder about the right religious practice as an obligation]. [...] I know it’s not always well received, but personally I take it positively, it’s an invitation to improve, to be a better Muslim”* (Brahim, Paris). Furthermore, the sense of emotional belonging to the community strengthens and enhances the religious efforts of the delivery workers: *“The brothers [i.e. co-workers of the same religion] need to be reassured that the risks are low and the rewards [i.e. religious rewards] are so much greater”* (Zine, Paris).

Immediate outcomes. The implementation of the free-shift algorithm has made it commonplace for food-delivery workers to adjust their working hours for religious reasons and to have brief periods of disconnection from the platform, known as a *“break in the working day”*, in order to pray or adopt a less intense work rhythm during Ramadan (Fathi, Paris). Respondents feel free to express their religious beliefs, especially since the reporting of religious behaviors through the application appears to be either non-existent or ineffective: *“If a food-deliverer tells Uber that I refused a ride to go ‘Sali’ [i.e. to pray], what do you think Uber cares about it? They don’t care! Let them enjoy themselves!”* (Omar, Le Mans). Workers can choose their working days in accordance with the religious calendar without any penalty and may decide, for example, not to work on Fridays or religious holidays. The accommodation between religiosity and professionalism is facilitated by the community relationships established among food-delivery workers. However, this may lead to conformity to religious dogma, implying that believers exert horizontal control over their peers. Some workers struggle not to appear weak in terms of their faith, for example, failing to fast during Ramadan on a busy day. Jordan from Le Mans described his dilemma, saying: *“Sometimes you’re so knocked out, while you’re working, you take out your bottle and you very discreetly drink from it. I don’t like to risk shocking them as they respect everything to the letter, but sometimes I can’t take it any more”* (Jordan, Le Mans). Food-delivery workers who do not strictly observe religious obligations have three main concerns: fear of being judged by those with informal religious authority within the group, fear of being marginalized within the group with which they identify, and fear of not benefiting from other aspects of community support (emotional support, for example) as a result of their heterodox practice. The following verbatims illustrate these fears: *“When someone asks you for help with their practice [i.e. religious], it’s hard to refuse, we’re brothers, and often it’s the other person who takes the risks, by lending their phone for example. It’s an obligation.”* (Bakar, Paris); *“If I ask someone for a favor for my dîn [i.e. religion, دین] and he says no even though he’s of the*

same religion as me, and he doesn't take any risks, I'm going to take it very badly and I'm going to tell him, clearly. [...]. It's good deeds, it's in his interest [i.e. spiritual]" (Zine, Paris).

However, religious agency is limited by the financial precariousness of the migrants and their economic dependence on the platform. Some delivery workers, like Brahim, may postpone certain practices, such as prayer, for fear of not achieving their income targets: *"I have set myself a rule since I started working there, which is to go to prayer at the mosque and on time (...). Afterwards, we also know the speed hours [i.e. the hours of high activity], and sometimes it goes up suddenly [i.e. the volume of orders during the hours of low activity], and then I personally shift [i.e. the time of prayer], because you know that it will be a good day thanks to that"* (Brahim, Paris). Brahim emphasizes that his financial situation is not sustainable unless he works more than 40 hours a week.

Figure 1: Situation 1



(2) Permissive monitoring of orders ignored and cancellations prevents logistical bottlenecks and is actualized to prevent the delivery of alcohol and/or pork

Intrinsic properties. Once connected to the platform, food-delivery workers receive orders on their phones. They can either accept the order and then receive the restaurant details, or ignore it and wait for the next. The platform automatically tracks each worker's order cancellation rate

using AI systems, and this information is accessible to the riders through the application.⁹ The platform's official website stresses the importance of maintaining a 'low cancellation rate', to avoid account deactivation.¹⁰ To ensure efficient logistics, the application designers have restricted order cancellations to exceptional circumstances, such as 'personal emergencies' or 'technical problems' related to transportation (e.g., accidents, breakdowns). However, the platform does not require explicit reasons when a rider ignores an order, leading food-delivery workers to perceive this algorithmic management artifact as relatively permissive as long as the cancellation rate is not excessive: "*We don't do exactly what we want, but we can still choose. In return we are monitored, but that's not so bad either*" (Sabri, Le Mans).

Actualization process. Muslim food-delivery workers leverage the platform's leniency regarding ignoring orders or cancellations to align their work with their religious beliefs, such as refusing to deliver alcohol or pork dishes. In doing so, they assert their control over the content of their work: "*We know it's not usual, but here we do what we want, no one knows why we cancel the order, that's just the way it is, no accountability*" (Taoufik, Paris). However, the platform explicitly states that frequent cancellations can result in sanctions, and food-delivery workers perceive cancellations as being viewed more negatively and penalized more severely than ignoring an order. During discussions with food-delivery workers, the fear of being banned emerged as an important concern, even though they did not provide specific examples of individuals being banned for canceling orders. Food-delivery workers try to mitigate this risk by leveraging the informational resources within the religious community to identify restaurants likely to serve 'haram' (prohibited by Islamic law, حَرَام) dishes, allowing them to ignore orders rather than cancel them. Omar from Le Mans explains: "*We know, we know the restaurants, we know the menus, that's experience (laughs), so we share the information*" (Omar, Le Mans). Although such refusals are unusual, they often stem from interactions with co-workers of the same religion seeking advice on the permissibility of accepting an order. For example, some delivery drivers say they give or receive emotional support to or from their co-workers to strengthen their decision-making process: "*It's also helpful to have people who support you, who confirm what's important. We have to go back to the basics, to our belief and respect our prohibitions*" (Brahim, Paris). The information shared mainly serves to inform food-delivery workers about the possibility of encountering non-halal food, enabling them to make informed choices regarding order acceptance. The most devout drivers tend to disseminate this information and are more inclined to ignore orders in such circumstances, thus serving as role models. Even among those who describe themselves as not very observant in terms of the religious norm within their working community, which is rather orthodox, they still uphold its legitimacy and theological validity: "*I am not super religious, but they are right. I mean I need to do more personally, I know that. I completely understand what they do, and why they do it. If you look at*

⁹

<https://help.uber.com/fr-FR/driving-and-delivering/article/suivi-des-taux-dacceptation-et-dannulation?nodeId=41d29702-a232-4d28-9ec1-a9b085080883>

¹⁰

<https://help.uber.com/fr-FR/driving-and-delivering/article/en-quoi-les-annulations-de-livraisons-peuvent-elles-affecter-mon-compte%C2%A0?nodeId=79274f6f-5dec-47a1-b15a-474c9562b2ee>

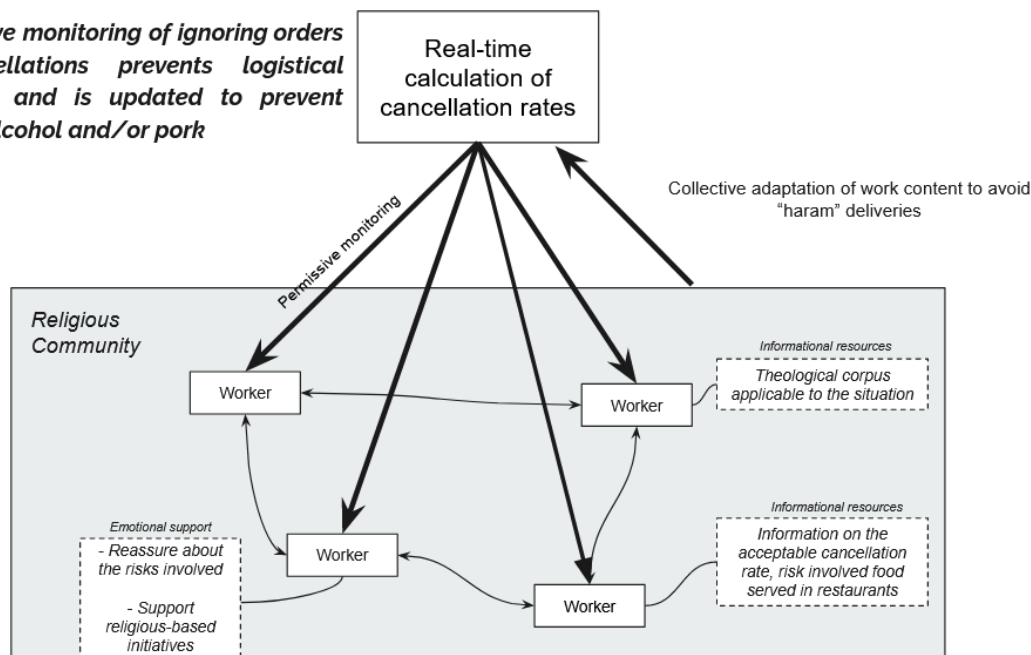
the texts [e.g. religious reference texts in Islam: Quran, Sunnah - Life of the Prophet, Tafsir - Quran exegesis], they're the ones who are in the right." (Marouane, Tours).

Immediate outcomes. The permissive surveillance of ignored orders and cancellations has resulted in the common practice among religious food-delivery workers of avoiding deliveries that contain products considered illicit for religious reasons. While not all delivery workers have a strict interpretation of their religion, interactions within the community of co-religionists influence workers to avoid certain deliveries. Eight of our respondents explicitly mentioned that they ignore orders or will cancel them if they involve delivery of alcohol or pork: *"We have to cancel quickly, but we know the restaurants, so we look directly, and we cancel if there is any [alcohol or pork]"* (Ibrahim, Tours).

However, fear of having insufficient work may lead the most financially precarious delivery riders to accept such orders or not cancel them after acceptance: *"Well, I admit that sometimes it's the 'hess' [i.e. a low volume of orders], and we take it anyway, even if there is alcohol"* (Sabri, Le Mans). Like Sabri, other delivery workers in economically insecure situations cannot afford to prioritize their religious choices. Some choose to maximize their working hours, on the grounds that accepting all orders is necessary. Others simply prefer to view the religious norm perceived within the working community as flexible and transgressible, even in the presence of diffuse social control. These behaviors can be attributed to personal interpretations of religion or to the perceived level of social control exerted over them. The more food-delivery workers engage the more they accumulate spiritual debt, making them susceptible to social control: *"When you give important information to someone for whom it's important not to deliver alcohol, for example, that means you're doing them a favor. [...]. A religious service as well, so he's happy and he gets closer to you, he trusts you, it's logical. There are also those who are more direct, telling you to cancel the order if you want to follow the religion. [...]. I think it's weird, but it happens"* (Taoufik, Paris). In general, those who are less committed to religious practice tend to perceive less social control, as the arguments and moral dilemmas have less impact on them, i.e. create less guilt.

Figure 2: Situation 2

(2) Permissive monitoring of ignoring orders and cancellations prevents logistical bottlenecks and is updated to prevent delivering alcohol and/or pork



(3) Customer and restaurant rating algorithm ensures quality and does not limit religious expression

Intrinsic properties. When food-delivery riders arrive at a restaurant to collect the order, they are expected to show ‘respect and kindness’, to ‘respect the law’ and to ‘ensure the safety of all [from uber.com¹¹]. The restaurant owner then provides an evaluation on a 5-star scale on the app for the rider. Upon delivery, the rider’s performance is rated by the customer based on meeting the delivery time and respecting food regulations and hygiene rules. These ratings, given by restaurant owners and customers, are aggregated and updated in real-time to calculate an average score out of 100. The platforms’ websites state that the rating system is designed to ensure user satisfaction and maintain consistent service quality, and thus they apply high evaluation standards (satisfaction rate above 90% is required¹²), and failure to meet these standards can result in temporary or permanent exclusion. Many food-delivery workers believe that the platform assignment algorithm, presented in 4.1, also considers positive evaluations by customers and the average volume of work: “The more active you are, the higher your score [because you are more likely to receive more orders], it’s simple” (Taoufik, Paris). Consequently, ratings are immensely important for delivery drivers in terms of the profitability and sustainability of their work: “Assessments are very important, they have power over you when they rate you, and you have to adapt according to what you think they’d like you to do or say, and see what they’d like you to be [laughs]” (Bader, Paris).

¹¹ <https://www.uber.com/fr/fr/safety/uber-community-guidelines/>

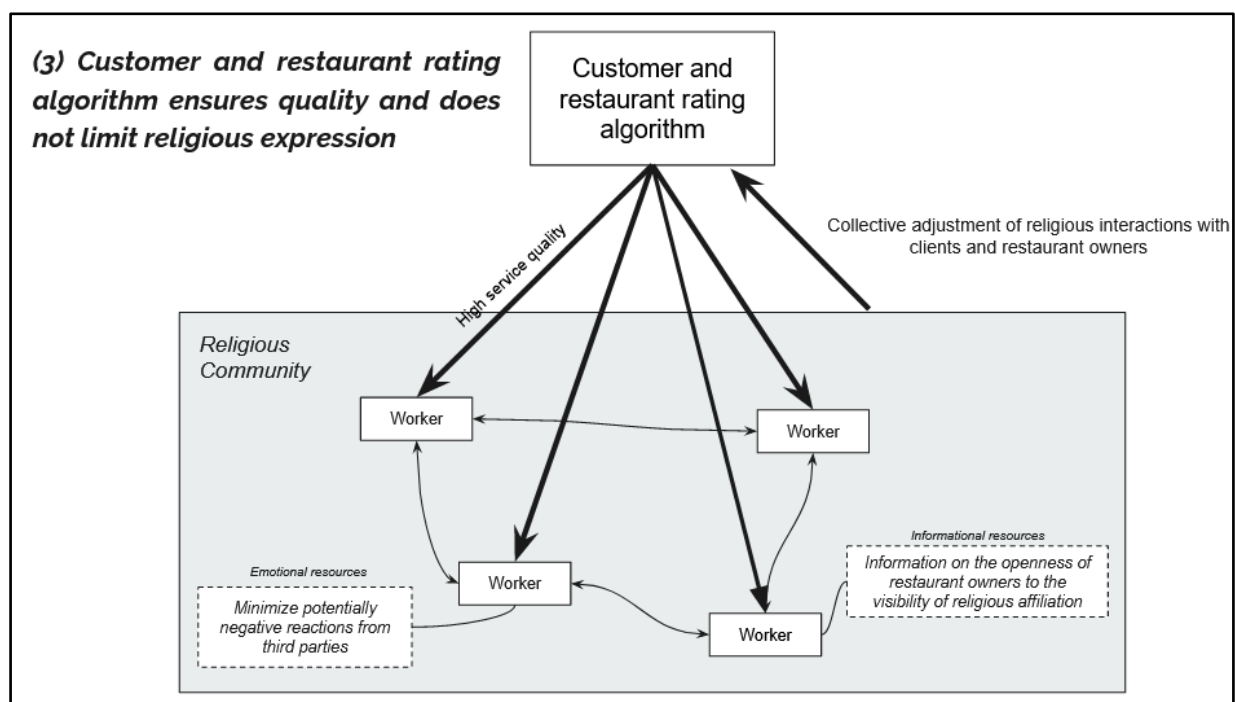
¹² <https://www.uber.com/fr/fr/deliver/basics/tips-for-success/delivery-ratings-explained/>

Actualization process. Religious workers perceive the rating algorithm as a threat to their religious expression agency, fearing that their religious appearance or behavior may lead to negative ratings from customers or restaurant owners. Some workers try not to overtly display their religious affiliation while interacting with restaurant owners and customers, as they are acutely aware of the potential consequences of negative feedback: “*Well clearly, if they [i.e. the restaurant owners] complain, for whatever reason, even if they talk about something other than our religion just because they don’t like our religion, well one unhappy restaurant owner is fine, but two, three, who knows? You can quickly find yourself thrown out...*” (Souleymane, Tours). To mitigate the risk of receiving a poor rating due to religious discrimination, food-delivery workers engage in the exchange of information about customers and restaurant owners in order to understand their receptiveness to religious expression, or their own religious affiliation, either to provide a cautionary warning or to facilitate religious expression. As a result, workers are able to adapt their self-presentation accordingly: “*With recurrent customers in a given area, we know who we can be ourselves with and who we need to be hyper-professional with. With some, we say “Salam ou alaykoum” [اَلْسَلَامُ عَلَيْكُمْ] to each other, we almost hug, they’re like brothers. Once you’ve had a bit of experience, you start to get to know people well, whether they’re customers or restaurants. You adapt*” (Bader, Paris). Workers also offer mutual support in uncomfortable or discriminatory circumstances, providing one another with emotional resources: “*I say be assertive, I say be proud, we are who we are. We don’t have to be ashamed of being religious, or simply of being visibly Muslim. I tell the other delivery people that, and it’s important to them as well as to me*” (Driss, Paris); “*I share my good experiences with customers and restaurants, when we are welcomed, by Muslims but also by other people. Talking about the positive is what we don’t do enough, yet it’s good for the mood, isn’t it? It is very French to see only the bad*” (Ibrahim, Tours). The community dynamic among food-delivery workers enables them to devise relational strategies that facilitate interactions with restaurant owners and customers, while maintaining visible signs of their religious affiliation. In the case of female colleagues who wear the religious veil, some workers provide theological guidance and emotional support, encouraging them to persist with their choice while slightly adapting their presentation or openly expressing their choice. For example, we witnessed an exchange between a veiled food-delivery woman (Samira, Paris) and a male colleague, who advised her to assert herself in her interactions and not allow any derogatory remarks about her veil to go unaddressed, particularly by a restaurant owner whom he perceived to be opposed to the practice of Islam. These discussions are centered around the belief that the heavenly reward – entry into paradise – has greater significance than the earthly reward of monetary earnings.

Immediate outcomes. Through the community actualization of the rating algorithm, concerns regarding the display of religious symbols, such as the religious veil, are alleviated. Since food-delivery workers and restaurant owners get to “*know each other quite quickly*” (Samira, Paris), they become familiar with each other, adopting relational strategies that help navigate potential challenges. Workers identify those who share similar beliefs and values, realizing that their religious appearance or expression can positively impact their ratings. For example, the use of

religious greetings in the original language, such as “*salam*”, is appreciated among co-religionists: “*Many restaurant owners take the initiative, customers too, when they welcome us, some even appreciate it, and the relations are ‘zen’ (i.e. fluid, easy)*” (Mohamed, Tours). Conversely, they learn how to be more careful with the minority of customers or restaurant owners who may penalize them with negative ratings: “*We know with whom it is better to be discreet, and keep our salam or alaykoum for us for example, you see*” (Omar, Le Mans). Even if the use of this greeting is not always religious, and can be used by people who are not Muslim, our respondents say that some restaurant owners and customers perceive it as religious, and for this reason, it is potentially inappropriate in a professional context. On the other hand, when used with co-religionists, it is also a greeting identified as religious.

Figure 3 : Situation 3



5. Discussion

Our research makes a twofold contribution to the literature. Firstly, we enhance understanding of platform workers’ agency by illustrating how the interpretive flexibility of algorithmic management enables religious workers to exert critical agency (Rebughini, 2018), pragmatically reconciling their professional and religious identities in the present moment, without any long-term concerns. This flexibility explains why migrant workers, especially those from religious backgrounds such as Islam, continue carrying out platform work despite facing precarious conditions. Secondly, our study enriches the sociomaterial literature by emphasizing the

mediating role of community in actualizing algorithmic management affordances. We show how communities furnish essential material, emotional, and informational resources, facilitating the agency of religious expression among food-delivery workers. Our findings reveal a nuanced interplay between autonomy and control within post-diversity organizations. As such, platforms offer workers unprecedented opportunities for religious expression within a labor market setting where religious exclusion is common (Valfort, 2017; Gaillard, 2021) and where, when securing employment, workers often feel compelled to conceal their religious affiliation (Adida et al., 2017). However, while Muslim workers perceive platform work as liberation from religious oppression compared to conventional organizations, they simultaneously grapple with accepting exploitative working conditions and yielding to social control exerted by their co-religionists.

5.1 The interpretative flexibility of algorithmic management as a key factor in the attraction of platform and in workers' acceptance of exploitative conditions

Our investigation delves deeper into the paradox of why “*migrant gig workers can and do contest platforms' unfair and exploitative practices [...] yet many continue to – reluctantly or gladly – accept rides, deliveries, and cleanings via their apps*” (van Doorn, 2023: 158). We first illuminated the increasing flexibility of algorithmic management: rather than mere instruments of control that enforce passivity upon workers, algorithmic management artifacts exhibit a level of adaptability that allows for interpretations and uses beyond their original design intentions. Consequently, depending on the characteristics of the workers utilizing these artifacts (particularly their socio-demographic profile, such as being a practicing religious Muslim), it becomes possible to perceive these artifacts as various forms of affordances and to actualize them differently from their intended purposes, particularly in expressing one's religious identity. For instance, the free-shift assignment algorithm, initially designed for logistical efficiency, can be utilized by religiously observant workers to align with worship times, thus enhancing their agency of religious expression.

The existing literature suggests that workers gradually gain agency in navigating algorithmic management systems through experience (Bellesia et al., 2023). Our study extends this discourse by emphasizing the role of identity, particularly religious identity, in shaping workers' interpretations of algorithmic management, thereby offering new avenues for understanding how such systems create opportunities for specific demographics. A notable finding from our research is that interpretative flexibility paves the way for religious expression, serving as a significant attraction for Muslim workers in platform work, who are often migrants. As well as monetary incentives, our results underscore the importance of spiritual values in shaping diverse interpretations and applications of algorithmic management. This flexibility not only enables the exercise of religious agency but also facilitates the reconciliation of professional and personal identities for migrant workers, in the absence of local managerial oversight.

The observed agency of religious expression can be more comprehensively understood within the framework of post-diversity organizational contexts, which “*eliminate differentials in the employment relation between capital and different socio demographic groups of workers*” (Zanoni and Miszczyński, 2024: 34). Through the eradication of biases in selection processes and the bypassing of frontline managerial oversight via algorithmic systems, the organizational structure of food-delivery platforms inherently cultivates equitable conditions for workers. Regardless of their ethnic, religious, or gender identities, all workers have equal prospects for obtaining work on the platform. This egalitarian context fuels heightened competition among workers (Zanoni and Pitts, 2022), driven by the hyper-meritocratic ethos prevalent in food-delivery platforms (Galière, 2020) that places exclusive emphasis on individual performance metrics, thereby compelling workers to strive for maximum efficiency in order fulfillment within tight timeframes and with minimal order cancellations.

However, this apparent neutrality towards social and demographic categories serves as fertile ground for platforms to thrive, exploiting the vulnerabilities of migrants seeking accessible work opportunities. It is important to acknowledge that such agency, while seemingly empowering, operates within the confines of the platform’s economic model. Despite the ostensible absence of bias, digital platforms perpetuate economic inequalities rather than dismantling oppressive structures. We concur with recent research that has found that worker agency, while it may be perceived by workers as empowerment (Pettica-Harris et al., 2020) or is translated into opposition to the platform, is generally deployed in a manner that complements the organizational structure of platforms (Karanovic et al., 2020) by “*materially improving individual conditions and aligning with platform business models*” (Barratt et al., 2020: 1643). The agency exhibited by migrant food-delivery workers can be characterized as ‘*critical agency*’ in the sense of Rebughini (2018), as it is not exercised in opposition to the socio-economic order of post-diversity and digital capitalism, but rather as a search for innovative solutions within the contextualized problems they encounter in their daily work practices. Our paper reveals how the agency of migrant food-delivery workers is shaped by the use of algorithmic management artifacts and the pursuit of religious expression, primarily aimed at effecting rapid change within the existing framework of post-diversity and digital capitalism.

Moreover, our study underscores how religious expression partially mitigates gig workers’ experience of economic insecurity, echoing Fraser’s (1998) observation that contemporary injustices often revolve around cultural domination rather than economic exploitation. However, this compensation has its limitations, as economic insecurity continues to shape workers’ lifestyles and future prospects. In contrast to van Doorn (2023), who portrays platforms as interim solutions for migrant gig workers, serving as temporary measures until they secure more stable employment, we argue that the critical agency facilitated by algorithmic flexibility hinders workers from considering future prospects. The absence of hope for attaining stable professional roles that would simultaneously allow them to reconcile their personal and professional identities perpetuates economic insecurity, which workers accept in exchange for agency in religious

expression and community support. Beyond our examination of the agency of Muslim migrant workers, we propose that gig workers adopt a hedonistic philosophy, prioritizing immediate satisfaction – be it derived from the camaraderie of their peers and community or from being able to express their personal or religious identity – over future considerations. This hedonistic philosophy inadvertently bolsters the platform’s business model while deepening the precariousness of gig workers’ lifestyles.

5.2 The mediating role of the religious community in facilitating worker agency through algorithmic management

The literature on sociomateriality often oversimplifies affordances (Leonardi, 2023), viewing them as either technological properties detached from the social context or mere cognitive perceptions of what a technology can do, without any nuanced understanding of their relational nature. Our study shifts this perspective by examining how algorithmic management artifacts interact with the agency practices of migrant and religious gig workers, thus shedding light on the practices, actions, and processes driving affordance actualization over time.

Our study contributes both empirically and theoretically to the literature on affordances. We show that the flexibility of algorithmic management systems enables the religious expression of Muslim meal-delivery drivers, and we highlight the central role of communities in actualizing these affordances. Our research serves first as an application of the concept of affordance, by examining the specific affordances enacted in the context of food-delivery work through key algorithmic management artifacts such as the free shift assignment algorithm, real-time calculation of rejection and cancellation rates, and the customer and restaurant rating algorithm. Furthermore, we make a theoretical contribution with regard to the role of communities in affordance actualization as a force that can enhance individuals’ agency. Agency is materialized through actualization and is influenced by forces that either reinforce or constrain it (Strong et al., 2014). We accordingly define the community of co-religionists as a potential force for reinforcing agency, while economic precarity constitutes a constraining force.

The process of actualizing algorithmic affordances is predominantly individual, as noted by Strong et al. (2014). However, within the context of the gig economy, individual agency for religious expression faces significant constraints, including the informational, material, and emotional limitations experienced by atomized workers. As shown in Figure 4 below, integration into a community of co-religionists can augment individual agency by accessing external resources (*e.g.*, information or access to places of worship close to restaurants or customers, religious advice on the licit or illicit nature of certain work practices, etc.) that they lack individually. Interactions within the community of co-religionists allow the development of a collective actualization of algorithmic management affordances and generate greater agency, in this context of a religious nature. Moreover, emotional support here plays a significant role in peer control, as the actions and convictions of the most religiously active and vocal individuals

can shape the behavior of their colleagues, further reinforcing religious norms. Through this process of collective actualization of algorithmic management affordances, the expression of religious agency is no longer limited by organizational constraints (such as the risk of management sanctions) or informational, emotional, and material barriers (such as lacking the resources needed to implement individual religious practices). Instead, economic constraints linked to the inherent precariousness of migrant status and the need for sufficient financial resources remain the sole limitations. However, it is important to note that the actualization of algorithmic management affordances remains informal, and the collective agency that gradually forms within the religious community is therefore very limited by changes in the platform's rules and artifacts. Nevertheless, this situation opens up interesting avenues for studying the way in which communities adapt to possible new affordances in order to develop social learning about actualization.

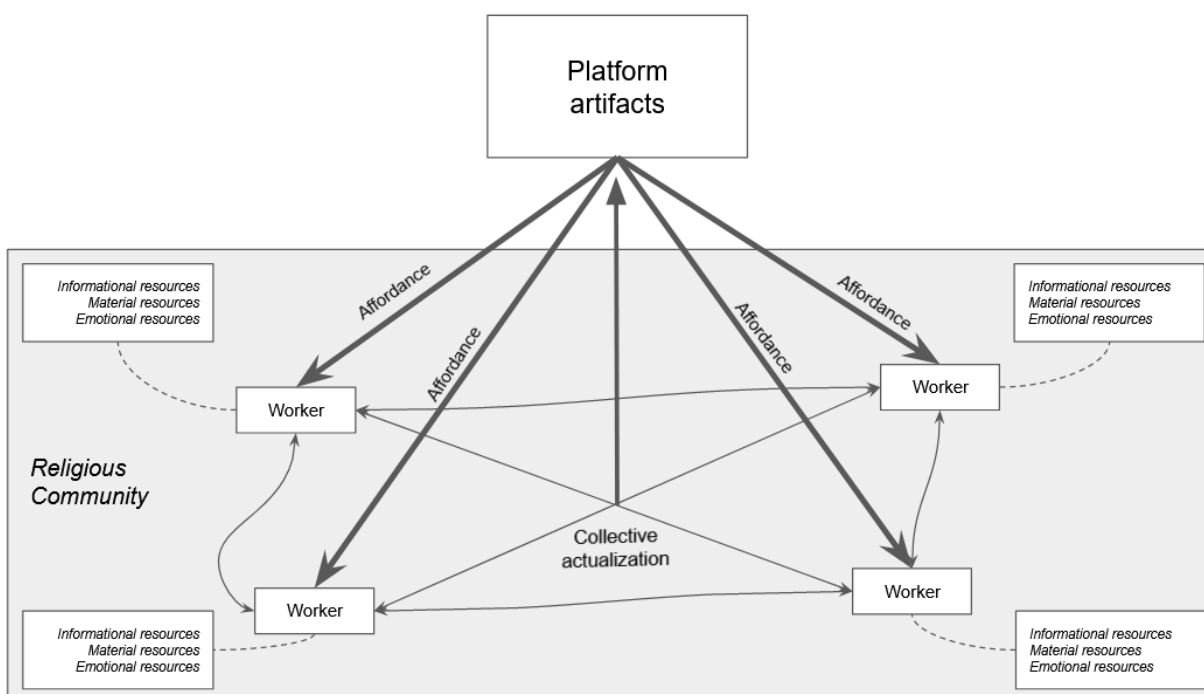


Figure 4: The role of the religious community in the actualization of artifacts

In our case study, we observe that religious communities serve as substitutes for traditional work collectives in the gig economy, bolstering individual agency and fostering a sense of belonging and collective identity uncommon in this context (Tassinari and Maccarrone, 2020). Engaging in these communities acts as an identity-based coping mechanism amidst workforce atomization, lack of social dialogue, and intense competition on digital platforms (Newlands et al., 2018). Our findings resonate with research indicating that gig workers form collectives not only for

resistance but also to support each other in performing their jobs effectively (Le Breton et Galière, 2022) or reconciling professional and personal identities.

Moreover, we uncover forms of social control exerted by the co-religionist community, echoing Supiot's (2015) observations on the transformation of power relations. As work governance becomes increasingly abstract (exemplified here by algorithmic management) and detached from traditional institutions that ensure individuals' economic and physical security, it gives rise to movements of re-identification based on religious, ethnic, or regional affiliations, leading to personal allegiance or clan-based withdrawal in the pursuit of security compensation. In our case study, religious affiliation is a pre-existing characteristic of food-delivery riders when they engage in platform work, and we show that it partly shapes their perceptions, interpretations, and actualizations of algorithmic management affordances. The question remains as to whether algorithmic affordances, in turn, stimulate religiosity and community organization in the absence of organized professional socialization.

Conclusion

Using the case of food-delivery work in France, this study explores how migrant Muslim food-delivery workers exercise their agency within algorithmic management systems. We show that while algorithmic management imposes constraints on workers' behavior, it also provides opportunities for exercising critical agency (Rebughini, 2018), thereby allowing workers to reconcile professional and religious identities. Our contribution to the sociomaterial literature lies in highlighting the mediating role of community in actualizing algorithmic management affordances, and showing how religious communities reinforce food-delivery workers' agency in religious expression. Muslim gig workers collectively actualize the affordances of algorithmic management by sharing material, emotional, and informational resources, thus facilitating religious expression among food-delivery workers. Although not all food-delivery workers are equally involved in this collective actualization, they individually participate in shaping their religious outcomes using the resources available to them. Our findings reveal a nuanced interplay between autonomy and control within post-diversity organizations. Platforms offer workers unprecedented opportunities for religious expression in a labor market where religious exclusion is common (Valfort, 2017; Gaillard, 2021), and where workers often feel obliged to conceal their religious affiliation to secure employment (Adida et al., 2017). Although Muslim workers view platform work as a liberation from religious oppression compared to traditional organizations, they simultaneously confront the challenges of exploitative labor conditions and social control imposed by their co-religionist community. Their critical agency is not exercised in opposition to the socio-economic structures of post-diversity and digital capitalism but instead seeks contextualized and rapid solutions for religious expression among migrant workers in the food-delivery sector. Similar forms of critical agency can also be observed in other contexts characterized by the abstraction of labor through algorithmic management (Zanoni and

Miszczynski, 2024), indicating that organizational models once considered highly platform-specific and marginal are extending to more traditional organizations employing low-skilled labor.

It is important to note that our study has focused specifically on French migrants and their specific socio-demographic categories, with affiliation to the Muslim religion, and has not included the experiences of workers affiliated to other religions such as Judaism or Christianity, or those with different identity affiliations such as gender or political orientation. Future research could explore how workers from diverse religious or identity backgrounds interpret and actualize the affordances of algorithmic management in the gig economy. Additionally, investigating the influence of national context, including factors such as the feeling of discrimination or exclusion, length of time lived in the country, and previous gig work experiences, on the propensity to collectively organize for the actualization of affordances could provide valuable insights. Finally, this topic could also be pursued using intersectional approaches, to better integrate the migrant status of many food-delivery workers, as well as their precarious economic situation. This avenue of research opens the door to a more comprehensive understanding of the interconnected dynamics of religious beliefs, economic challenges, and migratory status precarity in the context of platform work.

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Appendix 1: Profiles of individuals interviewed through semi-structured interviews

| i | Name | Gender | Age | Religion | Ethnic group | City | Duration |
|-----------|-------------|---------------|------------|-----------------|---------------------|-------------|-----------------|
| 1 | Aimé | M | 25 | Christian | Central African | Tours | 48 |
| 2 | Sabri | M | 28 | Muslim | Maghrebian | Le Mans | 56 |
| 3 | Mounir | M | 30 | Muslim | Maghrebian | Paris | 27 |
| 4 | Samir | M | 25 | Muslim | Maghrebian | Le Mans | 47 |
| 5 | Halim | M | 29 | Muslim | Maghrebian | Paris | 33 |
| 6 | Ahmed | M | 29 | Muslim | Maghrebian | Le Mans | 52 |
| 7 | Ibrahim | M | 23 | Muslim | Maghrebian | Tours | 68 |
| 8 | Zine | M | 25 | Muslim | Maghrebian | Paris | 36 |
| 9 | Jordan | M | 26 | Muslim | Central African | Le Mans | 34 |
| 10 | Saleh | M | 32 | Muslim | Middle East | Le Mans | 41 |
| 11 | Bakar | M | 26 | Muslim | West African | Tours | 52 |
| 12 | Brahim | M | 29 | Muslim | Maghrebian | Paris | 61 |
| 13 | Omar | M | 31 | Muslim | Maghrebian | Le Mans | 43 |
| 14 | Ahmadou | M | 26 | Muslim | West African | Paris | 30 |

| | | | | | | | |
|-----------|------------|---|----|--------|------------|---------|----|
| 15 | Mohamed | M | 25 | Muslim | Maghrebien | Tours | 42 |
| 16 | Souleymane | M | 19 | Muslim | Maghrebien | Tours | 36 |
| 17 | Marouane | M | 21 | Muslim | Maghrebien | Tours | 54 |
| 18 | Tarek | M | 22 | Muslim | Maghrebien | Le Mans | 33 |
| 19 | Fathi | M | 19 | Muslim | Maghrebien | Paris | 25 |
| 20 | Samira | F | 21 | Muslim | Maghrebien | Paris | 32 |
| 21 | Ismaël | M | 30 | Muslim | Maghrebien | Paris | 46 |
| 22 | Driss | M | 34 | Muslim | Maghrebien | Paris | 30 |
| 23 | Bader | M | 27 | Muslim | Maghrebien | Paris | 40 |
| 24 | Taoufik | M | 20 | Muslim | Maghrebien | Paris | 58 |