Affective Governmentality in Food Delivery Platforms: A Study of Bolt Food Riga Push Notifications

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Abstract: The paper uses a governmentality perspective to discuss the issue of control in food delivery platforms through analysis of 4083 push notifications sent by the Bolt Food platform to its couriers in Riga from 2020 to 2023. It examines intensity, rationalization, subjectification, and the use of emojis in push notifications and demonstrates affective governmentality technology to control labor mobility. The analysis contributes to the literature on algorithmic management that focuses predominantly on the control embedded in the platform application. Suppose a platform application is viewed as an algorithmic panopticon in which a worker is free to enter or exit by signing on or off. In that case, other semi-automated control technologies, such as push notifications, are affective persuasive tools for bringing workers into the panopticon that limits workers' autonomy and control.

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Introduction. Research Rationale

The study tackles technologies of control in platform work. Also called gig work, it is an increasingly widespread format of work characterized by an algorithmically managed string of short-term engagements, engagement-based pay, and certain flexibility of when and how work is performed (Woodcock and Graham 2020). In 2021, alarmed by the bad working conditions of many gig workers and their lack of access to social protection, the European Commission proposed a directive that would reclassify a significant number of the platform workers as employees and, therefore, push platforms to treat them as subjects of rights and protection provisioned by national and EU labor law. The central issue for interpretation in this debate was that of control—to what degree the workers control the conditions and process of their work and to what extent they are controlled by the platforms (Council of the European Union 2021). In 2024, after a lengthy negotiation between the European Parliament and member states and extensive lobbying by platforms (Corporate Europe Observatory 2024), a new platform work directive was adopted that left the member states free to regulate the classification issue. The new rules direct member states to establish a legal presumption that persons working on digital platforms can evoke if they feel they are being directed or controlled by the platform and thereby misclassified as self-employed (Council of the European Union 2024).

The platforms present themselves as information technology companies that aggregate and analyze data, and, through the provision of information, connect service providers and customers, in the case of food delivery platforms—restaurants, customers, and food delivery couriers. The platforms insist that they are not providers of food delivery services but are data companies that supply independent contractors—food delivery couriers—with information about market opportunities that they can use to provide delivery services and make a profit (Shapiro 2017). The freedom and flexibility to decide when, where, and how to work is the key promise platforms make to attract workers, and this autonomy is perceived as valuable by the workers (Dunn 2020; Schor et al. 2020; Ķešāne and Spuriņa 2024a). This representation of platform work is disputed by

a wealth of academic studies that demonstrate the disproportionate control platforms have over every aspect of the food delivery process, including the distribution of incoming orders amongst the couriers ready to deliver, fees for delivery, delivery routes, timing, and measurement of workers' performance (Aneesh 2009; Rosenblat and Stark 2015; Shapiro 2017; Kellogg, Valentine, and Christin 2020; Lata, Burdon, and Reddel 2023).

The issue of control in platform work is even further complicated by the so-called algorithmic management that platforms rely upon. Because the daily operations of a platform are based on algorithms that process data, platforms can argue that routine decisions—the delivery fees, routes, and allocation of orders—are not *controlled* by their managers but instead are *calculated* by algorithms. The platforms might argue that, instead of *controlling*, they merely *collect* data about incoming orders and couriers ready to deliver and then *calculate* a way for all incoming orders to be delivered fastest and most efficiently. The algorithmically calculated decisions supposedly make objectively optimal choices for the smooth functioning of the whole system, leaving the workers with a certain freedom to schedule their working hours and accept or reject specific orders (Shapiro 2017). Due to the use of machine learning algorithms that are trained on extensive amounts of data collected via the platform app, nobody in the platform management can fully explain what specific considerations and facts have been taken into account in the calculation of a particular algorithmic decision, such as allocation of an incoming to a specific courier and determination of a specific fee for a particular gig.

A substantial body of qualitative ethnographic studies demonstrates how workers perceive algorithmic control (Rosenblat and Stark 2015; Shapiro 2017; Galière 2020; Richardson 2020; Veen, Barratt, and Goods 2020; Parth and Bathini 2021; Zong, Tsaur, and Dai 2024). Since platforms are very protective of their algorithms and data, interviews with workers and ethnographic studies have been the only ways to inquire into the gig work practice

This study provides much more direct insight into the inner workings of a platform through analysis of push notifications sent by the Bolt Food platform to its couriers in Riga from 2020 to 2023. The paper highlights techniques of control through analysis of this dataset using "governmentality" (Foucault 2007; 2008; Bröckling, Krasmann, and Lemke 2012) as an analytical perspective. Recognition of rationalization and subjectification as mechanisms of control and the distinction between calculative and affective rationalization allows us to compare the extent to which push notifications provide information about the market and give workers a certain freedom to calculate their decisions and the extent to which they exert direct affective control over the workers.

The study contributes to the cross-disciplinary inquiry into on-demand platforms from a cultural sociological perspective. While organization studies, human resource management, sociology of work, and technology examine platforms as primarily economic organizations and focus on management techniques, we look at labor-based platforms as cultural actors engaged in meaning-making processes to facilitate work efficiency. By close examination of platform communication with its couriers as a cultural text that defines the workers and the work they are doing in a certain way, we follow the call to study the affective grip of ideology in digital control (Pignot 2023) and to

uncover how the platforms use cultural affective means to control the workers.

Governmentality Perspective

We find the "governmentality" approach useful to conceptualize control in on-demand labor platforms beyond the distinction between the controllers and the controlled. The notion of "governmentality," introduced by Michael Foucault in his 1978 and 1979 annual lecture series at the College de France in Paris (Burchell, Graham, and Foucault 2007; Foucault 2007; 2008), since then, has evolved into an analytical perspective used across many disciplines (Bröckling et al. 2012). Defined broadly, governmentality is a "conduct of conduct" that encompasses *technologies* and *rationalities* guiding the conduct of societies, groups, and individuals, including self-guidance and guidance of others (Foucault 2007:192-193). Technologies of control do not work by forcing others to behave in a certain way but rather by creating "lines of force" that make certain behaviors more probable than others and invoke people to move within these lines (Bröckling et al. 2012:12). Such lines of force can be clearly stated or implied as *rules of the game* maintained by the governing agency that rewards certain forms of behavior and punishes other. Thus, control is exercised not through constraining individual behavior but through structuring their field of action and subjectivity (Galière 2020).

From the governmentality perspective, control is ensured not only through a certain technological infrastructure but also through communicative or discursive practice—the production of truth and morality claims that maintain particular *rationalization*. Rationality, in this case, does not refer to abstract reason or logic but rather is understood as "any form of thinking which strives to be relatively clear, systematic and explicit about aspects of 'external' or 'internal' existence, about how things are or how they ought to be" (Dean 2010:18-19), thus presupposing the existence of multiple rationalities. Such rationalization might include descriptions of reality, its problematizations, and propositions to transform it. It can also include claims about the *subject*. The definition of the subjects of governance or *subjectification* is carried out through explicit reasoning for certain forms of behavior or implicitly by addressing the subjects in a certain way, thereby emphasizing certain subject positions and omitting other self-understandings.

While initially, based on Foucault's work, rationalization was discussed primarily considering calculative and tactical reasoning, more recently, scholars across many disciplines have pointed out that it can have an affective dimension, meaning that governance technology and rationalization can also address emotions or how one feels (D'Aoust 2015). Such affective governmentality (Harmat 2023) is exercised by framing and evoking individuals' desires, aspirations, and anxieties (Moisander, Hirsto, and Fahy 2016). Emotions, such as happiness, anxiety, fear, anger, shame, and self-esteem, among others, are not simply a by-product of the subjectification process but can instead be the target of power and control and can be instruments through which control is enacted (D'Aoust 2015; Kantola, Seeck, and Mannevuo et al. 2019). By working on feelings, such governmentality techniques affect the very behavior since people act upon their emotions.

In our analysis of Bolt Food Riga push notifications, we identify control technologies, rationalizations, and subjectification and observe affective technologies and rationalizations targeted at workers' emotions.

Push Notification in the Context of Algorithmic Management

The vast majority of existing empirical studies on algorithmic management in on-demand labor platforms demonstrate how "rules of the game" in platforms are embedded in the technological infrastructure—the platform application through which the work is carried out. The observed governance mechanisms can be summarized under three main headings—surveillance, measurement, and asymmetry (Kadolkar, Kepes, and Subramony 2024). Data *surveillance* mechanisms are fundamental to the business model of food delivery platforms, which, along with a broader IT and data industry, constitute contemporary "surveillance capitalism" (Zuboff 2019). To work, each courier has to install an application on their phone. While a courier is signed in to the app, their every action generates data. The platform collects and accrues the data and uses these in analysis. One could say that, while working, every move of a courier is observed but meticulously recorded. Platforms develop ratings and *measures* of workers' performance based on collected data. Platforms use these measures to exert direct control over workers—from affecting the allocation of orders to having one's account suspended or even blocked. They also exert indirect control through regular personalized feedback reports that inform workers about their performance and recommend how it could be improved (Rosenblat and Stark 2015; Kellogg et al. 2020; Veen et al. 2020; Duggan et al. 2023; Wiener, Cram, and Benlian 2023). Finally, control of the labor process in a platform is achieved through deliberate and carefully administrated *asymmetry of information* (Shapiro 2017; Veen et al. 2020; Kadolkar, Kepes, and Subramony 2024). Each worker receives information on an incoming order piecemeal while the platform management monitors the whole fleet of workers on real-time digital maps. The asymmetry of power over information is exacerbated through frequent updates of the application that change the visibility of information, rearrange how it is displayed, and even change the basic "rules of the game" (Shapiro 2017).

Two critical aspects of the control issue in platforms are inadequately acknowledged and understudied in the literature on on-demand labor platforms. First, the focus on the platform application overemphasizes automation in platform operations, whereas, in reality, platforms are only partially automated (van Zoonen, ter Hoeven, and Morgan 2023). They combine automated management with traditional human-controlled managerial techniques, and a better understanding of the latter is needed (Li 2022). Second, aforementioned studies of technologies of control account only for the control of the labor process—how the work is carried out—but tell very little about the control of labor mobility—when and how much workers decide to engage. To match fluctuating market demand with the very mobile workforce, the platforms use other mechanisms, such as push notifications, to reach out to workers and convince them to log in and work.

This paper contributes to other studies that address additional mechanisms of control beyond the platform application. Angela Ke Li (2022), in her research of the Didi Chuxing platform in China, observes that platforms use labor intermediaries and communication technologies, like push notifications, to ensure a sufficient supply of workers in times of high demand. Shalini Parth and Dharma Raju Bathini (2021), in a study of Uber and Ola platforms in India, demonstrate how these platforms combine algorithmic data analyses with other control mechanisms. For example, they use push notifi-

cations to "nudge" workers to work at specific times or longer hours, announcing price surges, special bonuses, and workers' competitions. Alex Rosenblat and Luke Stark (2015), in their study of Uber in the USA, mention the use of heat maps, incentives, and frequent messaging as "soft control" mechanisms urging drivers to log in or stay online.

These and many other studies rely on interviews with workers and a limited number of actual messages the workers have shared. By analyzing Bolt Food Riga's communication with its couriers, we can provide a much more thorough empirical analysis and more detailed insight into the platforms' governmentality techniques.

From Panopticism to Affective Governmentality

Extensive surveillance, meticulous measurement of performance, and asymmetry of information make platforms into digital "panopticons" (Foucault 1991), where the supervisors are missing, and the surveillance is carried out through algorithmic management (Veen et al. 2020; Woodcock 2020). Once workers sign in to the application, they find themselves in an "algocratic organizational system" (Aneesh 2009), where the application structures all their actions, and their freedom to choose is restricted by a limited set of programmed choices. Like Bentham's prison guard, the platform has a clear overview of the whole system—every move of each worker while they are signed on the app. The workers, just like Bentham's prisoners, are invisible to each other (van Doorn 2017:904) and receive only the minimum information needed to accomplish each task. The awareness of the prison guard or the "illusion of control" (Woodcock 2020) is maintained through the performance measures that workers perceive in monthly reports or once their account gets temporarily blocked. Some argue that it is exemplary of a new technique of control—"algorithmic governmentality" (Rouvroy and Hildebrandt 2011)—that is the anticipation of human behavior based on massive amounts of raw data without being concerned with causes or individual intentions (Lemke 2012). Without denying panopticism and algorithmic governmentality in on-demand platforms, our analysis of push notifications suggests that the control in platforms is not fully algocratic and that affective governmentality plays an essential role in the overall assemblage of algorithmic management (Kotliar 2021).

In gig work studies, emotions and affects are most frequently discussed regarding "affective labor" (Clough and Halley 2007) performed by gig workers who have frequent interpersonal contacts, such as taxi drivers or on-site micro workers (Wu and Huang 2024). However, some studies touch upon the role of affects and emotions in the rationalization and subjectification of workers. Aaron Shapiro (2018), in a study of Caviar and Postimees in Philadelphia, introduces a new term—"qualculation"—to refer to gig workers' "affective form of reasoning" that combines self-interest with moral considerations and on-the-job bodily and affective sense-making. Edouard Pignot (2023) points out ideological control in the platform economy and argues that it takes place at subjective-affective level via "persuasive performances" or personalized "interpellations" (Althusser 1971), such as algorithmic notifications, motivational incentives, and surge pricing. Sophia Galière (2020), in a study of Deliveroo, demonstrates how, besides disciplinary power, platforms exert normative power. Platforms use discursive features to prompt workers to view themselves as entrepreneurs, and workers consent to discipline because

they see it as "a tool for a hyper-meritocratic ideal of justice" (Galière 2020:9).

With our analysis, we aim to contribute to understanding governmentality technologies in food delivery platforms beyond the algorithmic infrastructure of the platform application. Using qualitative analysis of Riga Bolt Food notifications, we will demonstrate how push notifications serve as an affective control mechanism to reach out to workers and drag the workers into the algorithmic panopticon.

Methodology

The present study is part of a larger research project conducted from 2022 to 2024 in Riga and focused on the experience and practice of gig work by food delivery workers on two platforms—Wolt and Bolt Food. Several qualitative research methods were used to collect data, including 60 in-depth interviews with gig workers of both platforms, analysis of communication among workers on the Telegram platform, and communication between the platform and its couriers—push notifications sent by Bolt Food to its couriers on its official Telegram channel. Based on the data, we have analyzed differences in our respondents' motivations for choosing this work, their position, and historical mobility in the social structure (Ķešāne and Spuriņa 2024a; see also Ķešāne and Spuriņa 2024b) and have addressed the tension between autonomy and control in gig work (Ķešāne and Spuriņa forthcoming).

The analysis reported here is based on qualitative content analysis of push notifications sent by Bolt Food Riga to its couriers from January 01, 2020 to October 03, 2023 via Telegram instant messaging service. The use of an external channel of communication—Telegram—allowed us to download a complete archive of notifications sent by Riga Bolt Food to its couriers over four years of its operations and thereby provided a rare opportunity to get an insight into the internal workings of a platform that, being in the information technology and data business, is typically very seclusive and protective of its information. The following circumstances allowed us to treat the acquired data set as a part of the public domain, similar to any other publicly available promotional and advertising material, and therefore to be used for analysis without any ethical restrictions. First, at the time of the download, the data set was publicly accessible to any subscriber of the specific Telegram channel. Second, the channel itself was administrated by Bolt Food. All the notifications in the data set were authored by Bolt Food Management in Riga.

At the time of the download (October 03, 2023), the archive comprised 4153 text messages and had 7230 subscribers. The channel administrator had authored all notifications, and there were no comments or responses by any subscribers. The majority of messages were in two languages—Latvian and English. The archive was downloaded in JSON format and processed using Open Refine into a table format, where each message had a unique identifier, the date and time it was sent, and content in text format. The data were analyzed using Excel and Open Refine, an open-source application for data clean-up. The facet function in Open Refine and the in-built General Refine Expression Language (GREL) were helpful in data overviewing, transformation, text pattern identification, and coding. The resulting data set was analyzed quantitatively and qualitatively through reiterative thematic coding (Gibbs 2007; Corbin and Strauss 2008).

The quantitative analysis focused on the metadata of notifications—the dates and times when each message was sent. Analysis of dates allowed us to arrive at the intensity of messaging—the number of push notifications sent per day, week, and month. Analysis of the time each message was sent revealed the daily rhythm of messaging. We also used quantitative analysis to see the frequency and prevalence of various emoji types used in platform communication with couriers.

The qualitative analysis focused on the content of notifications and the conveyed meaning of emoji to identify patterns in rationalization and affective framing. Preliminary analysis of the data corpus revealed variations in the spelling, construction of sentences, and choice of specific expressive means that suggested that notifications are not fully algorithmic but human-generated texts. At the same time, the notifications were repetitive and formulaic. There were a limited number of recurring themes, the structure and expression varied only slightly, and one could observe periods when the use of expressions had not changed at all, suggesting that the author had been writing new texts using the old as a template.

The content of the messages was analyzed thematically (Gibbs 2007; Corbin and Strauss 2008), using faceting and GREL search functions in Open Refine to aid the process. First, a four-month data subsection was inductively coded to find a range of communicative purposes of Riga Bolt Food push notifications. Second, the whole data set was coded using the identified categories, adding new categories if needed. This process was reiterated several times until all messages were categorized according to their communicative purpose. One of the subsections of messages—messages urging couriers to work—was further analyzed thematically, looking for 1) rationalization used to encourage couriers to work and 2) instances of subjectification.

Findings

Thematic analysis of the notifications provided us with a range of topics indicative of the purposes for which the platform has used them. We identified four dominant themes. Only about *one-tenth* of all messages are aimed at providing *information* on working conditions, such as warnings about traffic restrictions or severe weather conditions, notices about temporary application malfunctions, and information on the measures taken by the platform to fix these troubles.

About *one-fourth* of messages set *disciplinary measures*—general "rules of the game," such as the default delivery rates and times of the day when rate multiplicators are applied, and listed recommended and forbidden behavior while delivering. While the information on rates is communicated somewhat regularly and does not change significantly over the four years, the rules of behavior, on the other hand, are set sporadically and inconsistently and vary from warnings that couriers cannot contact customers after completing the delivery to instructions to carry a second layer of clothing on hot summer days so they can change clothes if the first set gets sweaty.

About *two-thirds* of all notifications are invitations and encouragements to work. This part of notifications is particularly interesting because they construct rationalizations of why one should work and subjectify workers by addressing them in specific ways. Analysis of these notifications reveals three kinds of affective governing that will be described and illustrated in the subsequent sections: a) intensity and asymmetry of information, b) affective framing, and c) emoji that directly communicates emotion.

Intensity and Asymmetry of Information

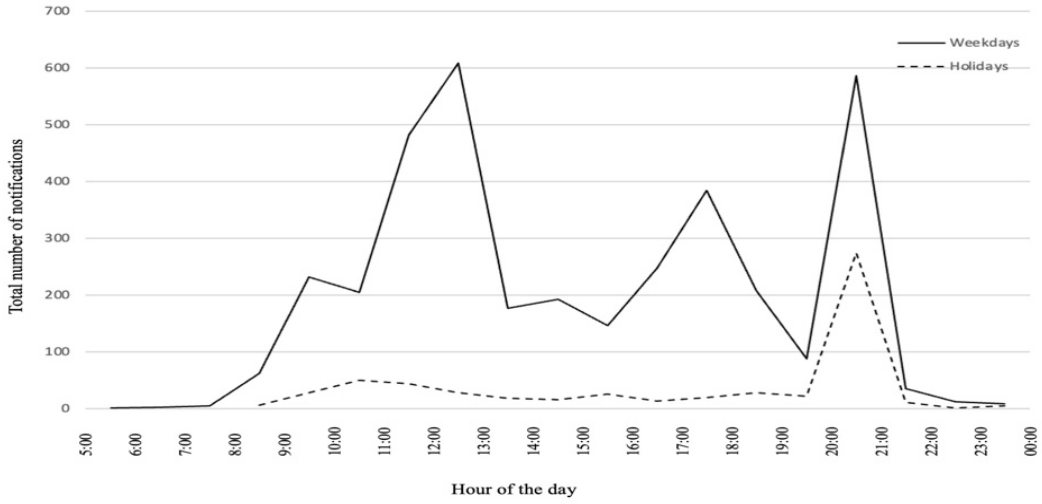
Looking at the number of daily notifications, we see affective governmentality in the intensity of reminders about work and the one-sided flow of information.

On average, Bolt Food Riga couriers have received about twenty-two notifications per week or three per day. The number of weekly notifications varies from more than 90 messages in December 2022 to two or fewer notifications for an entire week in February and March 2021. There are no visible patterns in the variation of the number of notifications; without additional information, it is hard to explain.

The uneven flow of notifications contradicts the view of the platforms providing information. If the push notifications served as a channel of information about market demand, one would expect them to be regular, like news about the weather or the currency exchange rates. Instead, the high intensity of messaging at some periods (13 notifications per day) and complete silence for as long as a week signal that these notifications are purposefully used to govern the behavior of their recipients.

If we look at the timing of notifications or the average number of notifications sent per hour (see Figure 1), we can see that there are three peaks in the number of notifications on weekdays (12:00-13:00, 17:00-18:00, and 20:00-21:00) and only one on holidays (20:00-21:00). These peaks coincide with traditional times for lunch, the end of the working day, and dinner, suggesting that push notifications are sent out predominantly during periods of high demand.

Figure 1. The total number of notifications sent by Bolt Food Riga to its couriers in 2021-2023 in each hour of the day



[The total number of notifications sent is indicated on the y-axis. The hour of the day (5:00 to 00:00)—on the x-axis. There are two lines—one for weekdays and one for holidays. The weekday line stays at zero from 5:00 to 8:00 and again from 22:00 to 00:00. From 9:00 to 21:00, it fluctuates around 200, with three significant peaks—600 at 12:00-13:00, almost 400 at 17:00-18:00, and almost 600 at 20:00-21:00. On holidays, the line stays below 50 from 8:00 to 00:00, with the only peak of about 250 at 20:00-21:00.]

Source: Authors' calculations.

The apparent correlation between the market demand and the intensity of the platform's communication with its workers demonstrates that the platform uses notifications to increase the number of couriers on the streets. Rather than regularly informing workers about the number of incoming orders, providing a complete picture of the market, and letting workers make calculated decisions and plan their working hours, the platform "informs" workers only when the demand for labor exceeds the supply. At other times—for example, when the demand is low or decreasing and workers could take a break—the platform remains silent.

The data demonstrate that control of the platform is exerted not only through its technological infrastructure—the application—but also through a discursive communicative practice—push notifications. This shows that push notifications are an essential control supplement to the platform application's digital panopticon (Veen 2020; Woodcock 2020). The platform Bolt Food uses push notifications to reach out to workers who are off and, therefore, are outside of the panopticon. The intensity of intrusive notifications can be considered a form of affective control. Repeated reminders of work that address individuals as workers during their off-hours inhibit their ability to relax and focus on their lives. Such messages appeal to such feelings as guilt for not working and might provoke feelings of anxiety. Such intrusive and, at times, very intensive communication contradicts the platform's promise that couriers can set their schedules.

The one-sidedness of the communication—the intensive messaging at times when the market demand is high and the lack of communication when the market demand is decreasing—contributes to the understanding of the asymmetry of information in platform labor found in other studies (Shapiro 2017; Veen et al. 2020; Kadolkar et al. 2024). We can see that the information asymmetry is not only built into the application, where workers receive information piecemeal while the platform has an overview of the whole system. It is also an integrated part of platform communication outside of the application. This communication pattern suggests that push notifications are used as a mechanism of control, and further analysis of the content of the notifications corroborates this interpretation.

Affective Rationalization and Subjectification

Content analysis of push notifications reveals the predominance of affective rationalization and subjectification. In its invitations to work, the platform does not communicate calculative rationale but rather appeals to the fear of missing out and losing opportunities. It also addresses the couriers in a way that targets their self-esteem and sense of duty.

More than half of all notifications urge couriers to activate the application and work or stay longer at work. Only one-fifth of the notifications inviting to work were grounded in calculative rationalization, offering higher remuneration or promising some other bonus or benefit. Some of these calculative rationalizations can be considered semi-affective mechanisms of control because they include elements of "gamification" (Woodcock and Johnson 2018; van Doorn and Chen 2021; de Krijger 2023), for example, announcements of a reward for a courier that delivers most orders at a specific time or an extra pay if a courier delivers a certain number of orders in a certain period. Other studies have documented that, due to information asymmetry,

such mechanisms of control sometimes result in feelings of anxiety and powerlessness when couriers extend their working hours to receive a volume bonus but fail to achieve it because they do not receive enough orders to deliver (van Doorn and Chen 2021).

The majority of notifications urging couriers to come out and work or to extend their working hours beyond planned, four-fifths of all invitations to work, are based on affective non-calculative rationale claiming that there is an extremely booming market and staying home one will miss out on their opportunities. In these notifications, information about incoming orders is expressed in a hyperbolic way, with extensive use of exclamation marks and excessive means of expression. As for example, here:

> WOW! So many orders today. Do not lose your chance and come online now! 🔥🔥🔥[fire emoji, fire emoji, fire emoji] 95 % of couriers are with orders! 💣[bomb emoji] [2020-07-08T11:36:08]

> 🆘[SOS button emoji] The city is already on fire! The best time to join us now! 🙌 [raising hands emoji] [2021-03-10T12:19:26]

> City is on fire, tons of incoming orders 🔥 [fire emoji] [2022-12-18T12:56:50]

The emotionally loaded way of expression and the use of superlative terms to characterize the status of the market, such as "on fire," "so many," and "tons of," do not merely provide information on market opportunities based on which couriers can make reasoned decisions to work or stay home. Instead, as an affectively loaded statement of how things are, they create rather narrow "lines of force" (Bröckling et al. 2012) within which there is only one right course of action—to work.

There are no notifications that would inform about other degrees of the demand—low or medium—or more detailed information on the level of demand, for example, the number of orders per hour. We can see another form of information asymmetry—the platform informs the couriers only about the times when the demand is high or is going up, but it gives no indication that the demand is decreasing or it is so low that the majority of couriers could stop working and take a rest. There is an affective asymmetry, where the platform communicates care about couriers missing out on opportunities to earn but does not demonstrate any care about their need to rest and recuperate.

The information on the high market demand is often narrated in a way that it is something unique, happening right now, and can be lost or wasted. Here are some examples:

> Come on guys! No time to waste. More you wait, more you lose 😉 [winking face emoji] [2020-05-11T11:46:14]

> Super huge amount of incoming orders! If you are not online, then you are losing a great chance to earn! ❄️ [snowflake emoji] [2021-12-03T12:00:49]

> The city is full with orders! ❌[red cross mark emoji] Come-online and dont miss an opportunity to earn! 💸 [money with wings emoji] [2022-08-11T20:28:07]

This sense of urgency maintained by warning against "losing time" or "missing opportunities" is hardly informative. It is important to note that this sense of urgency comes on top of the overall

temporal regime maintained by the platform application itself, where workers are given a very short time to review and accept an incoming offer and are prescribed a certain time to pick up and drop off an order. It is clear that the collective availability of workers in the on-demand economy comes at the expense of each worker's temporal autonomy (see also Shapiro 2017; Chen and Sun 2020).

The same expressive means are used to communicate information about the actual high number of incoming orders and expected high demand in the coming hours, often not clearly distinguishing the two. The expectations being communicated in the same hyperbolic way as statements about the present situation create an impression of complete certainty of the future. Certainty, as an emotion that is based on cognition (Barbalet 1992), is crucial to orient one's action in a positive way as it gives a sense of predictability and control. Here are some examples of it:

> Hey, rain is expected today, which means that the number of orders will increase rapidly. Remember - rain is your best friend when delivering! ☔ [umbrella with raindrops emoji] = 💸 [money with wings emoji] [2022-08-22T08:20:35]

> 🔥❤️🔥 [fire emoji, red heart emoji, fire emoji] Valentine's day - the most active day yet 🇬🇧 [flag of UK emoji] Hey! Already tomorrow a record amount of orders are expected all day long. The peak of the day is expected from 5 PM - 10 PM. 🚀 [rocket emoji] Earn your highest earnings yet and receive the money already on Monday! 💥 [collision emoji] [2020-02-13T18:56:05]

Similar observations of the lack of distinction between reality and expectations based on algorithmic calculations are reported in other studies. Rosenblat and Stark (2015) and Pignot (2023) report that experienced gig workers learn not to trust the platform's assertion of high expected demand because, reportedly, they often turn out not to come true. These observations show that due to asymmetry of power and information, the platforms are not motivated to increase the precision of their predictions or urge couriers to stop working because a mismatch between the demand and supply of labor is costly for the platform only if the demand exceeds the supply. Whereas, when the labor supply exceeds the demand, the only ones who suffer are couriers who have planned to work but are forced to stay idle.

Finally, in attempts to draw workers online, the platform appeals not only to the rational opportunity to earn but rationalizes their work as an act of bravery or a civic duty and asks couriers "to help" concealing the asymmetric employer-worker power relation behind an ideological fantasy of the platform and couriers united in a civic mission. This is done through subjectification—through addressing couriers as partners in a civic mission and heroes. Here are some examples:

> SOS! This city needs you! Be a hero and go online to help the citizens to cope with their hunger 🦸🦸[man superhero emoji, woman superhero emoji] The orders are coming more and more! 🌋 [volcano emoji] [2020-06-02T09:05:22]

> Orders are coming in non stop! Need more heroes to help us! 🚨[red police car light emoji] [2021-05-08T13:07:03]

> Couriers who are online now - you are real heroes! 🦸🦸[man superhero emoji, woman superhero emoji] [2020-06-08T17:36:08]

This subjectification of couriers as "heroes," portrayal of delivery work as bravery, and rationalization of work by statements that "people are hungry" have been observed in other studies of platform labor. Jeremias Prassl and Martin Risak (2016) report that TaskRabbit refers to its workers as "neighborhood heroes" and "entrepreneurs like you who can help [busy people] get things done" (Prassl and Risak 2016:24). Pignot (2023) argues that such personalized corporate interpellations platforms "seduces and flatters the self by silently depriving workers of their social and legal status as 'employees' or 'workers,' and by removing from them any chance of challenging the existing power structure" (Pignot 2023:148).

Overall, it is clear that affective governing at platform delivery works through texts and signs to appeal to workers' emotions that prompt their action to work.

Emoji

This discursive affective governmentality technique is supplemented by extensive use of emoji—digital pictograms encoded in Unicode that today are a standard part of computer-mediated communication and serve as "signifiers of affective meaning" (Stark and Crawford 2015). Emoticons, emojis, and kaomoji nowadays are used not only in digital communication but also in social debates, economy, art, and literature (Giannoulis and Wilde 2020), and as we can demonstrate, also in labor relations.

The whole corpus of Bolt Food Riga notifications to its couriers from 2020 to 2023 contains 36,164 emoji of 237 different kinds, or on average, eight emojis per message. The analysis of these emoji complements the text analysis in the previous section. Our analysis suggests that the platform uses emojis to create a sense of urgency and alarm, whereas the emojis most frequently used in everyday communication—those that express positive emotions and support, such as regular smileys—are very marginal in the Bolt Food Riga communication.

The most frequent emoji in Bolt Food Riga messages is *high voltage*, followed by *fire* and a *red pin*. Such emojis emphasize the need to be alert and get involved, making a reader anxious that something important is going on and that help is needed. Table 2 shows the rest of the top 10 most frequent emojis and their frequencies.

Table 2. Top 10 most frequently used emoji in Bolt Food Riga notifications, 2020-2023

Emoji	Name	Frequency
⚡	lighting	4950
🔥	fire	4315
📍	red pin	3056
💚	green heart	2238
❗	red exclamation mark	2125
🍏	green apple	1871
💸	flying money	1275
💡	lightbulb	1149
💰	money bag	962
🍔	burger	919

Source: Authors' calculations.

To get a more thorough overview of emojis, we did a thematic analysis of all emojis and found five general themes.

Table 3. Themes of emoji in Riga Bolt Food notifications, 2020-2023, and the prevalence of each theme in the total corpus (N = 36164)

Theme	Emoji (images)	Emoji (names)	Prevalence
urgency and alarm		high voltage, fire, red pin, red exclamation mark, lightbulb, backhand index pointing up and down, police car light, face screaming in fear, red cross mark, red circle, waving hand, alarm clock, exploding head, rocket	55%
food delivery		red cars, shopping cart, burger, bowl, noodles, pizza, coffee, pancakes, hot dog, drink, smartphone	11%
money		dollar bills, credit card, euro bills, diamond, money-mouth face, dollar sign, flying money, bag of money	11%
corporate green		green apple, green heart	11%
affection and support		raising hands, relieved face, star-struck, smiling face with smiling eyes, flexed biceps, smiling face with heart eyes, smiling face with sunglasses, star, face savoring food	5%

Source: Authors' calculations.

As can be seen in Table 3, more than half of all emojis (55%) communicate *urgency and alarm*. Among those are the most frequently used emoji of high voltage, fire, and red pin, but also other red-colored emoji, such as red exclamation mark, red cross, red dot, and red police sirens. Besides these, the sense of alarm and urgency is also expressed through the face screaming in fear emoji, exploding head, a rocket, and several hand gestures—upward and downward pointing index fingers and a waving hand.

Only about 5% of emoji are the most common emoji of affection and support—various smileys and raising hands or high-fives, as well as flexed biceps and stars. The rest of the emoji can be divided into three equally represented themes. One, the most expected, is emojis thematically related to food delivery, such as delivery cars, various food items, and smartphone emojis. Another is what we call "corporate green," which entails only two emojis—a green heart and a green apple. These emojis match the corporate color of Riga Bolt Food and are used along with the company name throughout the corpus. Finally, equally prevalent as the previous two is the theme of money that includes dollar and euro bills in various formats, as well as a money bag, aflying pack of money, and a smiley with money on the eyes and tongue.

The extensive use of emojis in Bolt Food notifications demonstrates Riga Bolt Food's communication with the couriers as an affective governmentality practice (Harmat 2023). Emojis expressing urgency, such as lightning, fire, and red colored dots, crosses, and exclamation marks, clearly serve as instruments of affective control (D'Aoust 2015; Kantola et al. 2019) and are aimed at evoking the decision to work based on emotions—the feeling of anxiety (Moisander et al. 2016). These emojis feed into the rationalization of the market situation as fast-changing that can be lost or wasted, where there is no time to reason and calculate, and one should act fast, not "miss out" and "lose opportunities" that are out there. The analysis demonstrates that emojis are an important tool to induce an "affective form of reasoning" (Shapiro 2017) on a subjective-affective level (Pignot 2023) and that push notifications as a discursive affective governmentality practice is an important component of the overall algorithmic assemblage (Kotliar 2021) in food delivery platforms.

Conclusion and Discussion

Our analysis demonstrates that affective governmentality techniques play an important role in the overall assemblage of algorithmic management (Kotliar 2021) in food delivery platforms. It is clear that the platform is not a neutral provider of information but rather uses affectively loaded discursive rationalization and subjectivization to control workers' behavior. If the platform application is viewed as an algorithmic panopticon (Veen et al. 2020; Woodcock 2020) that a worker can enter or exit by signing on or off the application, the push notifications resemble intrusive missionaries that reach out to workers while they are off and drag them into the panopticon using effective persuasive techniques. The affective governmentality mechanisms, illuminated by our analyses, demonstrate that platforms inhibit the promised autonomy and freedom of couriers to work when and how long they want by affective subjectification and rationalization. Platforms construct morality claims they systematically deliver to couriers (Dean 2010). They subjectify couriers by appealing to their courage, heroism, and "civic duty" to feed the hungry and play on the fear of missing out and losing opportunities. They also rationalize the decision to work when the platform is experiencing a shortage of couriers by exaggerating the market demand and by evoking the feeling of anxiety through the use of an extensive amount of alarm and urgency-provoking emojis. In line with the governmentality studies, platforms emphasize and promote only certain forms of couriers' self-understanding (Dean 2010). With their push-notification platforms form continuously active subjects but never inform them about their need to rest to rejuvenate (cf. Galière 2020; Pignot 2023). In other words, the study demonstrates that push notifications are affective governmentality mechanism used to increase the number of couriers on the streets at times of high demand, and this instrument of control is affectively loaded and asymmetric.

Besides illuminating the affective aspect of control technologies in platform labor, the study adds to the understanding of the human element in automated algorithmic management systems in more than one way. In a fully automated food delivery system, the delivery would be ensured by a set of robots or drones that would be activated and deactivated whenever necessary. In such an automated system, the deactivation of the robots would be important to decrease costs. In a current system, where deliveries are performed by humans, the key issue is the availability of the labor force. Because the cost of the supply of labor exceeding the demand is fully paid

by the workers, the platform cares only about increasing the number of riders in the system without taking care of "switching" them off.

The invisible authors of push notifications are among those new and understudied occupations that have developed alongside algorithmic management and bridge and bypass the gaps in global sociotechnical systems (Kellogg et al. 2020). One could say that the notifications they draft and send to the couriers accommodate the human factor in a system moving toward automation. In its present format, the platform relies on the communication skills of these workers and their mastery of the local language. In this, they resemble other local workers in global economic systems, such as the-last-mile delivery couriers in Poland whose local knowledge, analytical, and interactive skills are crucial for the smooth functioning of the global and slowly automating ecosystem of logistics (Pieczka and Miszczyński 2024).

Our findings raise important ethical and regulatory concerns about the role of affective governmentality in the platform economy. The use of persuasive communication techniques to influence worker behavior—without formal employment relationships—complicates existing debates on labor rights and workplace autonomy. Traditional employment structures are subject to regulations that limit excessive managerial control, yet platform-mediated work often circumvents these protections by relying on algorithmic and affective nudging rather than direct supervision. This raises pressing questions about consent, coercion, and the limits of self-employment in the gig economy. To address these concerns, policymakers and labor advocates may need to explore new regulatory frameworks that account for the psychological and emotional pressures imposed by digital platforms. Such measures could include transparency requirements for algorithmic decision-making, limits on the frequency of push notifications, or worker rights provisions that acknowledge the hidden forms of control embedded in platform labor.

Our analysis has certain limitations. It demonstrates the technologies of control and the affective rationalities push notifications project onto workers. How workers perceive, experience, and feel about these push notifications has been left outside of this study. Other studies demonstrate that gig workers are not passive recipients of platforms' affective control (Shapiro 2017; Woodcock 2020; Pieczka and Miszczyński 2024; Tuomi et al. 2024). For example, Shapiro (2017) argues that workers use "qualculation"—a combination of rational calculation, intuition, and on-the-job bodily and affective sense-making to make decisions and gain control in gig work (Shapiro 2017). Aarni Tuomi and colleagues (2024) demonstrate what they call "algoactivistic approaches" used by workers to mitigate algorithmic control. Yet, given the affective load push notifications carry, it is important to study to what extent their affective influence reaches gig workers and what kind of workers' subjectivities these push notifications shape. Such knowledge is crucial to understanding the power dynamics of the platform economy and how it affects the well-being of workers.

Our study underscores the need for a more integrated, interdisciplinary approach to understanding control and agency in the platform economy. While labor studies have extensively examined algorithmic management and surveillance, and digital communication research has explored the persuasive power of platform design, there remains a gap in understanding how these elements interact as part of a larger socio-technical system. By drawing from

sociology, psychology, media studies, and labor economics, future research can offer a more nuanced perspective on how workers and consumers navigate these digital environments. This cross-disciplinary engagement is essential for identifying new forms of resistance, adaptation, and policy intervention that can help shape a more equitable future for digital labor and platform-based work.

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