

race against the machine – the effects of digitalization on the working conditions and the organization of labor struggles.

An empirical study on the online delivery companies *Deliveroo* and *Foodora* in Berlin.

A research project
conducted by:

Manon Le Bon
Yannick Ecker
Sophie Emrich

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Preliminary Notes:

This paper was initially submitted as a research paper in the context of the project seminar *Smart City* conducted by Dr Henning Füller at the Department of Geography at Humboldt University of Berlin in the summer semester of 2017. It was produced by students and it has to be understood as part of a learning process. However, instead of feigning perfection by reworking it entirely, we decided to publish it as a *work-in-progress*, as a point of reference for future research projects and as a matter of debate.

Though this research project was conducted in the context of a seminar at Humboldt-University of Berlin, the results of this study are presented in English to make them accessible to delivery workers, of whom many are not in command of the German language. Hence, where possible, English sources were used and footnotes added to complement German quotes.

Moreover, it should be kept in mind, that the labor processes organized by the online delivery companies *Deliveroo* and *Foodora* are constantly changing and that they vary in different contexts. Therefore, the results of this study cannot produce a complete picture of the working conditions at these companies.

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1. Introduction

“The work we do is the foundation of their business. We are the foundation of their business. Yet for them, we are like cogs in their food-delivery-machine, more easily replaceable than app or algorithm.” – with these words a delivery worker formulates her criticism of the treatment of delivery workers in the companies *Deliveroo* and *Foodora* at a union rally in Berlin on June 28, 2017. She reaffirms the vital importance of the delivery work for the company, even though it consists of heavily standardized labor that takes place in a setting digitally-controlled through a smartphone app. The delivery couriers' labor process is centered around the worker's privately-owned bicycle, smartphone and his*her body, which is thereby *put into service* to receive and deliver orders.

Reflecting on this way of organizing a labor process, many aspects seem worthy of deeper investigation – this research project is, however, focuses primarily on the way in which the human-technology interface is set up and how it is shaping the control and experience of the labor process. This focus was chosen due to a more general interest in the use of cybernetically-networked systems to *put* human bodies *into service* within and outside of wage relations of employment (e.g. as *citizen sensors* or geo-information gatherers for platforms such as *GoogleMaps*).

Such discussions on new mechanisms of exercising power within urban realities have accompanied the recent surge of academic publications focusing on so-called *smart cities*, i.e. various urban development projects, which are centered on infusing information and communication technologies into cities and that share an “underlying neoliberal ethos that prioritises market-led and technological solutions to city governance and development” (Kitchin 2013: 2). Concepts such as *environmentality* (Gabrys 2014), *cybernetic governmentality* (Sacchi 2016) or *smartmentality* (Vanolo 2013) are called upon to analyze possible implications for the government of urban populations through the production of an urban landscape, consisting of digitally-connected and controlled infrastructures and spaces. In these debates, '*the*' *smart city* is frequently discussed in a dystopic-futuristic manner, using newly-founded cities and “green field developments” as examples or referring to public-private urban development projects in already existing cities (cf. Shelton, Zook & Wiig 2014: 14). However, instead of understanding *smart cities* as large scale urban development projects – as a type of city or a form of urban planning – in this research project, the *smart city* is understood in a dynamic manner: *smart city* herein is used as a concept to describe various forms of the *urban*, that emerge in production processes of cybernetically-networked and

-networking systems (for a similar understanding, see Kitchin, Coletta & McArdle 2017).¹ Thereby, the scope of the concept of the *smart city* is, on the one hand, extended, as diverse processes such as new business models, social networks, smart infrastructures or city administrations can be subsumed under it. On the other hand, the concept is refined analytically; it points towards the idea, that the *smart city* is not simply a new form of urbanity that is pulled into the city of today using public-private infrastructure projects. Instead it becomes apparent, that the everyday reality of the *smart city* is something, that is already produced in a decentralized manner in a wide range of everyday contexts.

Using such a definition, the research project documented in this paper focuses on the effects of the digitalization of the labor process on the working conditions in the online delivery companies *Deliveroo* and *Foodora* in Berlin in order to analyze its way of functioning and to provide a general framework for understanding and criticizing the emerging digitally-infused realities of today's cities. The aim is to answer the following research questions:

- i) To what extent is the organization of the labor process and its machinic interface of bodies and technological components used to maximize the businesses' profits?
- ii) How do digitalized working conditions in online delivery services (*Deliveroo*, *Foodora*) affect the worker's *relation to oneself* – the experience of the labor process?
- iii) To what extent does the digitalization and design of the labor process pose obstacles for the organization of labor struggles?

The project is focused on the delivery workers using a bicycle – hence excluding the experience of the labor process by delivery workers using a car or scooter and the experience of other wage laborers working for the above mentioned companies.

This paper is structured in the following way: In chapter 2, the theoretical foundations and analytical tools used in this project will be presented. This presentation includes the outlines of a postoperaist perspective on labor struggles and the concepts of *machinic enslavement/social subjection*. Chapter 3 focuses on the methodological framework of the empirical study conducted among delivery workers. In chapter 4, the results of the study are presented and analyzed, followed by a conclusion (chapter 5) on the results of this research project and a reflection on its theoretical and methodological design.

¹ The term *cybernetics* will be explained in chapter 2.2.

2. Theoretical Foundations

The research project presented in this publication focuses on the changes in working conditions, that are brought about through the interface of digital networking and the labor process in delivery services. Regarding the theoretical foundations of this project, two theoretical reference points will be presented: on the one side, the contextualization of this research project in the (post)operaist study of working conditions; on the other side, the recourse to the concepts of *machinic enslavement* and *social subjection* (for these concepts, see Deleuze & Guattari 1987: 356f.; Lazzarato 2006, 2014: 23ff.). These concepts will be applied in this project as a theoretical and pragmatic frame for analyzing the workers' experience of the labor process in online delivery services.

2.1 The “Working Self”: a (Post)Operaist Perspective

Studying the working and living conditions inside and outside of capitalist production facilities has a tradition reaching back as far as the emergence of the capitalist factory system itself (for examples, see MECW 35: 374-505 or MECW 4: 295ff.). With the detachment of labor from feudal and slave relations and the emergence of wage labor two sorts of questions were pushed to the fore in the context of this field of study. The struggle over the wage appropriate for a given type of work became a central issue. Besides, the conflict over the extension and intensification of labor was fought out, i.e. the conflict over the length of the working day, the organization of the labor process and the type of labor performed during working time.

In the Marxian labor theory of value, these struggles are referred to using the terms of *absolute* and *relative surplus value* (cf. MECW 35: 509ff.). From the standpoint of the Marxian analysis, maximizing the profit made from the labor spent in the labor process, while pushing down the workers' wages – or replacing workers by machines, if this should not be possible – is central to the capitalists' interests.

The classes mentioned in this analysis – capitalists, workers, landowners – refer to the position in relation to the means of production. This position in the capitalist production process is determined by the possibility to own means of production privately, thereby gaining the capacity to employ wage laborers and to retain the output of the labor spent by them. Capital, according to Marx, is consequently defined in the following way:

Capital, therefore, is not only, as Adam Smith says, the command over labor. It is essentially the command over unpaid labor. All surplus-value, whatever particular form (profit, interest, or rent), it may subsequently crystallize into, is in substance the materialization of unpaid labor. The secret of the self-expansion of capital resolves itself into having the disposal of a definite quantity of other people's unpaid labor. (MECW 35: 534)

The above mentioned labor struggles over the conditions of the labor process are assigned a varying importance within different currents of Marxian and Marxist theory.² However, these struggles take up a central role in so-called operaist (*workerist*) and postoperaist Marxist theories, that developed in Northern Italy in the 1960s: they become the driving force behind transformation processes of the organization of production/circulation/consumption. The struggle of the worker against work itself is understood as a fundamental historic moment (for example, see Tronti 1974: 233ff.). In contrast to structuralist Marxist approaches, the role of the *subjectivity* of the worker, i.e. the experience of the labor process and the disciplinary normalization of the *working self*, takes up a central role in (post)operaist theoretical praxis (for an overview, see Birkner & Foltin 2010: 16-34 or Wright 2002: 21ff.). In numerous studies, operaists entered businesses to analyze workers and their labor processes and to support labor struggles (for examples, see Alquati 1974 or Panzieri 1972). The founding of an own journal – the *Quaderni Rossi*³ – in 1961 supported the development of this operaist current by offering a platform for the presentation of such research projects and the discussion of Marxist theory (cf. Palazzo 2014: 96ff.). Operaist activists and researchers focused on the *relations in production*, rather than satisfying themselves with an analysis of the *relations of production*, i.e. of the a general model of the mode of production, property relations, the different factions among capitalists etc.⁴ By analyzing the relations between workers-machines, capitalists-workers and the organization of the production and labor process as a central site of class conflict, they take up a thread neglected in other Marxist approaches.⁵ Besides, discussions on reproductive work, care work and feminist issues gained a central importance in operaist theories, thereby advancing the Marxist critique of the capitalist mode of production and pushing its analytical focus beyond the factory walls (cf. Palazzo 2014: 353ff.; Wright 2002: 133ff.).

The label *Postoperaism* refers to the theoretical development of operaist thought from the beginning of the 1980s onwards. Two developments justify adding this prefix: on the one side, the politico-historical context of the destruction and criminalization of operaist-autonomist protests in Italy led to the incarceration or flight of important activists and theorists (cf. Wright 2002: 197ff.); on the

² Compare, for example, the rather marginal role of labor struggles in Harvey's *The Limits to Capital* (1982) to the one in operaist theories after Tronti (1974) or in feminist critiques of the capitalist mode of production following Dalla Costa & James (1972).

³ *Quaderni Rossi* means “red notebooks”. Six issues were published between 1961 and 1966.

⁴ Regarding the difference between *relations in production* and *relations of production*, see: Burawoy 1979: 14ff.

⁵ For Marx's interest in the workers and the labor process they were facing, see for example: MECW 35: 374ff. or MECW 24: 328ff.

other side, the contact with so-called poststructuralist theorists and former operaists led to a reformulation of operaist theory (cf. Birkner & Foltin 2010: 46ff.). Aside from numerous theoretical changes, one of the modifications of operaist thought should be named here: contrary to most other currents of Marxist theory, postoperaists such as Antonio Negri provided theoretical contributions, focusing on the politico-economic transformation, that lead to the production regime labeled in theoretical debates as *postfordism*. Vis-à-vis the industrial “mass worker”, affective and cognitive labor move to the fore, the importance of new sites of production outside factories and the commodification of social relations are theorized.⁶

Examples for tendencies anticipated by postoperaists early on can be found in the emerging platform economy: Internet users today produce data, while they are communicating with friends via *Facebook* or navigating the city using a smartphone or while consuming *Youtube*-videos and thereby profit companies that evaluate this data (geo)statistically and use it for marketing purposes.

The research project documented in this paper draws on the above mentioned (post)operaist theoretical praxis. The analytical gaze is therewith focused on the workers themselves, the *working selves*, i.e. the subjective experience of the labor process and the human-machine-relationships organized therein. For a better understanding of the digitally-mediated working conditions in online delivery services, the concept of *machinic enslavement* will be employed. Using it as an analytical concept, the contested relationships between (a) the formally-juridically defined *employment*, (b) the representation and experience of work and (c) the labor that is concretely spent shall be investigated. Furthermore, the obstacles these relationships create for the organization of labor struggles will be looked at.

Similar to (post)operaist research projects, the results of this study will be shared and discussed with activists from the *deliverunion*, a group of workers organized within Berlin's anarcho-syndicalist *Free Workers Union (FAU)*.

2.2 Concept of *Machinic Enslavement*

The concept of *machinic enslavement* is used to address several conceptual problems identified during a preliminary screening of the academic literature on the topics digitalization and working condition. Three of these conceptual problems will be presented here:

⁶ Prominent theoretical works include Negri's *Marx beyond Marx* (1991), Virno 2001, Marazzi 2008 (2002); 2011 (1999), Vercellone 2007 and Lazzarato 1996; for a general overview, see: Palazzo 2014: 350ff.

(1) The digitalization of social fields, such as service consumption, enables the organization of new processes of production, circulation and consumption – potentials especially used in the so-called *platform economy*.⁷ Taking *Deliveroo* as an example, a business model can be identified, that functions almost exclusively by digitally connecting relations and processes. Via a platform the stomachs of the consumers, the bodies and bikes of the riders and the kitchens of the restaurants are connected, making their relations accessible to commodification.

(2) At the same time, the digitalization of labor processes revolutionizes the human-machine relations, pushing transaction and communication costs towards zero and instituting smartphone applications, digital shift plans and communication services as the prime medium to send orders to workers during and beyond their labor processes (for these tendencies, see Jürgens, Hoffmann & Schildmann 2017: 23ff.; Raffetseder, Schaupp & Staab 2017; Becker 2017: 101ff.). This changes the experience of labor processes – the *molding of the working self*. The algorithms used by *Deliveroo* or *Foodora* can serve as examples: they process orders, deliveries and rides automatically and transform them into orders for the workers (“Ride to his restaurant!”, “Pick this up!”). Simply put, this poses questions such as: “Do I use the machine or does it use me? How do I experience this relationship?”

(3) Furthermore, the interface of digitalization and work is accompanied with epistemological and methodological challenges. The example of the algorithm mentioned above shows, that the power to perceive and act emerges in an interplay of human beings and technological apparatuses (for the concept of *distributed agency*, see Rammert 2008). Such potentials and machinic dynamics would be neglected when looking at them from an actor-centered approach, such as Giddens' *theory of structuration* (1984). Acknowledging these effects means, that agency – the power to perceive and (re)act – can emerge from machinic interfaces and non-human “things”. Due to the formal limitations of this paper, the full epistemological and ontological implications of such a statement can not be discussed at this point. Still, the following question moves to the fore: Which knowledge is produced within and about the working conditions of online delivery services? To what extent does the digitalized labor process endow its informational-technological components with a form of agency? Such thoughts point at the methodological challenge of understanding the mechanisms at work in digitalized labor processes, instead of simply focusing on their surface effects in the form of orders and deliveries.

⁷ In the face of spatially-disintegrating business models, the Hans-Böckler-foundation's expert commission on *the Future of Work* even proposes a concept of the *business (Betrieb)* that is no longer delimited spatially, but defined along its functions (cf. Jürgens, Hoffmann & Schildmann 2017: 33ff.). For an overview of the platform economy, see Becker 2017: 126ff.

In this research project, all of these three conceptual problems are addressed by introducing the concept of *machinic enslavement*. This concept can be read in at least “two directions” – as a concept developed within cybernetics to analyze asymmetric power relations and as a socio-philosophical concept used to explore the experience of subjection to these power relations. These two readings will be laid out in the following before presenting the research questions and a preliminary analytic framework.

2.2.1 *Machinic Enslavement: the Origin of the Concept in Cybernetics*

The concept of *machinic enslavement*⁸ was popularized in postoperaist theories and socio-philosophical discussions through its introduction by the French philosophers Gilles Deleuze and Félix Guattari. In their main oeuvre *A Thousand Plateaus* (1987 [1980]), Deleuze and Guattari refer to this concept rooted in cybernetics to refine their analysis of mechanisms of power and domination.

The field of study called cybernetics emerged in the 1940s and is centered on theorizing the control of systems. Norbert Wiener, pioneer in this field of study, defined cybernetics in the following way: “We have decided to call the entire field of control and communication theory, whether in the machine or in the animal, by the name *Cybernetics*, which we form from the Greek κυβερνήτης or *steersman*.” (1985: 11) In cybernetics, the aim is generally to understand and construct controllable, dynamic and automatic systemic processes by implementing feedback mechanisms and establishing interfaces between processes. In French cybernetics, *asservissement machinique* refers to an asymmetry in the interface of different systems – it refers to the subordination of one system to another through the establishment of feedback mechanisms enabling the control and manipulation of the subsystem and its components (cf. Johnson 2014: 65f.).

The use of a smartphone application such as *GoogleMaps* can be taken as an example. For users – understood as a subsystem – the usage improves their power to perceive, orientate themselves and

⁸ Massumi uses the term *machinic enslavement* in his translation of the French expression *asservissement machinique* used by Deleuze&Guattari in *A Thousand Plateaus*. However, in French cybernetics, the term *asservissement* originates in a translation of the English word of *control* and carries a specific meaning: “In early French mediations of cybernetics it is therefore interesting to observe a process of linguistic accommodation in which *contrôle* is not the predominant term, but is supplemented and relayed by associated terms such as *commande*, *asservissement*, and *régulation*. The first term (*commande*) clarifies the semantics of sequence: the order or command is unidirectional and precedes its execution. The second term (*asservissement*) qualifies the hierarchical relationship between coupled systems: the ‘effector’ component is subordinated to the ‘control’ component.” (Johnson 2014: 65). This meaning, proper to French cybernetics, is lost in the English translation. Hence, in this paper, the term *machinic enslavement* will be complemented by the expressions *put into service machinically* or *controlled machinically* to avoid the misleading connotations of the expression *enslavement*.

to act. It does so by granting them access to *GoogleMaps'* geodata archive. However, looking at it from *Google's* perspective, the users serve as sensors for the collection of geodata: by using *GoogleMaps* and their GPS systems, the users provide information – for example on the popularity of a visited place, the price level and service at a restaurant or on the traffic that is to be expected on a given route. In this specific interface consisting of humans-smartphones-*GoogleMaps*, the users produce a continuous stream of information that complements marketable data sets and establishes *Google* as the interface with the physical environment, which in turn produces places for attractive digital advertisement.

Looking at this problem from a perspective of *machinic enslavement*, it becomes obvious that one is not dealing with a dominating *subject* (*Google*) and a user, degraded to a functioning *object*. Instead, the example shows, that one is here dealing with a bidirectional, *asymmetric* inter-action, consisting of streams of data, information and money. Such a research perspective demands an extensive description of the system at hand and a detailed analysis of its interactions and connections. Such a description should be understood as an inventory: it tries to identify relationships, streams and bodies, that are taking part and *put into service* in given processes.

2.2.2 *Machinic Enslavement & Social Subjection* as Concepts for Analyzing Working Conditions

In a broader understanding the concept *machinic enslavement* refers to the human-machine relationship – i.e. in this research project, the relationship between delivery workers and the technological apparatus consisting of smartphone, app and algorithm. Already Marx theorized the importance of the molding of the worker in the production process through the implementation of technological and organizational innovations:

In handicrafts and manufacture, the workman makes use of a tool, in the factory, the machine makes use of him. There the movements of the instrument of labour proceed from him, here it is the movements of the machine that he must follow. In manufacture the workmen are parts of a living mechanism. In the factory we have a lifeless mechanism independent of the workman, who becomes its mere living appendage. (MECW 35: 425; see also 421f.)

Applying Marx' statements on how human bodies are *taken into service* through the means of production to current relations *in* production obviously requires major adjustments: labor processes have to be analyzed in their specific interfaces of bodies and machines. However, if one seeks to understand the functioning of the labor process, such an analysis of machinic interfaces has to be accompanied by an analysis of the experience of the labor process – the expressive practices, signs and statements that surround it. Speaking from a postoperaist perspective, what one has to analyze

is the *relation to the self* – the *subjectivity of the worker*. It refers to the worker taking up a subject position – “a role” – in the dominant patterns of producing meaning: it is about the production of “a relationship of capture with the narrative content which mobilizes my representations, my feelings, my habits as a subject [...]; [...] a world of conscious and unconscious fantasies inhabiting my daydreams...” (Lazzarato 2006; see also Lazzarato 2014: 23ff.)

Next to the concrete labor spent in the *machinically-controlled* labor process, consisting of bike, street, smartphone, app, restaurant and consumer, an understanding of the work one is doing is produced as a meaningful relationship to one's self: “in juristic terms I am a freelancer, who receives five euros per delivery, for *Deliveroo* I'm the hipster-courier who can plan his shifts flexibly and work outside at the fresh air instead of having a boring nine-to-five office job...” Stories, like this fictional one, told to oneself – this integration into the dominant mental reality is what Lazzarato, following Deleuze&Guattari, calls *social subjection*. Deleuze&Guattari explain these two different and complementary moments of exercising power in the following way:

There is enslavement when human beings themselves are constituent pieces of a machine that they compose among themselves and with other things (animals, tools), under the control and direction of a higher unity. But there is subjection when the higher unity constitutes the human being as a subject linked to a now exterior object, which can be an animal, a tool, or even a machine. The human being is no longer a component of the machine but a worker, a user. He or she is subjected *to* the machine and no longer enslaved *by* the machine. (Deleuze&Guattari 1987: 356f.)

Machinic enslavement as a broader concept for understanding how human bodies are *put into service* by technological and social arrangements – how the worker *is put into service* by fixed capital – points to the worker's relation to oneself, i.e. their *social subjection*. In order to understand this relation, the narratives, statements and discourses surrounding the work for online delivery platforms have to be considered.

2.3 Research Questions & Analytical Focus

Based on this preliminary review of the literature on digitalization and working conditions, the following exploratory research questions were formulated:

- i) To what extent is the organization of the labor process and its machinic interface of bodies and technological components used to maximize the businesses' profits?
- ii) How do digitalized working conditions in online delivery services (*Deliveroo*, *Foodora*) affect the worker's *relation to oneself* – the experience of the labor process?
- iii) To what extent does the digitalization and design of the labor process pose obstacles for the organization of labor struggles?

On a meta-level and considering possible future research projects, the following research question will also be considered and answered in chapter 5.2:

- iv) Which contribution can the concept of *machinic enslavement* make to the analysis of working conditions in online delivery services?

To address these research questions, the concept of *machinic enslavement* will be used as an analytical framework. The purpose is to determine the complementary moments of how the workers are *put into service*. On the one side, as laid out in chapter 2.2.1, an extensive description of the components of the cybernetic systems of the online delivery services has to be carried out: processes and connections of the components in the labor process have to be traced to grasp the role that the bodies *put into service machinically* play in them. On the other side, the relation to oneself of the workers has to be considered, as argued in chapter 2.2.2. Herein, the workers have to be brought to express the narratives, statements and signs – the “image” and self-image – they connect to their work. As an attempt to operationalize this research task methodologically, the combination of narrative interviews and photo-elicitation described in chapter 3 will be used.

Before going into the details of the methodological approach applied in this research project, one theoretical problem should be considered: In both perspectives – that of *machinic enslavement* and that of *social subjection* – the analyzed relationships and process partly elude the researchers' gaze. Considering the machinic interfaces, one is dealing with regimes of signs that can hardly be grasped narratively: in the *code/space* of algorithms (Kitchin & Dodge 2011), smartphone apps and online processes the bodies, orders etc. are converted into digits and automatic calculation processes. Factors such as physical exhaustion, weather or riding speed dependent on the terrain are measured in real-time and compared to achieve an efficient distribution of orders. A verbal or written account – as in the case of this research project – has to translate heterogeneous processes into “one” language, thereby running the risk of concealing their specific characteristics. Using the concept of *machinic enslavement* is an attempt to describe processes and connections established on a pre- or a-signifying (a non-representational) level. However, in this research project their qualities can only be communicated using the form of expression of language. A similar warning applies to the question regarding the “working selves” – the *social subjection*: here, one is asking for something, that is not reducible to language. Rather, subjectivity is the intangible “in-between” – the experience of being *put into service* – that some riders might never have expressed verbally. Bringing it forward using language runs the risk of pressing the riders' experiences into the ready-made narratives of the researchers.

The above mentioned problems have been considered in the context of this research project. They influenced the choice of methods employed and will be reflected upon at the end of this paper.

3. Research Design

In the following sub-chapters, the research design of this empirical study will be laid out. In chapter 3.1, the research method, a combination of photo-elicitation and narrative interview making, will be presented as a way to address the methodological challenges mentioned in 2.3. Chapter 3.2 documents the implementation of the research method.

3.1 Methodological Approach: Photo-Elicitation, Narrative Interviews

In this project, the researchers combined two complementary methods: *narrative interview making* and *native image making*, a method from visual sociology.

A general plan of inquiry with a set of topics that should be discussed served as a basis for the second part of the narrative interviews; the first part consisted of open narrative interview making based on the interviewees' photos. The researchers chose to include photographs as an integral part of this research process to obtain the interviewees' own accounts of their working conditions. Without shaping the subsequent questions, the aim was to get the interviewee to express him*herself freely; respondents are indeed more likely to find it easier to describe a photograph, explain its specificity than to produce point blank a very wide frame. Before meeting, the researchers asked the interview partners to take four to eight photographs and/or screenshots of what they associate with their job: 'key-moments' in their day, typical spaces or activities or anything they felt portrayed their situation. The interviews were conducted after taking photos and served as the 'ice-breaker' in the interviews, which then were narrative, open and not directive. The images (photographs but also screenshots) facilitated the access to important information and details that could otherwise not have been obtained by verbal interviews alone. Although telling stories is common in everyday situations, many forms of research seem to suppress stories and disqualify them as problematic in the analysis of collected empirical data. One of the most important thrusts of the combined method is the idea of seeing several approaches as mutually inclusive: narrative native-image-making interviews are both a resource for gathering detailed information (realist

approach) and interviews in themselves are a source of knowledge (ethnomethodological approach).

The use of still photographs as a field method is both a qualitative and inductive method that is rooted in the field of *visual studies*; the idea is that photographs are both a source of knowledge and a research tool. Their use in social research requires a theorization of their implications and meaning. In the Anglo-Saxon world, photographs only began to be integrated into research projects as a way to access the field in the 1970s. Only a few ground-breaking exceptions, such as the monographic thesis on Bali by Gregory Bateson and Margaret Mead in 1942 (Bateson & Mead 1942), which had the subtitle “a photographic analysis”, existed prior to this period. Gregory Bateson and Margaret Mead wanted to legitimate their use as a means of understanding non-verbal relations. Visual sociology takes root in the will of a direct exploration of the field. The article *Photography and society* by Howard Becker (1974) can be considered as its very foundation; he says: “Photography and sociology have approximately the same birth date [...]. From the beginning, both worked on a variety of projects. Among these, for both, was the exploration of society” (Becker 1974: 3). With a symbolic interactionist approach, Becker aims to find various methodologies to have a new understanding of already studied subjects; photography is one of those methods. One way to explain the late use of photography in social sciences is the difficulty to distinguish art photography, journalism and sociology: the contextual character of photographs makes them difficult to analyze since “their meaning arises in the organizations they are used in [...] and so varies from time to time and place to place” (Becker 1995: 5). Becker’s interactionism is close to an individualistic approach embodied in his refusal to take into account any exterior determinants. This divide between sociology and photography happened at a time during which sociologists wanted to be taken more seriously in the scientific sphere, leading to its depoliticization or at least objectivation; Becker remarks: “Whereas sociology becomes more scientific and less openly politic, photography becomes more personal, artistic and keeps on being politically engaged” (Becker 1974). Although sociological photography clearly differs from artistic photography, it remains an issue of controversial debate among researchers.

Written sources and verbal communication have long been dominant in research; their preeminence contributed de facto to marginalize other sources. With a Bourdieusian approach, Jean-Paul Terrenoire speaks about the *habitus* of researchers who prefer working on “available written sources (archives, documents, publications...) or on provoked written sources (questionnaires, tests...)” (Terrenoire 1985: 510; trans. by MLB) therefore discrediting pictures or graphic sources as illegitimate data; he affirms that “every means of expression is also a means of conception” (Ibid.;

trans. by MLB) and that photography is both a data and a means of collection of data. Its heuristic power needs to be rooted in a precise methodology without which “the image is worthless” (Bateson & Mead 1942: 49-50). The camera is more an extension of the senses than a technical object, it helps understand better insofar as “we moderns are often poor observers. Its sharp focus might help us see more and with greater accuracy” (Collier & Collier 1986: 5). The limitations of the camera are those of the one using it and a meaningful photograph is but the direct corollary of a precise sociological observation. Pictures in visual sociology are both a medium and a data; they can either be taken by the researcher himself or by the persons he is working on/with (Harper 1988). “The challenge is to observe with *scientific significance*” as argued by Collier and Collier (Collier & Collier 1986: 5): this *challenge* must be the first concern of the researcher as only then it permits to elevate photo-making from the realm of technical trivia to a substantive field method. Visual research methods enable to access the work stories and experiences of the subjects (i.e. here *riders*) on a deeper level. Photography is therefore used in mapping social interactions and in capturing slices of reality that would otherwise not be readily accessible to verbal description.

If one first understands the image as a means of collecting data, its use can be subdivided into several methods: the most important one is *photo-elicitation*. The interview is conducted based on a graphic support that “often stirred deep and painful memories” (Rose 2001), which can be explained by a physiological phenomenon according to Harper, insofar as pictures speak to the consciousness on a deeper level (Harper 2002). This method also diminishes the distance that can exist between the worlds of the researcher and of the interviewee because it helps co-construct the object of research. The *native image making* or *photo-voice* method, a subcategory of photo-elicitation, is based upon photographs taken by the interview partners on demand of the researcher; the pictures are then discussed during the interview. Albert Piette, with a Goffmanian approach of reality, affirms that photographs help to grasp social interactions and moments and that it is an essential tool to access “a minor modus of reality” (Piette 2007). It indeed permits to harvest data sensibly and qualitatively different; the interview partners are more prone to sharing personal stories which may seem anecdotic but by breaking out of generality actually permit to have a finer and more precise understanding of the realities of the interviewee. This proactive research method enables to grasp in a “total understanding the objective regularities of conducts and the subjective experience of those conducts” (Bourdieu & al. 1965: 11; trans. by MLB). It blurs the effective distinctions between experience and theory in a productive manner and integrates the interview partner in a more reflexive way into the research.

3.2 Implementation: Sampling & Analysis

Using the method described in the previous chapter, this research project set out to analyze the labor processes at the delivery companies *Deliveroo* and *Foodora* using accounts from delivery workers.

In this study, the sampling of interview partners was based on theoretical assumptions (see Kruse 2015: 248ff.). Already a superficial screening of media coverage on the working conditions at *Deliveroo* and *Foodora* shows that the working conditions are perceived very ambiguously: whereas the work is presented as an exploitative and physically-challenging work on the one hand (for example, see Grimm 2017 or Riese 2017); it is on the other hand presented as a pleasant and enjoyable part-time job (for example, see Töpfer 2017, Trüpschuch 2017 or Schader 2016). Considering this ambiguity, it seemed impossible to aim at representing the whole variety of narratives. Instead the researchers decided to focus on the experiences of workers who had already identified the work as somehow problematic. This decision was supported by the fact that fellow students were conducting a similar research project investigating workers who did not take part in the organization of the *deliverunion*.⁹ Hence, the decision was taken to participate in *deliverunion* events between May and July 2017 and to contact delivery workers directly. As the research project focuses on the organization and experience of the labor process, delivery workers from both, *Deliveroo* and *Foodora* were interviewed, as these companies – despite their differences mentioned in 4.1.1 – organize their labor process in a similar manner. Hence, no further criteria were used except of (a) being a delivery worker for either *Deliveroo* or *Foodora* and (b) sympathizing or participating in events that are part of the *deliverunion* campaign.

Using this sampling method, four interviews were conducted with workers from both *Deliveroo* and *Foodora* as presented in Table I. The implications of this sampling method will be discussed in chapter 5.2.

⁹ As part of the project seminar “labor struggles in digital capitalism”, see: <http://digitale-kaempfe.tumblr.com/projekt> (last accessed: 11-09-2017).

Table I: Overview of interview partners

	company	employment relation	conducted in
I1 (m)	<i>Deliveroo</i>	midi-contract	English / June 2017
I2 (m)	<i>Foodora</i>	midi-contract	English / July 2017
I3 (f)	<i>Deliveroo</i>	so-called self-employment	German / July 2017
I4 (m)	<i>Foodora</i>	midi-contract	German / July 2017

At every interview, two researchers were present who conducted the interview and documented their impressions regarding the atmosphere and contents of the interview as well as to reflect on their performance with regard to the implementation of the method. The interviews were then transcribed, using the method laid out in Appendix V.

The subsequent analysis of the interviews followed an iterative three-step process as presented in more detail in Appendix VI:

- (1) On the level of the individual interviews, a description of the interviews regarding the role of *pragmatics*, *syntax* and *semantics* was produced (a micro-linguistic analysis, see Kruse 2015: 469).
- (2) On the level of the individual interviews, the workers' narratives regarding their experience and understanding of labor process were used to form a system of codes. These categories represent an extension of the theory-based interest in the worker's definition of the labor process, relations to superiors/colleagues/customers, the role of app/connectivity and obstacles to unionization. These categories can be understood as thematically-defined containers which were then filled using the narrative phenomena produced in the interview situations (cf. Ibid.: 382).
- (3) Comparing the results of step (2), a common framework for coding was established and the interviews were compared regarding these categories (see Appendix VI).

Each step was documented. However, the documentation cannot be presented in full detail as the

researchers would thereby risk the anonymity of the interviewees and – in the case of this research project – their layoff by the companies.

The results of this descriptive and analytical procedure will be presented in the following chapter and reflected upon in chapter 5.2.

4. Analysis & Results

In the following sub-chapters, the results of the empirical study documented in this paper will be presented. Chapter 4.1 focuses on a description and analysis of the labor process, in which delivery workers are *put into service* by the companies, thereby focusing on the research questions (i) and (iii). The following chapter (4.2) then deals with discursive representations of the delivery work at *Deliveroo* and *Foodora* and the experience of the labor process by workers (research question (ii)).

4.1 Summary: towards Understanding the Labor Process

As outlined in chapter 2, the analysis will begin with an extensive description of the labor process organized by the delivery companies *Deliveroo* and *Foodora* in Berlin. The aim is to provide a detailed inventory of the organization of the labor process, its way of connecting the participating elements (bicycles, human bodies, restaurants, deliveries, customers etc.) and streams of information, money and labor force. Based on this description, the way the delivery workers are *put into service machinically* will be analyzed.

4.1.1 Description of the Business Models of the Online Delivery Services

The business models of the companies studied in this research project are organized in a similar way, although they differ in some important points, which will be described in the following.

Both companies were founded in recent years. *Deliveroo* is a British online food delivery company founded in 2013 that, as of September 2016, was active in over 84 cities in 12 countries with about 20,000 self-employed couriers (cf. O'Connor 2016). *Foodora* was founded in Munich in 2014 under the name *Volo*. It was bought by *Rocket Internet* and became part of the corporation *Delivery Hero* under the name *Foodora* in September 2015 (cf. Kyriasoglou 2017). According to its own

announcements, *Foodora* is currently employing over 7,000 delivery workers in over 65 cities in 10 countries (cf. Foodora 2017).

The business models of *Foodora* and *Deliveroo* are centered around the same model (see Appendix I): They offer online platforms, smartphone apps and a fleet of delivery workers – so-called *riders*¹⁰ – , allowing consumers to order food from nearby restaurants, most of which formerly did not entertain a delivery service. In this regard, both companies can be understood as working in logistics – as of now, they do not produce the food they are delivering. Therefore, they also do not need elaborate physical infrastructures for their delivery fleets, only offices for their hotline workers, IT staff, managers etc. The companies mainly organize their respective platforms and smartphone apps, they develop the algorithm and IT infrastructure needed for the delivery mechanism, they organize advertisement campaigns, win over new restaurants, raise capital and expand into new markets. This list does not include differences and local variations related to cooperations with other companies such as the cooperation between *Foodora* and *Lieferheld* within *Delivery Hero* and *McDonalds*.¹¹

However, considering the overview presented in Appendix I, one notes that the businesses are structured around three streams: flows of information, money and physical labor.

Information: Focusing on information, one notices that the business models consist of establishing contact between restaurants and consumers: the platforms present the restaurants' food items and process orders. This transfer includes the transmission of data on the customers' personal preferences and information (address, preferred price range and food etc.) and of data from the restaurants (average price levels, food offered in a certain part of town etc.). This stream of information is complemented by the companies' customers service and by the feedback established with delivery workers, using different smartphone applications for communication as well as registering the delivery workers' statistics – such as the number of deliveries, the distance covered or the average speed (see Appendix II).

Money: Looking at the circulation of money in this model, it becomes apparent, that the companies function by taking a *platform fee* and a *delivery fee* for their mediation of the customer-restaurant

¹⁰ The term *rider* itself can be seen as a way of avoiding to calling one's workers employees or workers and to establish a sense of community among the *riders*. In the *deliverunion*-campaign the expression is also used in an attempt to unite all delivery workers, disregarding their employment contract or whether they are working for *Foodora* or *Deliveroo*.

¹¹ In this example, *McDonalds* makes use of the platforms of *Foodora* and *Lieferheld*, while all deliveries are executed by *Foodora's* delivery workers; see McDonalds 2017.

relation. Both companies charge about 30 to 35 percent of the value of ordered goods (cf. Fischer 2017). These fees are the main financial inputs, that – aside from venture capital – keep the businesses going. Using this income, the companies have to cover wage payments as well as the costs for office rents, advertisement etc. In this regard, it should also be noted, that neither *Deliveroo*, nor *Foodora* are generating financial returns for their investors and stock holders yet, nor are they projected to do so in the upcoming years (cf. Ibid.). As can be seen in Appendix II, the flow of wages to delivery workers is restricted in different ways: In Germany, *Foodora* hands out various forms of contracts (mini-/midi-/full time contract), *Deliveroo* still has such contracts, but is pushing for a fleet consisting only of formally self-employed workers (cf. II: 8). In *Foodora*, the delivery workers are paid an hourly wage: 9€/h for normal delivery workers, 10€/h for *rider captains*, 11€/h for *senior rider captains* (taz 2017: 40:15ff.). *Deliveroo* has different models: formerly models with an hourly wage plus an extra payment per delivery existed; as of now workers are either (a) hired as self-employed workers receiving a payment per delivery without being paid an hourly wage (5€/delivery) or (b) using a contract with an hourly wage only (9€/h; cf. II: 8). *Deliveroo* also has so-called *senior riders*, delivery workers with additional functions in the labor process. Various schemes for receiving bonus payments exist in these companies.

Labor: Aside from the flow of money and information, the companies mobilize the workers' labor force. Their business models are centered around one commodity: the food delivery. This commodity is produced through *putting* the workers' bodies and their labor power *into service*: Producing this service consists of an iterative and highly standardized 7-step work schedule, exemplified here using instructions provided by *Deliveroo*: (1) using the app to confirm taking a delivery, (2) getting to the restaurant and using the app to confirm the arrival at the restaurant, (3) using the app to confirm that the restaurant staff is working on the delivery, (4) using the app to confirm having received the order, (5) getting to the customer and (6) using the app to confirm the arrival at the customer's location, (7) handing over the order to the customer and using the app to confirm having completed the delivery¹². The smartphone application herein becomes the tool for checking in and out of work; it controls the labor process as it does not allow the workers to see the following steps, unless the previous steps have been completed. Besides, it registers the workers' statistics (see chapter 4.1.4). This schedule does not contain other tasks necessary for the functioning of the labor process such as repairs of one's bicycle or shift planning (see chapter 4.1.2).

¹² This schedule is complemented by the following advice: “**Don’t get creative** – call the hotline! We love the mixture of culture and heritage within our community and we know you’re amazing. Not only because of your strength, but because of your minds. But when it comes to creativity, we ask you to act it out on your bike, your art, your communication...but please don’t get creative with deliveries!” (cf. Deliveroo 2017; emphasis in the original)

In the following sub-chapters (4.1.2-4.1.6), the results of the interviews will be presented around an in-depth analysis of themes, that appeared central in the interviews: the workers' understanding of the job (4.1.2), the relations to colleagues and superiors (4.1.3), the role of the smartphone app and connectivity (4.1.4), the assumptions about strategies employed by the delivery companies (4.1.5) strategies pursued by the workers, obstacles to and strategies for organizing labor struggles (4.1.6).

4.1.2 Defining the *Job*: What is Part of the Labor Process?

The statements made by the interviewees regarding their contracts on the one hand and the different *things that need to be done to get the job done* on the other hand brought to light a discrepancy between the paid work juridically defined by the companies and the actual tasks, time and energy related to the job as experienced by the delivery workers. Several aspects of the labor process which are not part of the the juridically-defined work are explicitly included in the *riders* definitions and perceptions of the job as the following statements show:

[...] it's like you're basically working from home as well just trying to get your shifts [...] (I2: 2)

[...] even when you have like a flat tire, they ask you to log off.. and. because they say, "yeah, you're not working", but yeah, if i have a flat tire on the street and i have to repair it to go on working for me, this would be part of the job for sure. [...] (I1: 2)

As illustrated by our iceberg model in Appendix III, only the actual deliveries are part of the juridically-defined job, while crucial tasks inherently connected to the labor process such as shift planning, repairs and – in the case of so-called freelancers – waiting between the deliveries is not regarded as part of the job as defined in the contracts and therefore not paid. In this sense the current negotiations between *FAU* and *Foodora* can be understood as a collision between the existing definitions, which might lead to a process of juridical redefinition.

The interviewees' statements on the actual time and costs spent on shift planning and repairs reveal the significance of these tasks for the *riders*. In the case of the often inevitable repairs, the amount of time and money that needs to be invested is hardly predictable:

[...] the tips or even a bit more goes out in reparations of the bike, and these expenses pop up when you less expect, and want it, like if you. if you fuck up your chain, you have to repair it today, if you have a shift tomorrow. [...] (I1: 7f.)

The importance of shift planning is related to the fact that most *riders* do not get enough shifts guaranteed to be able to reach their targeted monthly income:

[...] it is true that you need to spend a lot of time there if you don't get enough shifts which i think is the case for

probably half the people working for foodora i suppose. if you did a survey at least half of them would say that usually they don't get enough shifts by the end of the week so they need to spend a lot of time for that. [...] (I2: 2; see also I1: 14; I4: 14)

As shifts can often only be taken when they are dropped by another delivery worker, shift planning is a continuous task which has to be integrated in the *rider's* daily life as highlighted in the following statement:

[...] if you need to work and you don't have enough shifts basically you need to be refreshing this screen all the time, just be waiting for someone to post a shift that you want to take and then you contact them as soon as possible and try to get their shift. [...] some weeks you have to spend hours on there, it's like you just have to have this tab which is plain open constantly, just looking at it, trying to see if there's any shift [...] (I2: 2)

The discrepancy of definitions becomes particularly apparent in the case of so-called freelancers employed by *Deliveroo*. Waiting is an integral but unpaid and formally excluded component of their work, as they are paid per delivery only:

[...] ich glaube es ist ein viel größeres problem, dass wenn wir pro auftrag bezahlt werden, dass wir feste schichten haben, zu denen wir eigentlich da sein müssen, aber pro auftrag bezahlt werden, das heißt, wenn's zu wenige aufträge gibt um uns nen vernünftigen stundenlohn zu geben, also ich brauch mindestens zwei aufträge pro stunde um auf zehn euro die stunde zu kommen als selbstständige. wenn es aber weniger aufträge gibt, dann bekomme ich einfach weniger geld, muss aber trotzdem eigentlich zu meinen schichten da sein. [...] (I3: 4)¹³

As stated repeatedly by the interviewees, especially on sunny days the *riders* often need to wait a lot because only few orders are received.

Expenditures on bikes and phones are exclusively covered by the delivery workers. One interviewee had to purchase a bike initially to be able to work for *Foodora*, which increased his private spending for the job to a remarkable amount: “[...] u-um so yeah one hundred euros in repairs for the old bike and then about three hundred euros to for purchasing the two bikes [...]” (I2: 6).

It can be assumed that any job has effects on the leisure time and daily routines. However certain effects of the delivery work are worth noting. Aside from the shift planning and repairs that need to be dealt with, this concerns a special diet, time for recovery and the effects of the working hours on social life.

Two interviewees reported to have special eating habits adjusted to the physical strain of the work:

[...] ich fahr ziemlich viel ehm bin gestern zehn stunden durchgefahren ehm da, da ist man schon auch ein bisschen am futtern und zwar gnadenlos. ehm, also heute zwei-stunden-schicht, das ist nix, da passiert nichts, aber ehm, wenn man ein bisschen länger fährt . das ist ganz lustig, man ist einfach auch so, ok, hier halbe stunde pause,

¹³ English translation: [...] i think it's a much bigger problem, that we are paid per order, that we have fixed shifts where we actually have to be present, but we are paid per order, that means if there are too few orders to pay us a decent hourly wage, so i need at least two orders per hour to reach ten euros per hour as a freelancer. but if there are fewer orders, then i get less money but still have to be present during my shifts. [...] (I3: 4)

so schnell wie möglich ganz viel kalorien [SE: ok] das ist schon irgendwie, das macht man sonst so nicht unbedingt so, ja, das ist einfach eine körperliche arbeit [...] (I4: 2; see also: I1: 15)¹⁴

Leisure time is also influenced by the fact that the physical strain of the labor requires time for recovery. In addition the unusual working hours inherent to the delivery work have a significant influence on the social life. The following quotes illustrate these two aspects:

[...] man ist halt total fertig. ich glaub wenn du das ein jahr machst, dann kannst du auch mal ne acht-stunden-schicht machen und danach noch was tun, aber meistens arbeitet man ja also mittags und dann abends nochmal. das heißt, erstens ist da der ganze tag im arsch von den zeiten her weil dann, wenn man von achtzehn bis zweiundzwanzig uhr arbeitet, ist halt dann wenn alle anderen frei haben und zweitens, klar man kommt von der ersten schicht nach hause und ist erstmal total müde und dann kommt man von der zweiten schicht nach hause und geht erstmal ins bett. [...] (I3: 13)¹⁵

[...] das ist einfach ein komplett asozialer job [laughs] [SE: laughs, ok] also du fährst am wochenende und abends, so tschüss, freunde. ja, also, eine ehemalige mitbewohnerin hat mir geschrieben, na wann kommst du denn mal vorbei, wann willst du mal meinen sohn sehen, der jetzt gerade geboren wurde? ich sag, eh, aha [laughs] keine ahnung, eh-eh, lass uns nächste woche mal drüber reden, ja so, das ist . eh . so ne sache [...] (I4: 4)¹⁶

To sum it up, discrepancies between the paid work and the actual activities necessary to fulfill the job as a *rider* exist in the fields of repairs, shift planning, waiting, recovery and leisure time habits.

4.1.3 Relations to Colleagues & Superiors

As mentioned in Chapter 2.1.3, communication processes with the company and colleagues are largely shaped by digitalized and depersonalized standards. For most delivery workers, there is no common work space for exchange, except for encounters in the streets and restaurants. This chapter focuses on how this situation molds the relationships to superiors and between colleagues.

Relations to Superiors

The *riders* are mainly in contact with the *dispatch/rider operations* team or the customer service and according to the interviewees' narrations many of them have never actually met their superiors and often do not even know their names:

[...] den einzigen kontakt den wir so wirklich haben ist mit dem kundenservice wenn irgendwelche probleme auftauchen, aber die sind ja selber nur angestellt von deliveroo, also die sitzen ja selber nur im büro und

¹⁴ English translation: [...] i do quite long shifts uhm yesterday i did ten hours non-stop uhm, there you have to eat a lot, like merciless. uhm so today two hours shift, that's nothing, nothing happens, but uhm when you're on the bike for a bit longer, that's pretty funny, you're just like, okay half an hour break, as many calories as possible [SE: okay] that's already, you wouldn't do that otherwise, yeah, it's simply physical work. [...] (I4: 2; see also I1: 15)

¹⁵ English translation: [...] you're pretty done. i think if you would do that for a year, then you can do an eight-hours-shift and still do something afterwards, but most of the times you work during lunch time and then again in the evening. that means, first it ruins the whole day due to the schedule because then, when you work from six pm to ten pm, is just when every body else is free and second of course you come home from the first shift and initially you're totally tired and then you come home from the second shift and first of all you go to bed. [...] (I3: 13)

¹⁶ English translation: [...] it's just a completely asocial job [laughs] [SE: laughs, okay] so you work on weekends and in the evenings, so bye, friends. yeah so a former flat mate texted me, hey when will you come over, when do you want to see my son, who has just been born? i say, uhm, aha [laughs] no idea, uhm, let's talk about it next week, yeah so, that's uh such a thing [...] (I4: 4)

werden dafür bezahlt den kundenservicejob zu machen. also ich würd mich nicht bei denen beschweren. das sind nicht die richtigen ansprechpartner. und zu irgendwelchen leuten, die da höher in der hierarchie sind, hab ich überhaupt keinen kontakt, ich hab die noch nie gesehen [...] (I3: 8)¹⁷

However, two interviewees reported that *riders* who have been working for the companies for a longer time and who are often *captains* or *seniors* are better connected. *Captains* at *Foodora* who are paid a euro more per hour are responsible to give feedback to a group of *riders* if something abnormal shows up in their statistics. Hence, there is no need for the superiors anymore to get in contact with the *riders* because appraisal interviews are sourced out to the *rider captains*. One interviewee who is a *rider captain* reported to know his bosses and to sometimes chat with them in the *hub*, a kind of common room *Foodora* has in Berlin-Mitte, which supports the assumption made by two other interviewees:

[...] wenn man ab und zu mal, eh, im hub rumhängt im endeffekt und da mal der chef rumrennt [SE: hm] eh. man kann ja mit dem auch ganz normal reden, ja, also, es gibt nen wunderbaren umgang mit dem, also wunderbar aber .. völlig vernünftigen umgang mit dem ja, ehm . der erzählt einem dann auch mal ehm irgendwie was zurück, ja, also es ist nicht so . aber kommunizierst du halt nicht mit fünfhundert fahrern . [...] (I4: 18)¹⁸

With respect to the interviews it seems like communication between superiors and certain *riders* takes place on informal corridors and depends on personal acquaintance.

When the executive suit of the company wants to communicate something to the riders, they do it via newsletter (cf. I1: 16; I4: 18). This one-way communication tool does not ensure mutual understanding and does not offer any space for questions or discussion.

Relations between Colleagues

Although there is no permanent working space where the delivery workers could meet, communication between colleagues can be more personal as there are several places of personal encounter: parks and squares at the log-in points, restaurants and traffic lights enable personal exchange. Especially the log-in points, where the delivery workers usually wait for their first order, offer time and space for communication.

Nevertheless much of the communication between the delivery workers takes place via *WhatsApp*. Yet this digital exchange is not guaranteed but requires a first personal contact to get an invitation to

¹⁷ English translation: [...] the only contact that we actually have is with the customer service when whatever problems show up, but they are also just employed by deliveroo, they themselves are also just sitting in the office and are getting payed for doing the customer service . so i wouldn't complain with them. they are not the right contact persons. and i don't have any contact to people who are higher in the hierarchy, and i've never seen them [...] (I3: 8)

¹⁸ English translation: [...] when you're hanging out in the hub from time to time eventually, and then the boss is running around there [SE: hm] uhm, you can talk to him in a normal way, yeah so there's a wonderful intercourse with him, yeah wonderful but .. absolutely decent intercourse with him yeah uhm . he also tells you uhm something back, yeah it's not like. but obviously you don't communicate with five hundred riders . [...] (I4: 18)

a *WhatsApp* group. In this sense, communication between *riders* is highly informal and depends on private initiative:

[...] ich red jetzt hauptsächlich von einer inoffiziellen whats-app-gruppe [MLB: okay] also einer die sich einfach über kollegen, die haben sich dann, so gebildet, leute kommen und gehen . also, da wird immer wer hinzugefügt, ey, ja wo mal ein bisschen gequatscht wurde und so, ah ja, hier ach haste lust, wir haben hier so nen kollegenchat, willstste mal mit rein? [...] (I4: 29)¹⁹

This also explains why the perception about actually *having colleagues* varies between the *riders* depending to their involvement in inter-colleague communication processes as the following two quotes show:

[...] i mean, and.. the people that, the people from deliveroo that you meet are generally your colleagues and are generally even nice people and you have nice chats. [...] (I1: 4)

[...] there is no sense of actually having colleagues i guess, u-u-um, and you don't, you basically don't know anyone who actually works at the company, that's not entirely true for everyone who works at foodora, i know that there are people who are riding longer, the rider captains who actually have to deal with people at the office, u-um, a lot more. but i would say that for at least eighty per cent of the riders that's basically the sense that you have, like the only people that you know are people who work in the same area as you and then you run into restaurants sometimes and then you exchange, you have five minutes of conversation but that's about it. [...] (I2: 8)

Hence, relationships between delivery workers and their superiors or colleagues are either digitalized and depersonalized or informal and personal. Encounters between delivery workers are no necessary components of the regular labor process but take place rather accidentally.

4.1.4 Role of App & Connectivity

Apps and Connectivity do not only play a crucial role in the organization of the food distribution as described in Chapter 4.1.1 but also in communication and evaluation. Nearly all communication processes between workers and company are digitalized and depersonalized and although personal communication takes place between *riders* in certain situations, they are mainly connected via smartphone applications. To control the *riders*' performance, the companies use the digital connection to constantly evaluate them. They capture the *riders*' exact log-in and log-out points and times, their speed and routes as well as the time spent at restaurants and customers. The extracted data is used for statistics and to create scores which are the basis for sanctions against the delivery workers (see I1: 3f.; I3: 3; I4: 11).

This section refers to the questions raised in Chapter 2.2: How do the *riders* experience the human-

¹⁹ English translation: [...] i'm mainly talking about an unofficial what's app group now [MLB: okay] so one that just was created by colleagues, they just developed, people come and go . so there's always someone new added, ey, yeah where some chat took place and so like, uh yeah, would you like? we have this chat for colleagues, do you want to join? [...] (I4: 29)

machine-relationships that shape their labor process? What roles are taken by humans and machines? How do the *riders* relate to their smartphones and how are they *taken into service* by the applications? In this regard, the interviewees' statements display two major discrepancies: the advantages and disadvantages of depersonalized digital communication and labor processes and the contradiction between a personal perception of freedom and permanent digital control and evaluation.

When asked to assess the central role of human-machine interaction in their job, the interviewees tended to compare their situation to non-digital human-human relations. The *app* which provides the *riders* with instructions concerning the deliveries was compared to a human superior. This narrative gives evidence on a clear hierarchy and asymmetric relationship perceived by the *rider* vis-à-vis the machine: In this case, the app is not viewed as a tool to use but as a superior instance of command and control.

However, the phone was also described as a barrier to the direct grasp of a superior as it would be the case in an office setting. Here, the app is presented rather as a medium to filter communication which reduces interpersonal stress to a minimum and therefore involves protection through depersonalization:

[...] den kontakt zu meinem arbeitgeber gestaltet das angenehmer, weil ich sie nicht sehen muss, sondern das einzige was sie machen, ist mir nachrichten schreiben oder mich vielleicht mal anrufen. das ist ganz praktisch, also ich hab quasi keinen boss, der mich irgendwie ankackt wenn ich was falsch mache, sondern das schlimmste was passieren kann ist, dass sie halt mal anrufen. das ist ganz praktisch, das ist wie so ne barriere zwischen mir und meinem arbeitgeber, der mich auch ein bisschen schützt auf ne weise. [...] (I3, 2; cf. I4: 28)²⁰

[...] for me it's a lot better than working in an office or in a restaurant for example and then just having a boss that you can't stand and who can't stand you possibly, u-um, it would just basically own you all the time, looking on everything that you're doing, uum, asking you to do things every other minute basically...u-um... i think i would rather take the app than taking that. there are definitely positives, you don't feel like you're being watched all the time, u-um, although that's a false perception obviously because they, if they wanna look and see which way you work every single minute, you can do that but so far, it seems like they don't actually do that [...] i think it can be, it's a lot more predictable, u-um, than having to work with an actual human being above you basically who is supervising you every single minute. u-uh, i think i would take the algorithm actually over that as terrible that might sound. [...] (I2: 8)

Nevertheless, the comparison to a human superior revealed feelings of ambiguity on the *riders'* side: On the one hand, the predictability of the *digital boss*, who *just lets them do their work* is appreciated, on the other hand the indirect contact can hinder communication and therefore involve disadvantages for the delivery workers:

²⁰ English translation: [...] it makes the contact to my superior more pleasant, because i don't have to see them, but the only thing that they do is sending me messages or maybe they call once in a while. that's pretty practical, so i don't really have a boss, who bawls me out when i do something wrong, but the worst thing that can happen, is that they call me. that's pretty practical, it's like a barrier between me and my boss, that kind of protects me in a way. [...] (I3, 2; see I4: 28)

[...] das ist zwiespältig, das kann sehr, angenehm sein weil da einfach .. also, du hast, also du hast in anderen jobs halt wo du im engeren kontakt, da stehst du unter mehr druck teilweise oder auch unter persönlichem druck. den hast du nicht so sehr, ja, also du wirst sozusagen nicht direkt beobachtet so. klar, die app schneidet natürlich mit und kriechst auch dann .. also da werden auch statistiken geführt und so weiter aber . ehm, wenn man jetzt nicht völlig sinnlos ist, dann geht das, aber man muss, genau, das ist halt son-son zweischneidiges schwert, ja, du wirst irgendwo alleine, in ruhe auch gelassen, aber du wirst gleichzeitig auch alleine gelassen. das ist irgendwie ein bisschen komisch, das hat so seine, zweischneidig einfach. [...] (I4: 8f.)²¹

The personal disconnection and spatial distance from superiors seem to have a strong impact on the delivery workers' self-experience: It provokes a feeling of freedom, despite the *riders*' awareness of the constant digital connectivity and supervision. This awareness does not seem to have a strong impact on the *riders*' work experience, although for the company the permanent control can be crucial to sort out less efficient *riders*. The interviewees rather control themselves to reach the bonus or to earn more money; the fact that they are constantly tracked does not play a significant role in their narratives. The digital control is rather downplayed. Nevertheless, the constant connectivity is rather perceived in a negative way, especially because of its influence on leisure time and private life:

[...] eher negativ. weil diese ständige verfügbarkeit ist halt irgendwie total nervig . und weils halt auch mein privatding ist, es ist halt mein privattelefon und mein privatfahrrad und so weiter und das heißt es gibt nicht mehr so diese trennung zwischen arbeit und privatleben, sondern es ist quasi das gleiche gerät [...] (I3: 2)²²

[...] und deswegen sitzt du dann halt am telefon und fängst die ganze zeit, ich hab auch immer, selbst wenn ich jetzt nicht arbeite, ich fang, das überträgt sich auch auf die freizeit [MLB: okay] dass ich relativ [MLB: du bist in der freizeit auch mehr auf deinem handy?] ja, durch den job, also über den job sozusagen, vorher war das nicht so, da hab ich das relativ .. da habe ich das nie kultiviert, und jetzt ist es halt einfach, dadurch, das ist dann so ne regelmäßigkeit, man hat halt irgendwann so das gefühl, oh ich muss mal wieder, weißt du, da ist irgendein chat, da sind schon wieder zwanzig nachrichten, was wurde denn da geschrieben? och! eigentlich total bekloppt, ja! [...] (I4: 28)²³

As the functioning of the algorithm is not communicated openly by the companies, one interviewee reports to regularly speculate on it, which points to the asymmetries of knowledge distribution in the human-machine relationship:

[...] man ist im job alleine, die ganze zeit und man grübelt halt eigentlich, was ma-, wie funktioniert denn das, also weißt du, es ist halt, man rätselt dann auch rum, warum zur hölle muss ich denn jetzt fünf kilometer irgendwo hinfahren, wenn meine pause in fünf minuten anfängt, ja [laughingly:] und will jetzt irgendjemand einem was böses oder kann man das nicht anders machen oder weißt du, so . eh man . mit irgendwelchen kleinigkeiten, also man ist dann durchaus auch ein bisschen damit beschäftigt, einfach so im kopf nebenbei

²¹ English translation: [...] that's double-edged , that can be very comfortable because there just .. so, you have, so you have in other jobs where you have closer contact, there you are more under strain partly or also under personal strain. you don't have this that much, yeah, so you are so to say not directly observed. of course, the app is recording of course and you then get .. so statistics are kept and so on but . u-hm, if you're not completely senseless, then it's alright, but you have to, yeah, it's just a-a double-edged sword, yeah, you are being left alone, in peace as well, but in the the same time you are being left alone. that's a bit weird, it has its, just double-edged. [...] (I4: 8f.)

²² English translation: [...] rather negative. because this constant availability is somehow totally annoying . and also because it's just my private thing, it's just my private phone and my private bike and so on and that means there's not this separation any more between work and private life, but it's quasi the same device [...] (I3: 2)

²³ English translation: [...] and therefore you sit at your phone and you always start, i always have, even when i don't work now, i start, it transfers also to leisure time [MLB: okay], that i relatively, [MLB: you are more occupied with your phone in your free time now?] yes, through the job so to say, before it was not like that, i managed that relatively .. i never cultivated that, and now it's just, thereby, it's a regularity somehow, you eventually have the feeling, oh i have to check it again, you know, there's any chat, there are twenty messages again, what has been written there again? oh! completely daft actually! [...] (I4: 28)

weil man halt auch nichts anderes macht so wirklich . das läuft einfach so nebenher. [...] (I4: 16)²⁴

[...] das ist ja auch ein automatismus, weißt du, man beschäftigt sich dann halt damit, was macht eigentlich der computer mit mir. leute überlegen ewig stundenlang rum, wenn ich schnell fahre, krieg ich dann nur lange distanzen . wir haben ein dämliches bonussystem wo du für, dafür belohnt wirst, wenn du genug order fährst, so wenn du viel order fährst. [...] (I4: 17)²⁵

He describes a feeling of impotence and degradation in the interaction with the *app*: When the digital delivery system or communication processes do not function in an efficient way, he cannot intervene because he has to follow the steps determined by the interface:

[...] die ganze firmenphilosophie ist dass so wenig wie möglich da irgendwo . eh, hand angelegt wird von leuten . ehm, was halt teilweise echt schade ist, also, du sitzt halt manchmal einfach zwanzig minuten rum und hast noch ein essen im rucksack, das jetzt wohl, der umgedrehte fall, ja . eh, und dann, hast du zwei [word not understandable] abgeholt und, das hat so zeitlich alles geklappt . ehm . stehst dann aber am nächsten restaurant und da ist der automatismus jetzt noch nicht gegeben, das die dann irgendwann, also dass du sozusagen auswählen kannst, ey, die brauchen hier noch ne halbe stunde . ne, ehm . genau also, diese folgeorder, die werden ja inzwischen rausgenommen aber wenn du jetzt schon was drinnen hast, dann pech, dann stehst du halt einfach mal, dann gibt es kalte pommes, fertig [laughs] das ist total, passiert jetzt nicht andauernd ja, aber es passiert, das frustriert einen als mitarbeiter und man kommt sich ein bisschen blöd vor, einfach nur weil einem die adresse nicht mitgeteilt wird, ja, das ding, das ist meistens dann drei häuser weiter, ja . dann hättest du es schon vor ner halben stunde abliefern können. [...] (I4: 18f.)²⁶

[...] das frustriert einen einfach weil man selber jetzt nicht die möglichkeiten hat, da einzugreifen, ne. also, man ist halt auch nur son, wie soll man sagen . man spielt ein computerspiel, der computer spielt mit einem [SE: hm] ja, das ist irgendwie ne ganz komische situation in der man da eigentlich ist. wenn es da mal, wenn es da mal irgendwie hakt, dann stehst du da und denkst, oh mann! was ist mit? du fühlst dich auch irgendwie ein bisschen . nicht ernst genommen so, ja. also, das ist ganz, ganz lustig. [...] (I4: 19)²⁷

In this narrative, the *rider* is left powerless in the interplay with the machine despite his or her ability to solve a problem. Two other interviewees show a different perspective by alluding to the possibility of adopting a more sovereign position in which they are no longer enslaved by the machine:

²⁴ English translation: [...] you are alone in this job, the whole time and you keep brooding over just actually, what do-, how does this function, well you know, it is just, you then also puzzle over it, why the hell do i now have to ride five kilometers to somewhere, when my breaks begins in five minutes, yes [laughingly:] and now does somebody want something evil things to happen for me or can't you do it differently or you know, this . uh man . with some kind of details, well you are indeed also a bit busy, with well in your head because you also just don't really do anything else . this simply goes on while you're doing it [...] (I4: 16)

²⁵ English translation: [...] well that is another automatism, you know, you're occupied with it then, what does the computer do with me, people think about it for eternal hours, when i ride fast, i then get only long distances . we have a dim-witted bonus system in which you are rewarded for, for, when you ride enough orders, when you take ride many orders. [...] (I4: 17)

²⁶ English translation: [...] the whole philosophy of the company is that as least as possible somehow. uh, people are working on things personally . uhm, which is a pity, so, sometimes you just sit around for twenty minutes and you still have food in your backpack, and that seems to be the inverse case, yeah. uh, and then, you have picked up two [word not understandable], and it all worked out timewise . uhm . but then you stand at the next restaurant then the automatism doesn't work yet, that they then somehow, so you can choose so to say, ey, they need half an hour more here . no uhm . yeah so these following orders, they are being taken away now but if you already have something, then tough luck, then you're just waiting for a while, and then they'll have cold fries, that's it [laughs] that's totally, doesn't happen all the time yeah, but it happens, that frustrates you as an employee and you feel a bit stupid, just because you don't get this address, yeah, it's often just three blocks away, yeah. so you could have delivered it half an hour ago. [...] (I4: 18f.)

²⁷ English translation: [...] that just frustrates you because you don't have the possibility yourself to intervene, right. so you're just simply, how to explain that. you're playing a computer game, the computer plays with you [SE: uhm] yeah, that's somehow a strange situation in which you are. when there's a problem somewhere, then you're standing there, oh man! what about? you somehow feeling a bit . not taken seriously, yeah, that's pretty pretty funny. [...] (I4: 19)

[...] it doesn't mean that working with the app like that doesn't mean that you absolutely need to do everything that it tells you to do. if it does something stupid, or there's something that you just don't wanna do, u-u-uh, for example your shift is about to end in five minutes and you get a delivery, technically you have to except it but usually if you write dispatch and say, "hey i have something, i have a commitment right after my shift, could you please take this order away from me", they usually do that with no problem. so yeah it's nice having that as well. of course as i mentioned some people have very different experiences [...] (I2: 9)

[...] die haben trotzdem nicht so viel kontrolle, dadurch dass ich halt irgendwo unterwegs bin, kann ich mich auch wenn ich keine lust mehr habe zum beispiel einfach ausloggen und die können da nicht so viel machen, weil ich ja selbstständig bin oder wenn sie mich anrufen, muss ich auch nicht rangehen. das schlimmste was sie machen können ist mich zu feuern. [...] (I3: 3)²⁸

The different narratives reveal the complexity of the *rider*-app-relationships and the varying knowledge and power asymmetries. While the usual delivery process takes the delivery workers *into service*, certain situations – combined with knowledge on the companies' rules and one's rights – can open up scopes of action to the *riders*.

4.1.5 Assumptions about Strategies employed by the Companies

In all interviews the delivery workers mentioned strategies which they attributed to the delivery companies. These include speculations on why the labor process is structured in a certain manner and general comments on *Deliveroo's* and *Foodora's* business models.

Unclear Rules

In all interviews, the interviewees mentioned that they are confronted with unclear rules regarding their work. According to the interviewees, these uncertainties arise either due to missing instructions and unclear communications from the companies or due to the fact that the rules regarding the labor process are constantly changing:

[...] and this thing you really sort out like everything of the job, you sort it out around the year or in reuterplatz. you never get communications from even this role of the senior riders was never explained by the company and it's totally unclear what, how should we communicate. [...] (I1: 4)

[...] ehm .. beide jobs sind ja im stetigen wandel also was was, wenn ich jetzt .. ehm . den job hier vor nem halben jahr betrachte, der sieht komplett anders aus .. [...] (I4: 11)²⁹

As one rider argues, the missing clarity of the rules might be a strategy, used by the company to gain an advantage over its workers:

[...] basically.. and.. yeah, a thing that is.. i find. i found really particular at the beginning i was maybe more

²⁸ English translation: [...] they still don't have that much control, as i'm somewhere on the road, for example i can when i don't feel like working any more just log out and there they can't do much, because i'm a freelancer or when they call me, i don't have to answer. the worst thing they could do is to fire me. [...] (I3: 3)

²⁹ English translation: [...] uhm .. well both jobs are permanently changing well what what, when i'd now .. look at this job half a year ago, it looks completely different .. [...] (I4: 11)

innocently think, yeah, this could be better, is that like the rules are totally unclear. nobody knows the rules. maybe this guy [points at a passing cyclist] knows the rules because he is one of the seniors of the zone. [laughs] but nobody knows the rules of deliveroo precisely and after a while you figure out that.. it could be a very nice strategy. [...] (I1: 5)

[...] and i think they, this is very, very good in their business plan because you have unaware, with lower rights and lower expectations people .. and in a few cases, they come straight away from italy and you come here and they tell you, “*here, they pay you nine euro per hour to bike on the street*”, *for me, it would have been, what the fucking nice great shit!* but yeah, obviously you have to see the context that you’re living in a city with prices that are going constantly up .. and .. yeah, and anyway, you will pay sixteen cents more, if you would have been paid twenty cents less, it would be illegal, and not that i have this great idea of what is legal or illegal, doesn’t matter much, but this kind of shows that the, that the wages is shit. just, yeah, if you, if you come from away from germany, you might not realize it so fast. [...] (I1: 11)

The second quote also highlights the intersection between an advantage gained by providing unclear rules and the possibility to attract non-German speakers to the job and take advantage of their lower knowledge about the German legal system (see also I4: 26).

Depersonalization

Another topic of speculation concerning the labor process was the role of depersonalization. *Depersonalization* or the German word *Entpersonalisierung* were used as expressions to highlight that the labor process was less or not dependent on interacting directly with other staff members, co-workers or superiors:

[...] so you have to wait a lot in the restaurant and then, like take it to three different customers, and when you write to the hotline this kind of thing, they say, “*yeah, we know it’s shit but we cannot do anything about it. it’s the app.*” but yeah. i guess somebody controls the app or can change some .. can change some . settings. [laughs] i guess .. and yeah, it could be potentially cool, but it.. i think in the end it’s very cool for deliveroo because it depersonalizes all the, all the stuff. i don’t know my bosses.. [...] (I1: 10)

According to the interviewees, the motivation for this depersonalization is rooted in two ideas. On the one hand, it is rooted in the attempt to minimize the number of human workers the companies have to employ (cf. I4: 10):

[...] der automatismus ist da ganz, ganz . stark eingebunden, das halt alles automatisch läuft, ja . die ganze firmenphilosophie ist dass so wenig wie möglich da irgendwo . eh, hand angelegt wird von leuten . [...] (I4: 18)³⁰

On the other hand, depersonalizing the relationship allows the companies to use the technological components of the labor process – the app and algorithm – to justify negative aspects of the job and to enhance its *machinically-controlled* functioning (dealt with in more detail in chapter 4.2.2). As mentioned in 4.2.2, in *Deliveroo* the app is used as a tool to differentiate unpaid and paid working time down to the minute:

³⁰ English translation: [...] the automatism is very, very . strongly integrated, so that just about everything runs automatically, yeah . the whole philosophy of the company is that as least as possible somehow. uh, people are working on things personally . [...] (I4:18)

[...] even when you have like a flat tire, they ask you to log off.. and. because they say, yeah, you're not working, but yeah, if i have a flat tire on the street and i have to repair it to go on working for me, this would be part of the job for sure. [...] (I1: 2)

This trend of using technological components to enhance the control over the labor process, is coupled with a trend of (re)personalization of power relations in *Foodora*. Here, some better-paid workers, so-called *rider captains*, are assigned a group of workers to whom they give feedback. This will be explained in more details in chapter 4.2.2.

Aside from mechanisms set up to enhance the *machinic control* over the labor process, the role of the image – the representation – of the work play an important part in legitimating the design of the labor process. This will be presented in 4.2.2.

4.1.6 Strategies pursued by Workers, Obstacles to and Strategies for Organizing Labor Struggles

In the interviews different strategies pursued by the workers were mentioned. The aims of these strategies are to cope with problems identified by the interviewees.

As laid out by three interviewees working for *Deliveroo* or *Foodora* means that risks are externalized to the workers (cf. I1: 12; I2: 10f.; I3: 5). To compensate for this uncertainty produced by the company regarding payment, bonus payments and receiving enough shifts, two delivery workers mentioned using different smartphone apps to calculate the number of shifts taken, the income earned in tips and their monthly income including bonuses in advance (see I2: 2f.; I3: 5). Thereby, they engaged in a close evaluation of their own performance.

As described in chapter 4.1.5, unclear and constantly changing rules communicated insufficiently by the companies are another source of uncertainty for the workers. Two interviewees mention the importance of exchanging information informally with other workers (cf. I1: 10; I3: 7). Whether waiting at log-in areas or restaurants, meeting at *Foodora*'s hub in Berlin-Mitte or communicating via *WhatsApp* groups and the like, workers try to gain a proper understanding of the job they are doing:

[...] fortunately, like here in friedrichshain and in neukölln, there are places where like everybody stops during the shift and meets there. so at least there you could know colleagues and gather information even about the work which is very important .. [...] (I1: 10; see also I4: 10f., 28)

The digital networks established through apps thereby become the equivalent of an office job's "chat by the coffee machine" (I4: 29). Hence, even though the organization of the labor process

does not encourage collegiality structurally, the missing encounters with fellow workers are at least partly compensated through chat groups and meetings at restaurants, waiting areas and in the streets. These encounters and informal networks also let some of the interviewees to the *deliverunion*'s unionization process (cf. I1: 10f.; I2: 13). Aside from this face-to-face communication, the *deliverunion*-campaign also makes use of a newsletter for workers interested in organizing themselves and communicates via a website and *Facebook*-pages³¹. In this way, just as the digital pathways used for *machinically-controlling* the labor process, other digital pathways are used to compensate for the missing forum of a spatially-delimited working space.

Another strategy mentioned was simply breaking rules and trying to trick the companies' smartphone apps, e.g. not finishing an order to avoid receiving another one or ride fast or slow in order to slow down the labor process. Though these strategies cannot be presented here in detail in order to avoid putting the workers at risk or laying open their strategies to the management, one further comment can be added regarding possible labor struggles: As one interviewee notes, the companies rely on a relatively small number of workers working at the same time in a given delivery area. Hence, already a small number of delivery workers could enact a *slowdown* strike during the companies' main business hours, if they coordinate their shift planning and actions sufficiently.

Lastly, a central obstacle to organizing labor struggles that was mentioned in the interviews is the missing identification with the work and motivation to fight for better working conditions due to a short-term employment at the companies. As several interviewees laid out, many workers do not work for *Deliveroo* and *Foodora* for a long time, which might undermine their commitment to a long-term campaign:

[...] i think that, yeah, once you stop to do this job you do another shitty job and then you might not be so much in the struggle. and this is for sure a thing that deliveroo knows. like they, they for sure enjoy the fuck that they have a very, very, very big turnover and people coming in are often not speaking german, not aware of their rights. [...] (I1: 11)

[...] uhm, but it's a crucial problem. that's i think combining with the fact that a lot of people, it's a high turnover job like a lot of people don't expect you stay a long time. i'll be curious to know what the average time is, for people to do this job for, i suppose it must be around six months, not a lot, you know, not too much over that, uhm but i would say that those two aspects are the crucial difficulties in trying to organize, the fact that people don't, contact between riders is sporadic at best and a lot of people don't have a reason to, have a lot of motivation to do it because they expect not to do the job very long. [...] (I2: 14)

[...] ehm .. aber, ich mein ich hab auch x andere jobs vorher gehabt wo ich niemals auf die idee gekommen wäre, mich da jetzt irgendwie zu, also gewerkschaftlich zu organisieren [SE: hmh] so . ehm . teilweise aus

³¹ See: <https://deliverunion.fau.org/> and <https://www.facebook.com/deliverunionberlin/>; facebook group for the international campaign: <https://www.facebook.com/groups/382672968743331/> (last accessed: 09-09-2017).

unwissen vielleicht oder auch aus . trägheit, ich glaube für mich fallen da zwei sachen relativ stark zusammen .. [...] (I4: 16)³²

As shown by the results presented in the previous chapters, the organization of the labor process and its digitalization shape the possibilities and obstacles for worker organization. However, not only the technological-organizational set-up of this process is a contested area connected to the delivery workers' job. As presented in the following chapter, the representation of the work done and the experience of the labor process are important parts of the functioning of the companies' businesses.

4.2 Experience and Representation of the Labor Process

Any labor process is not only composed of its organization – the use of machines or its division of labor – it provides and assigns roles, narratives and functions to the human bodies *put into service* by it. Lazzarato defines this form of exercising power as *social subjection*: “We are subjected to the machine when, constituted as its users, we are defined purely by the actions that use of the machine demands. Subjection operates at the molar level of the individual (its social dimension, the roles, functions, representations and affections).” (Lazzarato 2006; see also Lazzarato 2014: 23ff.) Regarding delivery workers at *Deliveroo* and *Fooroda*, one has to add that the machine the worker is making use of is her*his own body, connected to bicycle and smartphone – more specifically, *social subjection* in this context refers to the relations to their own performance and the other components of the labor process (hotline workers, superiors, restaurant personnel, customers, bicycle etc.) which workers are taking up while they are working.

The following three sub-chapters present a collection of narratives that could be identified as common motives invoked by the interviewees. The analysis, herein, considers the interviewees' explicit statements as well as micro-linguistic phenomena, as explained in chapter 3.2.

4.2.1 The Work on One's Performance: Improving the *Working Self*

The *work on one's performance* was a common narrative present in each of the interviews. It implies a process of reflection, in which the worker establishes him*herself as a subject, reviewing his*her performance in the labor process. As presented in the interviews, this can be achieved in a number of different ways.

³² English translation: [...] uhm .. but, i mean i have had x other jobs before where i would have never thought of, now somehow getting into, organizing in a union [SE: hmh] well. uhm . partly because of missing knowledge or maybe out of . idleness, i think for me in this case the two things coincide with each other .. [...] (I4: 16)

The permanent supervision of the worker's performance through the use of smartphone app and GPS positioning (mentioned in chapter 4.1.1) provides the company with a detailed overview of the worker's performance. Although aspects such as the interaction with restaurant personnel and customers cannot be controlled directly, statistics such as the average speed, the number of deliveries taken or the distance covered during a shift can be registered. While *Deliveroo* workers might not even be aware of their statistics as there is no institutionalized mechanism of feeding back performance reviews to workers (cf. I1: 3f.; I3: 3), at *Foodora*, a system of *rider captains* ensures feedback on the workers' performance (cf. I4: 11f.). As one rider captain explains, his function is to provide feedback to the workers assigned to him on a weekly basis in order to force them to justify themselves in front of him regarding their performance:

[...] ich soll da halt irgendwie nachgucken und irgendwie meinen senf dazugeben, so halt irgendwas von den, letztendlich dass die sich dann vor mir eh rechtfertigen dafür, und ich das dann halt einfach in ne tabelle reinschreibe und sage, ja der hat das und das dazu gesagt .. [...] es ist halt so ne hierarchische. weißt du, ich bin, ich bin sozusagen irgendein, die leute die in dieser position sind, die sind halt so ein peitschenschwingender im endeffekt. weil, du hast halt deine fünfhundert mitarbeiter, wenn du da halt einen davor setzt oder zwei . die sich dann um alle fahrer kümmern, da wirst du wahnsinnig, ja, das wird halt so ein bisschen ausgelagert da über diese dämlichen statistiken. das ist auch ein automatisierungsprozess der da stattfindet. die statistiken sind ja, allein schon, wie sie dargestellt werden und irgendwelche prozent und so weiter [...] (I4: 11f.)³³

Using this mechanism, workers with statistics that show anomalies or diverge from the average performance indices are addressed as subjects made responsible for their performance: Workers with excellent statistics are reinforced positively by being shown their higher rank in comparison to other workers; workers with bad statistics will get a message from their riders' captain asking them, if something is wrong with their bike or why their weekly performance is low.

Other riders with average performance records might never be made really aware of their statistics by the companies, but may choose to become their own data analysts. This might happen for several reasons. As one interviewee notes, he surveys his own performance (deliveries made, tips earned etc.) using different smartphone applications in order to be able to calculate his monthly salary in advance and to see, if he can earn bonuses (cf. I2: 2f.; regarding bonuses, see chapter 4.1.6). In this example, the self-monitoring serves as a way to cope with the uncertainty the business model creates for the workers (see 4.1.6). Another interviewee uses a separate smartphone app to monitor his performance in order to make his work more enjoyable: “it’s like an application that records all your movement and speed around the city. and yeah, for me it makes the work be more . nice .

³³ English translation: [...] well, i should somehow look at it and somehow throw in my two cents worth, so that something from them, in the end so that they then have to justify themselves in front of me for it, and i then write it into a table then and say, yes, he has said this and that to it .. [...] it is just such a hierarchical. you know, i am, i am so to say some kind of, the people that are in this position, are in the end just a kind of whip. because, you just have your five hundred employees, when you just put one or two in front of them . that take care of the riders, then you will get crazy, yes, that is just outsourced a bit then via these dim-witted statistics. that is also an automation process that happens there. the statistics are yes, the very way they are represented and some kind of percent and so on [...] (I4: 11f.)

because at least you see it as a sporty stuff.” (I1: 2)

Whichever of the above mentioned reasons may lead to reviewing one's performance, they involve taking up a relation to one's self: one's own performance becomes an object of study, improvement, enjoyment or frustration. In this way, the labor process organized by *Deliveroo* and *Foodora* offers workers ways to relate to the labor process and themselves: (a) you can understand work as a sportive competition against other riders and/or yourself (cf. I1: 2), (b) you can be an analyst monitoring your performance and salary (cf. I2: 2f.) or in a coercive way, (c) you are addressed as a responsible subject forced to justify the statistics you are required to provide to the company by switching on the app during work (cf. I4: 8f., 11, 17). In all of these examples, through taking part in this *machinically-controlled* labor process one creates a flow of data, graphs and statements on one's performance – a digitally-rendered reality potentially *subjecting* the worker, either by being used against him*her by the company or by being used by the worker against him*herself.

4.2.2 Narratives provided by the Companies

In all of the interviews, statements and representations assigned to the companies were reproduced. In the following, these will be categorized, depending on whether they implicate the worker into the labor process by offering a positive point of identification or by *subjecting* the worker to a nonnegotiable reality.

(Self)Images provided by the Company

One image referenced in all interviews was the representation of delivery work as something *other* than a simple wage relation of employment (cf. I1: 17; I2: 9; I3: 2; I4: 23):

[...] yeah, exactly . they even . i think that, like even .. for what i know, like the working situation, the working, and this for me tells a lot, the working conditions bei deliveroo and foodora are modelled on, are shaped on the worst conditions they could give in a country. so for example in italy, foodora workers are way in worse conditions than here . as eh, as payment .. and, what they said . in italy, i don't know if they have the courage to say it even here . was like, “*yeah, but this is not supposed to be a real job, it's supposed to be a, eh [ironic:] a good way to earn money if you like to bike around*” . as if the money, they are making is not real money. hm [laughingly:] as if like if you do it, *yeah, what's the difference between this and a real job if you do it five hour per day every day, i swear it's a real job, you should give it a try ..* [...] (I1: 17)

[...] . um you can't, you know, foodora and deliveroo try to sell this fantasy that it's just perfect, it's so flexible, you work whenever you want and then they, that means that all of that boring stuff like rights and, you know security and predictability how much you make in the end of the month that's all gone in that ways. so-o one thing that always makes me laugh is, i think deliveroo in particular, if you go to the website and you go on their, how do you call that- the bewerbung page were you can apply to become a rider u-uh one of the first selling points that you see is that paid exercise which to me is it sounds hilarious like imagine that a construction company started advertising that like “*hey become a construction worker, it's paid exercise* it's” just how people call manual labor these days i guess. it's just *paid exercise*. it's good for your heart. u-um so

yeah that's, it's ridiculous how they try to basically, this marketing play to, it's a bit like, you know, it's a bit like a construction worker but it's still manual labor and it's very toxic on your body and and you have to provide the equipment and all that and yeah it's no excuse, like that flexibility is no excuse to just strip, people away a bunch of other rights that they're entitled to. [...] (I2: 9)

[...] ich hab das gefühl, dass dieses image des fahrradkurrierseins das das irgendwie aufrecht erhalten wird, dass das irgendwas cooles ist, was urbanes und dass es so ein junges, urbanes, hippestes ding ist, das wird aufrecht erhalten [...] (I3: 2)³⁴

[...] es ist ne arbeit, es ist ein job, weißte, es ist irgendwie, ich mag den job, ich glaub viele leute, mögen den job tatsächlich auch, ehm .. und haben da auch spaß dran und genau ja, ob man das ewig machen möchte und so weiter, das ist klar aber. ehm .. ah, cool ist es nicht .. also es hat mit cool nichts zu tun, ne. also finde ich auch ne total unnötige-ehm, aber ich weiß auch nicht, klar sie machen dann auch irgendwie so photos von, von, schönen fahrern, die halt in fashion gel da irgendwie tausendmeilenblick lächeln da, weißt du so, eh . ja, ne [laughs] wir sind ein stinkender haufen leute, die [SE: laughs] weißte, meine socken, die kann ich keinem anbieten, das hat mit cool nichts zu tun [laughs] das geht nicht, ehm ... ja, keine ahnung, ne ansonsten, klar die leute haben im allgemeinen schon spaß an dem job, ne, so, an der eigentlichen tätigkeit .. [...] (I4: 23)³⁵

This representation is complemented by an informal way of interacting between superiors and normal delivery workers and by expressions disguising necessities of and decisions made by the companies:

[...] eh, yeah, i think they, they hide between their young and friendly and “*yeah, yo-bro-thanks*” . [gets louder:] “*yeah, yo, bro, thanks, but give me my fucking money!*” hey! and then for sure, yo-bro-thanks, okay, yeah, we can even pretend to be, to be friends, but first of all, like, i don't give a shit of your coolness if you don't start being cool with the reason why we are in a relationship and it's, i work, you give me the money [...] (I1: 17)

[...] wir kriegen auch immer so SMS, wo dann so drinsteht, jaa, heute ist eure chance geld zu verdienen oder jaa, helft uns bitte heute diesen tag zu stemmen und so, als ob wir so ein team wären dabei. [...] und ich glaube, es gibt dieses problem nicht nur bei deliveroo, dass irgendwie so dieses freundschaftsding ist und ja, wir duzen uns ja alle und es ist ja alles cool, aber wir bezahlen euch total prekär und wir verbessern nicht eure arbeitsbedingungen. das ist glaub ich bei vielen so jungen, dynamischen unternehmen in irgendwelchen großstädten so, und das hab ich auch vorher in nem anderen start up so erlebt, dass das so war. [...] (I3: 12)³⁶

[...] eh, im frühjahr war halt einfach die philosophie [laughs] es wurde so schön kommuniziert, wir wollen unsere rider base verbessern .. ja, also sprich, alles rausschmeißen was irgendwie einfach rauszuschmeißen ist und schlechte statistiken fährt . und was weiß ich irgendwie an irgendwelchen stellen auch mal ungemütlich aufgefallen ist oder keine ahnung, da weiß ich, kenn ich die details ja auch nicht. [...] (I4: 22)³⁷

The first and second quote also highlight the attempt to establish a collective identity that includes the company *and* its workers. As theorized by one worker, this is achieved by presenting the

³⁴ English translation: [...] I have the feeling, that this image of the bicycle courier that that is somehow maintained, that it is something cool, something urban and that it is a kind of young, urban, hip thing, that is maintained [...] (I3: 2)

³⁵ English translation: [...] . it's a kind of work, it is a job, you know, it is somehow, i like the job, i think many people, also actually like the job, ehm .. and have fun doing it and exactly yes, whether you want to do this for eternity and so on, that's clear, but. ehm .. ah, it is not cool .. also it has nothing to do with something cool, no. well i find it totally unnecessary-ehm, but i also do not know, obviously they do then take somehow photos of, of beautiful riders, that with fashion gel and somehow a thousand mile gaze laugh, you know this, eh . yes, no [laughs] we are a stinking heap of people, that [SE: laughs] you know, my socks, you cannot offer them to anyone, that has nothing to do with cool [laughs] it is not about, ehm ... yes, no clue, no otherwise, obviously the people generally do have fun doing the job, no, so, doing the actual activity .. [...] (I4: 23)

³⁶ English translation: [...] we also get these text messages, in which it says, yea-ah, today is your chance to earn money and yeah-ah, “please help us to stem this day” and stuff, as if we were some kind of team. [...] and i believe, this problem doesn't exist only in deliveroo, that somehow this friendship-thing is and yeah, we address everybody informally and everything is so cool, but we pay you totally precariously and we don't improve your working conditions. it is like this in many young, dynamic companies in whatever big cities i think so, and i also experienced this before in another start up, that it was like this. [...] (I3: 12)

³⁷ English translation: [...] eh, in spring the philosophy was simply just [laughs] it was so nicely communicated, we want to improve our rider base .. well, meaning, kick out everything which somehow simply meant to be kicked out and rides bad statistics . and what do i know what somehow in some situations also drew attention uncomfortably or no clue, what do i know, i don't know the details as well. [...] (I4: 22)

working day as a challenge for the company and the workers: “please help *us* to stem this day’ and stuff, as if we were some kind of team.” (I3: 12; trans. and emphasis added by YE). *Work* herein appears to be something like a *service* among friends, clouding the wage relation and hierarchy existent between worker and the owners of the online platforms.

These findings are confirmed by narratives presented by the companies in their public relations work. For example, at a panel discussion with union members on July 10, 2017 the spokesperson of *Foodora* present there used similar tactics. When confronted with allegations made by the FAU, he redefined solidarity as the solidarity of employees towards the company (cf. taz 2017: 23:15f.) and redefined the “unorganizability” of the logistics sector – used by the union member to refer to the ability to unionize – as the difficult organizability of a food delivery service also arising due to the missing commitment of workers towards the company (cf. taz 2017: 24:00f.). This discursive misrepresentation of the wage relation has also been discussed recently as a tactic employed by *Deliveroo*, which is accused of “creating vocabulary” so “that the food delivery company’s own staff could become confused by the definition of the riders’ role.” (Butler 2017; cf. Deliveroo 2017)

In all of these examples, the role workers should find for themselves in the company seems not to be one in antagonism towards the management, but rather as part of a collective struggling with the common challenge of stemming the working day.

Subjecting the Worker to a nonnegotiable Reality

However, in the interviews two examples were mentioned which contrast strongly with the soft and friendly way, the management of *Foodora* and *Deliveroo* deal with their workers.

One motive concerns the role of the smartphone app and its functioning. Due to the missing transparency of its allocation mechanism, it is a frequent source of confusion and frustration for workers (cf. I1: 9f.; I3: 2; I4: 16). However, when asked about it or facing criticism, the management and hotline workers treats the app as “an entity” (cf. I1: 9) with rules no one seems to know or control:

[...] ... [sighs] let’s say that, in a pos-, it could be . potentially ... it could be potentially a cool way obviously because the software shows you the map and if you don’t know the streets of a neighborhood, then it’s a cool thing .. but it, like, depersonalizes all the stuff and it even the responsibility. like when you, when you wrote to the, to the customer, like to hotline for a problem, they say, “*yeah, we know this problem about the app, but we don’t*” . like the app, the app is an entity, like nobody did it and nobody controls it. [...] so you have to wait a lot in the restaurant and then, like take it to three different customers, and when you write to the hotline this kind of thing, they say, “*yeah, we know it’s shit but we cannot do anything about it. it’s the app.*” but yeah. i guess somebody controls the app or can change some .. can change some . settings. [laughs] i guess .. and yeah,

it could be potentially cool, but it.. I think in the end it's very cool for deliveroo because it depersonalizes all the, all the stuff. i don't know my bosses.. [...] (I1: 9f.)

[...] die machen halt mit mir profit und die versuchen halt auch so viel profit wie möglich zu machen, das heißt wenn die irgendeinen fehler machen oder so, dann versuchen die das auf mich umzuwälzen, wenn die zum beispiel in ihren systemen fehler machen, mir ne falsche adresse schicken oder so, dann wollen sie dass ich ne halbe stunde unbezahlt warte bis sie das alles geregelt haben [...] (I3: 2)³⁸

[...] atomarisierung, mit dieser kommunikations-, mit diesem kommunikationsproblem was man einfach inhärent in diesem job drinnen hat, ja, ist einfach mit, also, den zu lösen, da würden sich alle freuen. [...] man ist im job alleine, die ganze zeit und man grübelt halt eigentlich, was ma-, wie funktioniert denn das, also weißt du, es ist halt, man rätselt dann auch rum, warum zur hölle muss ich denn jetzt fünf kilometer irgendwohin fahren, wenn meine pause in fünf minuten anfängt, ja [laughingly:] und will jetzt irgendjemand einem was böses oder kann man das nicht anders machen oder weißt du, so. [...] (I4: 16)³⁹

The above mentioned quotes show, that the uncertainty, which the digitally-mediated labor process creates, is outsourced to the workers without providing them with a clear explanation.

Another motive concerns the presentation of the delivery work as a job in gastronomy, even though the so-called self-employed *Deliveroo* couriers are insured as workers in logistics (cf. I1: 6). One interviewee highlights the way this narrative is used to motivate workers to accept unpleasant working conditions:

[...] and they wrote to everybody aah . ah a message saying that, since we work in gastronomy, which is a bullshit they keep on saying all the time, it's totally not true. since we work in gastronomy, days that are ferientage for eh for other people are our most busy days and they're core business, so they are not to be considered as holidays for us. meaning that there is no day in the year that should be considered as holiday for us. and they keep on repeating this stuff that we work in gastronomy and i believe that if somebody is not very critical and . a bit aware, can think, *yes, we work in gastronomy.* but this is absolutely not true proven by the fact that like when you get sick, the . the branch of the insurance that pays for you, is the one for the transport stuff. and if you're a freelancer, you have to pay nine hundred euros per year because you're in the transport stuff and it's a dangerous job and so you have to pay a high insurance. [...] (I1: 6)

In both cases, the labor process is presented as a nonnegotiable reality, to which the workers are *subjected* by outsourcing the responsibility for the working conditions: Whether referencing the unchangeable mechanism of “the app” or the imperatives of working in gastronomy – in these narratives, the workers are forced to accept their role in the unchangeable reality that seemingly lies outside of the companies' influence.

³⁸ English translation: [...] they make profit with me and then also try to make as much profit as possible, that means when they make some kind of mistake or so, they try to turn it on me, when they for example make mistakes in their system, give me false address or so, then they want that i wait half an hour unpaid till they figured everything out [...] (I3: 2)

³⁹ English translation: [...] atomarization, with this communications-, with this communication problem what you just have inherently in this job, yes, is simply with, well, to solve it, there everybody would be happy. [...] you are alone in this job, the whole time and you keep brooding over just actually, what do-, how does this function, well you know, it is just, you then also puzzle over it, why the hell do i now have to ride five kilometers to somewhere, when my breaks begins in five minutes, yes [laughingly:] and now does somebody want something evil things to happen for me or can't you do it differently or you know, this. [...] (I4: 16)

4.2.3 Workers' Narratives

In all interviews, the workers contrasted the companies' way of representing their job with their own narratives. However, these counter-narratives are ambivalent in regard to the positive aspects they connect to the work. Hence, they will be discussed in two parts.

Work as physically-challenging Labor, “us” vs. “them”

On the one side, the delivery work is presented as physically-challenging labor by the interviewees:

[...] . but eh yeah, you end up with like the minimum wage, plus the tips . but eh yeah, the tips or even a bit more goes out in reparations of the bike, and these expenses pop up when you less expect, and want it, like if you . if you fuck up your chain, you have to repair it today, if you have a shift tomorrow . so-o, there is not much choice. so in the end up working, yeah and i have to say that this job really . i liked it . as i said . but really takes the soul out of you. like . you know that every day you're doing the job. your leg hurts, your back even hurts. i have a fucking . yeah i show you [shows his back to the interviewers] . this sign, you see it? this is the bag of deliveroo. [...] (I1: 7f.)

[...] also ich glaube es gibt so das image, als was junges, hippes, was irgendwie auch cool ist auf ne weise und es gibt halt die realität vom job, dass er einfach ein mega anstrengender, scheißjob ist, der mit nem riesigen risiko verbunden ist für meine gesundheit und auch sonst, der schlecht bezahlt ist. [...] die realität auf der straße ist halt son bisschen kacke, es ist halt stressig, anstrengend, schlecht bezahlt. das ist überhaupt nicht cool. es ist einfach nur total prekär. [...] (I3: 5)⁴⁰

[...] essen, he [laughs] ehm .. kommt noch, muss ich dazu sagen, ich fahr ziemlich viel ehm bin gestern zehn stunden durchgefahren ehm da, da ist man schon auch ein bisschen am futtern und zwar gnadenlos. ehm, also heute zwei-stunden-schicht, das ist nix, da passiert nichts, aber ehm, wenn man ein bisschen länger fährt . das ist ganz lustig, man ist einfach auch so, ok, hier halbe stunde pause, so schnell wie möglich ganz viel kalorien [SE: ok] das ist schon irgendwie, das macht man sonst so nicht unbedingt so, ja, das ist einfach eine körperliche arbeit [...] (I4: 2, see also 4)⁴¹

In all interviews the aspect of security is connected to this, as working in traffic under time pressure implies danger for the workers' safety (cf. I1: 3; I2: 9; I3: 5; I4: 3).

As a micro-linguistic analysis of the interviews shows, this representation of one's work is also connected to a collective understanding differentiating between “us” (the *riders*, doing physical work) and “them” (superiors, office workers). The use of the according personal and possessive pronouns by the interviewees marks this division and is reinforced by insulting the superiors in fictitious dialogues during the interview (cf. I1). This dividing line separates the delivery workers from the office personnel, which seemingly does not understand the riders' work and which is generally viewed as incompetent or useless (cf. I1: 10; I4: 7f.).

⁴⁰ English translation: [...] well i think there is this image of the job, as something young, hip, something that is somehow also cool in a certain way and there is well the reality of the job, that it is simply a super exhausting, shitty job, which is connected to an enormous risk for my health and that besides is also paid badly. [...] the reality on the street is just a bit shitty, it is stressful, exhausting, badly-paid, that is not cool at all. it is simply just totally precarious. [...] (I3: 5)

⁴¹ English translation: [...] food, he [laughs] uhm, it depends, i have to say, i do quite long shifts uhm yesterday i did ten hours non-stop uhm, there you have to eat a lot, like mercilessly. uhm so today two hours shift, that's nothing, nothing happens, but uhm when you're on the bike for a bit longer, that's pretty funny, you're just like, okay half an hour break, as many calories as possible [SE: okay] that's already, you wouldn't do that otherwise, yeah, it's simply physical work. [...] (I4: 2, see also 4)

In two interviews, this division is also connected to the character of the work, separating the *dirty/manual* work on the street to the work done by people simply sitting in the office:

[...] on, [laughs] fuck this is .. on fridays, i don't know if they do it anymore, but on fridays, there used to be like the big office eh, the big office lunch. that means that they call a lot of riders [laughs] to take their own food, even you pick up the food in restaurant and you deliver it by deliveroo office. where all the office is sitting, and on a kind of asterix and obelix table. and you always meet other riders with very heavy bags and you just drop them on the table and they're all there, eating, and then you go back to sweat on the street .. [...] (I1: 7)

[...] es ist ne arbeit, es ist ein job, weißte, es ist irgendwie, ich mag den job, ich glaub viele leute, mögen den job tatsächlich auch, ehm .. und haben da auch spaß dran und genau ja, ob man das ewig machen möchte und so weiter, das ist klar aber. ehm .. ah, cool ist es nicht .. also es hat mit cool nichts zu tun, ne. also finde ich auch ne total unnötige-ehm, aber ich weiß auch nicht, klar sie machen dann auch irgendwie so photos von, von, schönen fahrern, die halt in fashion gel da irgendwie tausendmeilenblick lächeln da, weißt du so, eh . ja, ne [laughs] wir sind ein stinkender haufen leute, die [SE: laughs] weißte, meine socken, die kann ich keinem anbieten, das hat mit cool nichts zu tun [laughs] das geht nicht, ehm ... ja, keine ahnung, ne ansonsten, klar die leute haben im allgemeinen schon spaß an dem job, ne, so, an der eigentlichen tätigkeit .. [...] (I4: 23)⁴²

In two interviews, the hotline workers are relieved off their responsibility for communication problems related to the labor process (cf. I1: 13; I4: 8). One worker theorizes, that the above-mentioned division is amplified by the depersonalization built into the labor process:

[...] du hast halt diese, diese entpersonalisierung hat auch irgendwie den effekt, dass man .. leute halt auch, also dass zu gegenüber, die man ja nicht mehr sieht, wo man ja auch nur irgendwie ein paar buchstaben von denen kennt, von wem auch immer .. da ist halt, da ist halt die psychologische grenze da irgendwie noch .. verständnis zu zeigen für ist da relativ gering, ja. [...] (I4: 10)⁴³

This division was, however, less nuanced in the interview with the *rider captain*. While he maintained a division between “us” (delivery workers/*riders*) and “them”/“the company”, he sometimes used a “we” that included the company's interests (cf. I4: 7). The role of the riders' captains as a *whip* (“Peitschenschwingender”; cf. I4: 12), maintaining the connection between company and workers seemed to confuse this division, which corresponds to the companies' strategies listed in 4.1.5.

Enjoyment in Work

Besides, as mentioned in the above shown quotes, this antagonism and the dissatisfaction with the negative aspects of the work does not preclude enjoying the work (cf. I1: 7f.; I2: 9f.; I4: 23).

⁴² English translation: [...] . it's a kind of work, it is a job, you know, it is somehow, i like the job, i think many people, also actually like the job, ehm .. and have fun doing it and exactly yes, whether you want to do this for eternity and so on, that's clear, but. ehm .. ah, it is not cool .. also it has nothing to do with something cool, no. well i find it totally unnecessary-ehm, but i also do not know, obviously they do then take somehow photos of, of beautiful riders, that with fashion gel and somehow a thousand mile gaze laugh, you know this, eh . yes, no [laughs] we are a stinking heap of people, that [SE: laughs] you know, my socks, you cannot offer them to anyone, that has nothing to do with cool [laughs] it is not about, ehm ... yes, no clue, no otherwise, obviously the people generally do have fun doing the job, no, so, doing the actual activity .. [...] (I4: 23)

⁴³ English translation: [...] you just have this, this depersonalization that also somehow has the effect, that you .. people that also, well that to one another, that you don't see anymore, where you well also just somehow know some of their names' letters, from whom-so-ever .. then it is just, then the psychological border is just even somehow further .. show understanding for someone is relatively low, yeah. [...] (I4: 10)

Especially doing physical work outside, getting to know the city and maintaining a “feeling of freedom”, even though being aware that it is just a feeling, makes the work attractive:

[...] ... so i went there and i, yeah, i find out that in a way, i like this job. there are many cool things that are not connected with deliveroo at all, but are more with the fact that you know your city better, and, like you really. how do i say, this is really hippy, but you live in a symbiotic way with the traffic and . it's strange to say, but before i was working in a restaurant, i came back home and like you really hate everybody you see and all the world, i have like stomach ache for it. instead when i was coming back from deliveroo. *yeah, you're pissed because a lot of thing happened on the street* but you still have the nice feeling of . after sport. and adrenaline. and after all you say, oh fuck, i never thought i could do a hundred and ten kilometers in a day and then come back home and be fine. it's cool. [...] (I1: 7; also cf. 4)

[...] ... but yeah, there are many things that are really enjoyable and when it's a nice day and you're biking in, in mitte, around like, on the side of the spree, *fuck! much better than to clean the dishes!* it's really enjoyable. the problem is that, it's obvious that like the, the working conditions are obviously .. it's their perfect business to keep working conditions as low as possible to have the best profit. at least, at for any capitalist stuff but. they have more tools. in my, in my opinion. And so they do it. [...] (I1: 17)

[...] i think for me it's a lot better than working in an office or in a restaurant for example and then just having a boss that you can't stand and who can't stand you possibly, u-um, it would just basically own you all the time, looking on everything that you're doing, u-um, asking you to do things every other minute basically...u-um...i think i would rather take the app than taking that. there are definitely positives, you don't feel like you're being watched all the time, u-um, although that's a false perception obviously because they, if they wanna look and see which way you work every single minute, you can do that but so far, it seems like they don't actually do that [...] (I2: 8)

[...] i do often enjoy the work. if it's, you know, if the weather is nice it truly is nice to just know that you are getting paid for riding a bicycle basically, but you can't, like you can't basically u-um insulting the intelligence of your employees by thinking that basically you're doing them a favor and that they have no right to ask for anything that employees are entitled. [...] (I2: 10)

[...] man erlebt ja auch die stadt irgendwie mehr, so, ja, man ist halt irgendwie unterwegs in ecken, in denen man sonst auch nicht ist . ehm . man sieht, die abstrusesten hausflure und hinterhöfe und so weiter und so fort, also das macht schon auch spaß, ja. [...] (I4: 3)⁴⁴

Considering these statements, it stands to reason that the ambivalence towards one's work, which is somehow experienced as enjoyable and criticized at the same time, is one of the central moments around which the narratives of the companies and workers are centered: As analyzed in chapter 4.2.2, it supports the companies' efforts to frame the riders' job as something *more than work* and it makes it difficult to create a coherent narrative against the companies and their way of organizing the labor process. Asked about whether he thinks his analysis of *Deliveroo's* business model is shared by the majority of the workers, one rider comments on this problem – he argues that especially among his male colleagues the enjoyability and hardship of the job melt into a “macho-masochism”:

[...] in the bike messenger culture, i think there is a part of macho-masochism in which they say, *“yeah, we're low paid but we don't give a shit because we are bike messengers and if it rains, we don't give a shit and blabla.”* so maybe they see this problems are like, yeah, not real problems .. which, yeah it's cool that you can

⁴⁴ English translation: [...] well you somehow experience the city more, well, yeah, you are just somehow getting around to all corners, in which you are normally not . ehm . you see, the absurdest staircases and backyards and so on and so forth, that is also fun, yeah. [...] (I4: 3)

still ride with the bad weather but i don't see why you shouldn't get a bonus for it, like. or if you don't think, "just shut up and let your colleagues get it, by the way, no!" ... this was even a, yeah, like on the first event, when, that we made, in ostkreuz, came even a lot of like proper bike messengers. and said, yeah, we work in even worse conditions and we don't complain. and we were like . so bad *for you*, like you should complain a lot in my opinion and if you don't do, your choice, but . what does it, what does it, for sure there is a part of our, of my colleagues which is, very likely are the most professional ones i have to say it, that i don't know how and why, probably don't see this things, or don't share this thing as particular problems, let's say .. [...] (II: 12)

Summarizing the above mentioned points, a complex situation becomes apparent. On the one side, the workers formulate a counter narrative against their role in the labor process based on the physical hardship of the concrete labor they are doing and a division between them and the company. Here, a rebellious self-image is constructed, that resists a *subjection* in the labor process. On the other side, it becomes apparent that the potential enjoyability of the work as a delivery worker can compromise this narrative and lead workers to *subject* themselves to the reality of their work.

5. Conclusion & Reflection

Reviewing the results of the research project documented in this paper, conclusions can be made concerning the research questions on the effects of *Foodora's* and *Deliveroo's* digitalized labor processes on working conditions as well as on the research design as such. These will be presented in the following sub-chapters.

5.1 Conclusion

Using the online delivery services of *Deliveroo* and *Foodora* as examples, this research project set out to analyze the effects of *digitalization* on the organization and experience of labor processes. A postoperaist conceptual framework centered around the concepts of *machinic enslavement/social subjection* was used to, on the one hand, produce knowledge concerning the labor processes organized by these delivery companies and, on the other hand, to test the research design as a model for future research projects. Thereby the following research questions were pursued:

- i) To what extent is the organization of the labor process and its machinic interface of bodies and technological components used to maximize the businesses' profits?
- ii) How do digitalized working conditions in online delivery services (*Deliveroo*, *Foodora*) affect the worker's *relation to oneself* – the experience of the labor process?

iii) To what extent does the digitalization and design of the labor process pose obstacles for the organization of labor struggles?

Regarding the first research question, the empirical evidence presented in chapter 4.1 presents a clear picture: The technological components of the labor process – in the form of app and algorithm – transform the labor into a *machinically-controlled*, standardized and repetitive activity that can be supervised by the company. This *machinic enslavement* in the digitalized work environment produces several effects: (a) it enables the companies to differentiate *work* and *non-work* through the worker's log-in/log-off, hence minimizing the amount of labor counted as paid-work; (b) it depersonalizes the worker's relation to fellow workers and superiors and (c) it produces statistics concerning the workers' performance, which can be used for different purposes such as disciplinary measures, turning the job into a competitive activity and deciding upon layoffs. Through digitalizing the labor process, activities necessary for the functioning of the labor process, such as shift planning, can be outsourced into the workers' leisure time – though workers might be legally employed, they might still compete for shifts not guaranteed by the companies. Through taking part in the machinic interface consisting of smartphone and the corporate applications, workers' generate data that can eventually be used against them and make their daily lives accessible to an integration into the preparation of the labor process. Coupled with unclear rules regarding one's work, the depersonalization and dependence of the labor process on app and algorithm also confront workers with a nontransparent and nonnegotiable reality, used by the companies to justify problems in the labor process or for purposes not explained to the workers.

Looking at the second research question, the study's results have shown that beyond the organization of the labor process, an ambivalence over the representation of the delivery workers' job is part of the functioning of *Deliveroo's* and *Foodora's* businesses. Through the evaluation and self-evaluation of the workers' performance, the workers are turned into subjects responsible for their statistics and encouraged to improve their performance. Different narratives circle around the representation and image of the work. The companies encourage their workers to identify as part of the companies, helping them out to stem the *challenges* of the companies' daily work-loads. Informal communication, a friend-like language and the representation of the work as “paid-exercise” or as something *more* or *other* than work provide workers with a collective self-image, clouding the difference between workers, company and managers. In the research project, it became apparent, that varying narratives also exist among workers: Against the companies' images of their *riders*, the interviewed delivery workers understood their work as a physically-challenging job and produced a self-image, in which delivery workers are opposed to their respective companies. Hence,

the representation of the delivery work appeared as a contested reality, further complicated by the fact, that there is an ambivalent stance towards one's job: It is often perceived as enjoyable, but at the same time heavily criticized for its working conditions.

Besides, the organization of the labor process summarized above is linked to challenges concerning the organization of labor struggles (research question (iii)). Missing encounters between colleagues, missing knowledge about the functioning of the labor process and one's rights and an ambivalent struggle over the representation of the job, pose obstacles to collective actions. However, in this context, the digitalized relations between the workers also allow pursuing new strategies – using an online newsletter, *facebook*-groups and online communications – as shown by the *deliverunion*-campaign.

Summarizing these results, one can argue that analyzing the labor process at *Deliveroo* and *Foodora* centers around three conflicts: (a) a nontransparent functioning of app and algorithm, (b) the conflict over what part of the concrete activity necessary for the labor process is counted as paid labor and, thus, recognized as work and (c) the conflict over the representation of delivery work. In the context of such a job which relies on a depersonalized labor process – in which encountering and talking to one's colleagues is not a necessary part of the regular working day –, it therefore becomes all the more important for a critical analysis to provide a narrative breaking the silence of automated human-machine interactions.

5.2 Theoretical and Methodological Reflection

Due to the exploratory character of this research project, a number of reflections regarding its methodological design and theoretical framework are in order.

Firstly, it is obvious that the four narrative interviews considered in this research projects can only provide limited insights into the everyday reality of the delivery workers on Berlin's streets. For a proper analysis, researchers would have to contextualize the workers' job in her*his general everyday reality. Hence, a greater set of interviews would have been interesting in order to gain access to the perspectives of workers that, for example, do not sympathize with the *deliverunion*-campaign. Besides, even though the process of producing, preparing and analyzing the empirical data has been documented in chapter 3 and in Appendix IV-VI to ensure the transparency of the researchers' project (cf. Steinke 2015: 324f.), self-critical comments appear necessary. A proper documentation was complicated by the specific context of interviewing workers on their working

conditions, thereby putting them at risk of being attacked by their employers. This context demanded great care: Neither the full interview transcripts, the interviewees' photos, nor more detailed information on the workers' socio-demographic characteristics could be revealed in order to guarantee the workers' anonymity.

In the context of the methodological design, photo-elicitation as a method to kick-start the first part of the narrative interviews proofed to be a very useful tool to gain insights into the routines of the delivery workers' job and to encourage them to act as analysts of their own reality (cf. Rose 2001: 240f.). However, it has to be remarked critically that the photographic material was not integrated into the analysis of the interviews. Thus, photo-elicitation served more as a catalyst than being part of a fully-implemented research method.

Regarding the theoretical framework of this research project, several points should be added. Firstly, it is clear that a postoperaist theoretical framework, such as the one employed in this project, sets the ground for a critical analysis of the power mechanisms at work in a labor process – hence, what might be regarded as *normal* considerations from the standpoint of standard management literature or a company's business administration turn into objects that are problematized by such a perspective: Describing, analyzing and thereby de-naturalizing the organization of the labor process and the wage relation built around delivery work is the prime objective of such a research project. Employing such a theoretical framework, hence, produces its own narrative of a company's functioning that can support workers in understanding, reflecting upon and contesting their daily work routines – this comment was actually made by a worker after one of the interviews. The concept of *machinic enslavement/social subjection* herein becomes an analytical tool to differentiate different moments of exercising power. Especially in a context, in which automated processes, smartphone applications, digital networks and algorithms play a central role, a closer look at these mechanisms is called for when using a concept such as *machinic enslavement*. It points at aspects of exercising power that do not rely on spoken words, statements and meaningful exchanges of signs (*social subjection*). However, it has to be critically remarked that producing in-depth knowledge about these components of human-machine interfaces would require methods different than the ones employed in this project: These digital components could only be analyzed to the extent to which the workers took notice of their intervention. Hence, it stands to reason that many aspects of this *machinic control* of the labor process remained unexplored. While this, on the one hand, only highlights, how nontransparent the functioning of the labor process remains for the workers as the companies leave them intentionally uninformed, on the other hand, it points at the necessity of

developing new methodologies to explore the digitalized aspects of life and work in the 21st century.

In spite of these remarks, the research design – through a combination of exploratory methods and a conceptual framework drawing researchers towards an analysis of power mechanisms functioning through the set-up of *machinically-controlled* environments – can be seen as an effective way of interrogating labor processes such as the ones organized by *Deliveroo* and *Foodora*. Moreover, it can also serve as an inspiration for future research projects on the effects of infusing our daily life or leisure routines with digital networks – whether it may be in the context of digitalized labor processes, studies on the use of smartphone apps or debates on so-called *smart cities*.

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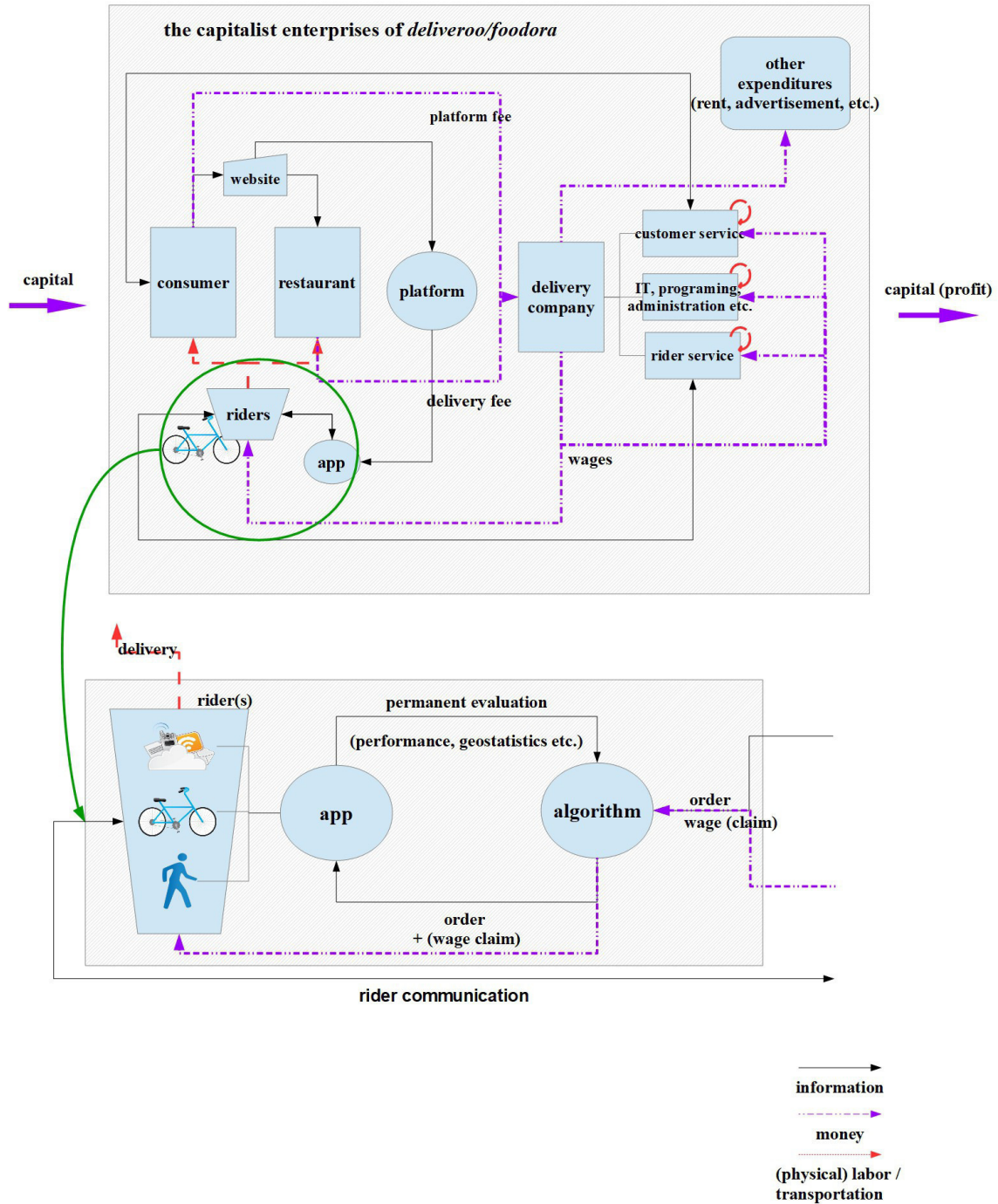
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Appendix

Appendix I: the Business Model of *Deliveroo* & *Foodora*



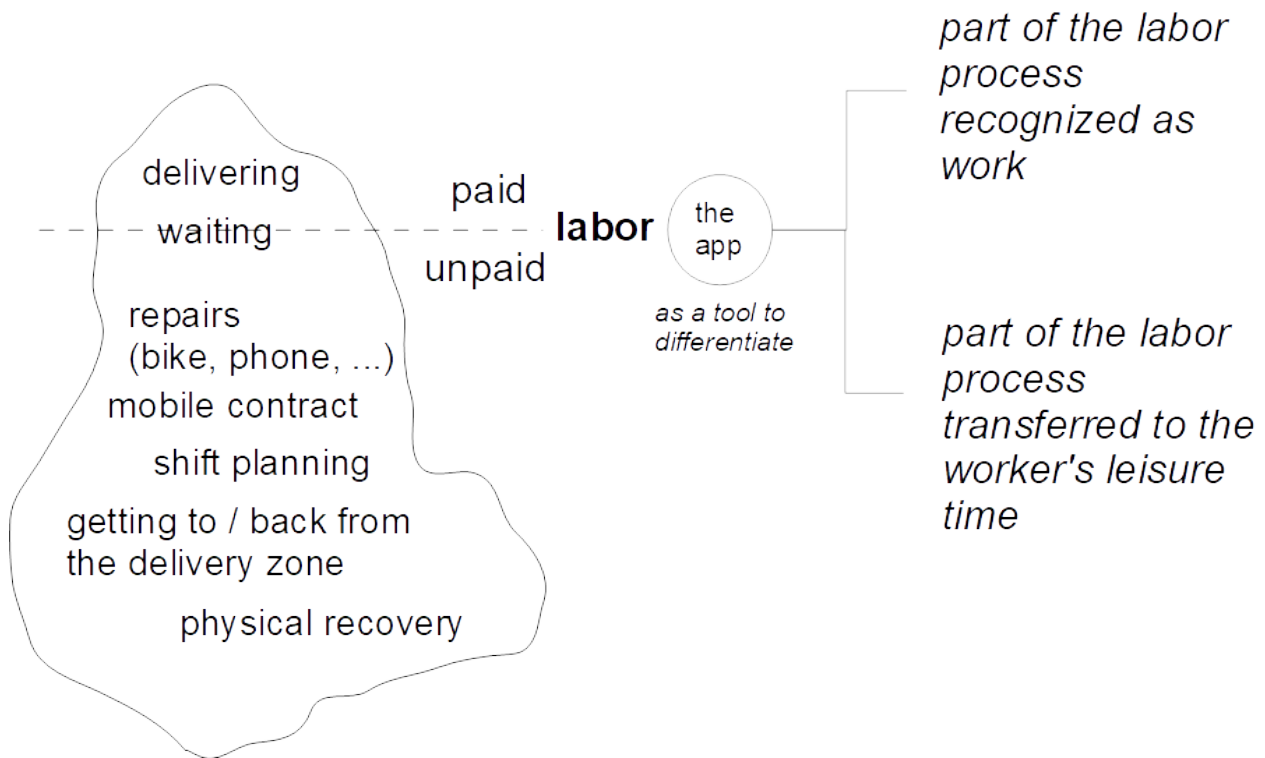
Note: The width of the lines does not represent any ratios or quantitative relationships.

Appendix II: Comparison of the Labor Processes of *Deliveroo* and *Foodora*

	<i>Deliveroo</i>	<i>Foodora</i>
wage relation	self-employed, various forms of contracts (mini-/midi-/full time contract)	various forms of contracts (mini-/midi-/full time contract)
payment	(1) payment per delivery (2) hourly wage + payment per delivery, (3) hourly wage	hourly wage
app	<i>Deliveroo</i> app	<i>Foodora</i> app
official communication	hipchat, rider operations, Live Support/Hotline CS	WhatsApp, dispatch
shift planning ⁴⁵	flexible, using the app	“fixed shifts”, “flexible shifts”
shift planning app	easyPEP (https://easypep.de/)	shyftplan (https://shyftplan.com/)
organization of the rider fleet	senior riders, normal riders	senior rider captains, rider captains, controlling a set of normal riders

⁴⁵ The term *flexible* means that workers can enter their preferences in the shift planning apps and try to get a shift, if it is available, or swap shifts with other delivery workers. Hence, *flexible* in this context means that it is uncertain if a worker can do these shifts. The so-called *fixed* shifts exist only at *Foodora*. Here, a couple of shifts are distributed to the workers on a weekly basis according to their preferences; cf. I4: 14.

Appendix III: Ice-Berg Model *work / non-work*



Appendix IV: Photo-Elicitation & Interview Guideline

Question asked regarding the photo-elicitation task in advance:

Could you, whilst working, please take 5 to 8 photos that reflect, what you personally link with your job? Photos and/or screenshots are possible.

Interview guideline

[narrative part of the interview]

To begin with, we would like to thank you for your time and your participation to this study.

We had asked you to document, what you personally link with your job and working condition with photos or screenshots. We would like to use the pictures as a basis for this interview. Could you describe the chosen photos and explain what you link with your job as online-courier?

[half-open part of the interview using the following guideline]

- 1 Why did you choose to work as an online-courier? How long have you work as an online-courier? How long do you plan on working as an online-courier?
- 2 How would you describe the company atmosphere?
- 3 How many hours do you have to work per month/week according to your employment contract?
 - 3.1 To what extent are you satisfied or dissatisfied with it?
 - 3.2 How do you perceive your working hours while working?
- 4 Which aspects from your job satisfy you / do not satisfy you?
- 5 Digital connections and your smartphone play an important role for your job. How do you perceive the role and function of the smartphone in your daily work life?
 - 5.1 To what extent do consider it as positive or negative?
- 6 To what extent are you satisfied or dissatisfied with your relations to your superiors and colleagues?
- 7 To what extent are you satisfied or dissatisfied with the relations to the customers / to the restaurants?
- 8 To what extent are you satisfied or dissatisfied with your job and why?
 - 8.1 To what extent do you feel it is possible to change these conditions?
 - 8.2 If trade unions are not mentioned: How did you get into the *deliverunion* campaign?
 - 8.3 To what extent is the business model an obstacle to the union organization?

Appendix V: Transcription Rules

The following rules were used for transcribing the interviews:

- Contractions/short forms are transcribed as they are spoken.
- Numbers, Idioms, abbreviations are transcribed literally.
- Direct speech quoted in a recording is indicated by putting the quotes in quotation marks (“...”).
- All words are transcribed in lower case letters. Single letters or acronyms are capitalized.
- Breaks are indicated in the following way: breaks between intonations using a comma (,), a one second break using one period (.), a two second break using two periods (..), a three second break using three periods (...), a longer break is mentioned in brackets [x seconds break].
- Words, not spoken out completely, are transcribed, using a hyphen at the end (-).
- Interjections and gestures by interview partners are transcribed in brackets [...].
- Tone is transcribed using brackets [...].
- A strong emphasis on individual words or phrases is transcribed by *italicizing* them.

This transcription method represents a simplified version of the method proposed by Kruse (cf. Kruse 2015: 351-353). However, for reasons related to the researchers' work-load, the emphasis could not be transcribed on the level of individual syllables.

Text sample:

[...] I1: yeah, exactly . they even . i think that, like even .. for what i know, like the working situation, the working, and this for me tells a lot, the working conditions bei deliveroo and foodora are modelled on, are shaped on the worst conditions they could give in a country. so for example in italy, foodora workers are way in worse conditions than here . as eh, as payment .. and, what they said . in italy, i don't know if they have the courage to say it even here . was like, “*yeah, but this is not supposed to be a real job, it's supposed to be a, eh [ironic:] a good way to earn money if you like to bike around*” . as if the money, they are making is not real money. hm [laughingly:] as if like if you do it, *yeah, what's the difference between this and a real job if you do it five hour per day every day, i swear it's a real job, you should give it a try ..* [...] (I1: 17)

Appendix VI: Analyzing the Interviews

Step 1:

Before going into a detailed analysis of the content of the interview, the analyst has to engage with the interview on a linguistic-communicative level.

The aim is to create an understanding of the following aspects:

- pragmatics / interaction: Which roles are taken up between interviewer and interviewee (How are they related socially)? How do the participants in the interview relate to each other / themselves / people they talk about? (positioning) What role do self-theorizing, observing and anecdotal elements play in the narration?
- syntax: longer/shorter sentences, insertions, ellipsis (incomplete sentences), Importance of volume, break, speed of talking, use of direct/indirect speech, specialties regarding the use of certain expressions/verbs, negations/... ?
- semantics: Which words, metaphors or semantic fields are employed? Use of word plays, figures of speech, a certain jargon (standard/everyday speech / scientific jargon...)?

→ Notes are taken regarding these aspects.

Step 2:

After having gained a sensitivity regarding the communicative context and particularities of the interview, important segments should be identified.

The following classification systems has been developed *inductively*, meaning it was based on the containers mentioned in chapter 3.2 and expanded in an iterative manner while re-reading the interview and identifying themes treated therein.

Category	thematic definition/dimension
1. Definition and important aspects of the work	
Definition of work / Important aspects of the job	Statements/expressions made to express what the interviewee understands as a part of the work s/he is doing.
(Un)clear rules regarding the labor process	Statements/expressions made to express her*his opinion on the clarity or missing clarity of the rules regarding her*his work.
Enjoyment in work	Statements/expressions made to express enjoyment connected to the job as a online delivery worker.
Satisfaction with work	Statements/expressions made expressing the interviewees satisfaction with her*his job.
Wages	Statements/expressions referencing the wage he*she receives.
2. Relation to colleagues, superiors, customers	
Relation to colleagues	Statements/expressions expressing the understanding of collegiality at the delivery company AND Statements/expressions regarding his*her colleagues.

Bike messenger culture	Statements/expressions referencing the professional messenger community.
Relation with superiors	Statements/expressions made, expressing the relationship to superiors at the delivery company.
Relation with customers	Statements/expressions made, expressing the relationship to customers/restaurant personnel.
3. Digitalization and the labor process	
App and Connectivity	Statements/expressions regarding the role of the smartphone, app or connectivity in the labor process.
Strategies employed by the company	Statements/expressions made, expressing speculation or knowledge on the company's strategies regarding the organization of the labor process.
Knowledge about the algorithm	Statements/expressions regarding the interviewee's knowledge about the functioning of the algorithms, that are part of the labor process.
4. Problems and Coping Strategies	
Strategies employed by the delivery workers	Statement/expressions made, regarding strategies or habits taken up by workers (e.g. to maximize the wage).
Negative aspects of the job	Statements/expressions regarding negative aspects the work as a delivery courier.
obstacles for unionization and organizing labor struggles	Statements/expressions regarding obstacles to organizing labor struggles.

Step 3:

The segments in, produced in step 2, are reviewed regarding the micro-linguistic phenomena mentioned in step 1.

→ Notes are taken regarding the analysis of these segments.

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We're an interdisciplinary group of researchers/activists based in Berlin who combine theoretical work with concrete interventions in the fields of labor struggles, urban politics, protests and the corresponding academic discourses. Through the engagement in political activities and through free publications (via Creative-Commons licenses), we try to challenge hegemonic discourses and spread deviant theoretical practices.

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