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Article — Accepted Manuscript (Postprint)

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Suggested Citation: Kuttler, Tobias (2023) : The spatial politics of platformization: Negotiating platform power in everyday taxi driving in Mumbai, Geoforum, ISSN 1872-9398, Elsevier, Amsterdam, Vol. 147, pp. 1-11,
<https://doi.org/10.1016/j.geoforum.2023.103890>

This Version is available at:

<https://hdl.handle.net/10419/318878>

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The spatial politics of platformization:

Negotiating platform power in everyday taxi driving in Mumbai

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Word Count: 9488 words (including footnotes, excluding abstract and bibliography)

Version: Accepted manuscript (Postprint), 16.10.23

Abstract

A growing body of studies on platform urbanism has drawn attention to the (dis)embeddedness of digital platforms at the urban-digital interface. However, with growing attention to platformization in cities of the global south, and to practices of resistance against increasingly overarching platform power, the notion of urban space in the analysis of platform (dis)embeddedness needs to be better conceptualized. Beyond platform domination and subjugation, this contribution aims at offering a conceptual approach to understand and study empirically the politics of platformization in the context of the heterogeneous southern city. Building on Henri Lefebvre's theory of the production of space and his differentiation between abstract and differential space, and drawing on ethnographic fieldwork in Mumbai, India, I retrace the emergence of mobility platforms and their encounter with the long-established metered taxi services in the city. Thereby I analyse the contentious negotiation between the everyday practices and socialities of taxi driving, and historical and contemporary narratives and concepts that seek to govern transport and labour in Mumbai. As a result, attention is directed to the ambivalent role of state institutions in the case of Mumbai, which try come to terms with the logics of the platform economy and to take control of platformization processes in the city. Also, state institutions in their everyday, ground-level workings have provided a level of autonomy to metered taxis, and arguably provide a space for taxi drivers to manoeuvre the hardships of platform work. I conclude by highlighting the consequences of my observations for taxi driving in Mumbai, the future of platform capitalism and class relations in post-pandemic urban societies.

Keywords: Platform urbanism, platform mobilities, Henri Lefebvre, digital geography, South Asia, southern urbanism



1. Introduction

With platform firms increasingly concentrating economic power, there is a growing body of literature on *platform urbanism* that investigates platforms interact with and transform cities (e.g. Graham 2020; Katta et al. 2020). However, *platform urbanism* studies often do not explicitly address the socio-spatial interrelations, the historic trajectories of economic processes and the lived experiences of platform workers. In this contribution, I seek to expand on and substantiate the notion of *urban* (dis)embeddedness in these studies. I propose an approach to study contested urban-digital mediation between platform firms, workers, state institutions *and* urban society. Recognizing that platformization is an open-ended, non-linear and contested socio-spatial process despite increasing platform hegemony, I argue that the historic context and the lived experiences of platform workers should receive more attention.

Therefore, I draw on Henri Lefebvre's notion of urban space as arena of contradiction, appropriation and negotiation, hence as political arena. This space constantly produces differences that counter dominant processes of socio-spatial homogenization and abstraction (Lefebvre 2003, pp. 36–40). This conceptualization is useful, since, on the one hand, it requires to recognize platform workers not only in context of their labour, but as urban *inhabitants* that actively occupy and appropriate the city. It allows to extend the observations of *lived experiences* not only to the meanings and socialities of the work experience, but also to those related to, e.g. the experiences of migration and of dwelling in a home and neighbourhood, and to meaningfully integrate those observations into an analysis of everyday contentious platformization. On the other hand, I use this approach to urban space to investigate how platformization of mobility services is embedded in processes of urban restructuring and transformation of transportation infrastructures as well as different trajectories of conceptualizing and governing transport and space. By investigating how platform mobilities are produced in mediation and negotiation of these spheres, I aim to bring into conversation on power relations on different spatial scales that are often treated separately from each other.

I illustrate my approach by drawing on the case of Mumbai's taxi sector, thereby investigating how the emergence of platform mobilities is linked to –instead of disconnected from – practices, materialities and socialities of established metered taxi driving as well as embedded in established and emerging conceptualizations of taxi driving that seek to govern urban transport in Mumbai.

In the first part of the paper, I will trace recent debates on platform urbanisms, highlighting their contributions and deficits. In the second part, I outline to my theoretical approach based on Lefebvre's theory of the production of social space and his historical analysis of spatial production and my methodology. In the third part, I illustrate my conceptual approach: First, I observe the (dis)continuities between practices of metered

and platform taxi driving in Mumbai. Secondly, I briefly highlight past and present conceptualizations of taxi driving. Thirdly, seeking to identify the production of differential space in taxi driving, I explore the role of the state in facilitating and negotiating different concepts of taxi driving.

2. What is the “urban” in *platform urbanism*?

Critical accounts of the platform economy either tend to highlight their all-embracing, permeating power and influence, viewing platformization as an eventually inevitable process. Or they focus extensively on workers’ benefits or exploitation, running the risk of undertheorizing platform labour and precarity (Schor et al. 2020). *Platform urbanism* literature tries to dissolve the dichotomy of platform hegemony and worker subjugation, seeking to better understand how platform firms concentrate and exert power at the interface with the materialities and socialities of the city (Barns 2019; Hodson et al. 2020b; Sadowski 2020). Notions of platform (dis)embedding have been particularly productive for investigations of mobility platforms (e. g. Stehlin et al. 2020; Graham 2020; Katta et al. 2020). These contributions have highlighted how platforms reproduce existing power relations and create new inequalities, but also exposed the (potential) limits of platform power. Shedding light on the agency of city dwellers, it is highlighted how different actors collectively adapt platform logics and mechanisms to their needs and progressive aims (e. g. Rossi 2019; Wells et al. 2021; Murray and Datta 2020). Questioning the image of all-embracing platform power, authors have also drawn attention to the disruptions in the entanglement of platforms, humans and urban materiality (see e.g. Leszczynski 2020; Mazumdar 2020; Ferrari and Graham 2021; Leszczynski and Elwood 2022). Nevertheless, the study context is often rather the *city* than the urban. I argue that a more thorough theorization of the urban in the investigation of digital platforms is needed to answer the questions “what we mean by ‘urban platforms’ and what [...] is *urban* about these platforms.” (Hodson et al. 2020a, p. 4).

This is timely because platform investigations have been dominated by political economic approaches that understand digital interfaces primarily through the lens of technocapitalist restructuring. Such restructuring is displayed in processes of dispossession and dependency, resulting in overly dystopian framings of digital politics and practices (Leszczynski 2020; Elwood 2021). However, as Ash Amin reminds us, a city is a “constellation of entities, networks, and systems with their own logics and dynamics that are only ever partially visible and always emergent in their combinations” (Amin 2013, p. 206). Taking this invisibility into consideration, different conceptual strands provide fertile grounds in identifying ambiguity in the relationship of platforms, their users and the state.

Studies engaging queer and feminist theorizations highlight the heterogeneous forms of urban life in a digitally mediated world, pointing towards political imaginations and possibilities that lie beyond dominance and subjugation. When put in use, digital systems stimulate relations and create previously unimagined spaces, agencies and subjectivities that exceed the design of the system (Ash et al. 2018; Elwood 2021). This is an illuminative perspective, since it “informs a reading of digital-urban mediations as simultaneously

indicative of how technocapital operates and secures itself in cities as well as interruptions in normative digital-social-spatial relations of technocapitalist urban life” (Leszczynski and Elwood 2022, 6). Digitality is understood here as open, non-deterministic mediation of ‘urban’ socio-spatial and socio-material relations. At the same time, urban space mediates digitality in conjunction with the many processes reshaping socio-spatial relations today.

From this brief overview of the debate, I conclude that a procedural and open-ended approach to the politics of platformization needs to fulfil a peculiar balancing act: on the one hand, it needs to grapple with ever emergent platform constellations as thoroughly embedded phenomena. They are the results of preceding processes on different spatial scales, in the form of ubiquitous digitization, global capitalist expansion, and neoliberal urbanization; or in the form of local contestations over citizenship, migration regimes and taxi regulation on regional and local levels. While it is imperative itself to acknowledge and identify the precursors of these articulations, it is also important to seek additional angles of analysis that can identify the fault lines in deterministic narratives of platformization, potentially uncovering the unimagined outcomes. The idea of the *urban* as a political arena is where I locate the bridges between seemingly irrevocable conditions on different scales (such as existing power relations) that shape the city, and potentially liberating imaginaries in times of platformization. I am inspired here by Lefebvre’s spatial theories, where urban space is produced in the dialectical movement between concentration of power on the one side, and the production of difference and pursuit of self-determination on the other. This notion of the urban allows to grasp the ever-shifting dynamics of platformization that operate on different spatial scales and intersect and materialize in the city. Furthermore, it directs attention to the social and spatial everyday practice of taxi driving, since for Lefebvre the bodily practice is the primary source of heterogeneity and the production of differences. Finally, using the “urban” lens means to apply Lefebvre’s trilateral model of spatial production. This is enriching, since in such a trilateral dialectic, power relations never linger on a hardened dichotomy (such as presented in observations of big capital and worker subjugation), but always a third level of observation is offered. Here, adding the level of the lived experience (or the private, local) is a major tool for coming close to an understanding of platformization in its complexity. Introducing the perspective of the lived experience allows to grasp the shattered reality of the platform worker’s existence, that is characterised by the constant mediation of the frictions between the personal aspirations that for many are associated with platform work, and the exploitative everyday that seems to be the only way to reach these aspirations. Introducing the variable of driver biographies and aspirations into my analysis results in a much more complicated picture of digitally-mediated urban life; this form of urban life circles between (individual or collective) opposition and affirmation to platformization, but is rarely ever characterised fully by either of these poles.

In this period of vibrant debates on platform urbanisms, such a Lefebvrian notion of the urban is fruitful for at least two reasons: First, there is a growing body of empirical studies on worker's resistance against platform domination. Although they focus on potentials and limitations of worker organisation, mobilisation and solidarity (Cant and Woodcock 2020; van Doorn 2020), most studies on worker resistance do not make the spatial or urban – or even the city – explicit in their epistemologies.¹ The yet limited number of platform studies with explicit socio-spatial conceptualizations are productive in revealing the quiet, subtle and covert forms of agency and everyday appropriation of platform mechanisms (e.g. Ferrari and Graham 2021). Understanding such acts of resistance from a spatial perspective allows to better understand advances of, and limitations to, platform penetration in all spheres of urban dweller's lives.

Secondly, an urban angle is also needed due to a yet limited but growing body of literature on the digital-urban interface and platform labour conditions in the global south (Sharma 2019a; Surie and Koduganti 2016; Verma et al. 2020) also in context of the Covid-19 pandemic (Rachmawati et al. 2021; Annavarapu 2022). There is also growing interest in worker organization and socio-spatial strategies of dealing with risk and uncertainty of platform work in southern cities (Frey 2020; Nowak 2021). A stronger focus on the biographies and lived experiences of urban dwellers engaged in platform work is conducive to better understand how platform structures and mechanisms enable or limit dwellers to navigate the southern city in the multiplicity and “throwntogetherness, the unavoidable challenge of negotiating a here-and-now” (Massey 2005, p. 140) that these cities characterize.

3. The space of taxi driving: Narratives and practice, abstraction and difference

At the core of Lefebvre's theories is the famous triad of the production of space. Its three dimensions can be understood as different modes and moments of spatial production that are opposing, and at the same time linked to, each other in constant non-hierarchical interaction. First, the *spatial practice* refers to the reproduction of the material reality, the social appropriation of materiality and its sensory perception (Schmid 2005, pp. 210–211), marked by a certain cohesiveness of practices (Lefebvre 1991, p. 38). The *lived space* instead is overlaying the materiality of space with emotions, imaginations and symbolism. It is the affective dimension of spatial production resulting from the process of inhabitation (Lefebvre 1991, p. 42). The third mode of the production relates to the ways how the perceived space and the lived space are conceived and represented. It requires a mental act in order to conceive space, thus involves knowledge (Lefebvre 1991, p. 38). The representations of space are developed on the level of discourse, with maps, plans, signs and drawings all being part of the discourse (Schmid 2005, p. 216).

¹ Notable exceptions are e.g. Wells et al. 2021, Ecker and Strüver 2022, Briziarelli 2019, Nowak 2021.

In order to understand contemporary platform mobilities, I apply Lefebvre's triad to taxi driving. For analytical purpose, I assume a distinct social space of taxi driving that is produced in the tripartite relation explained above. The first step of the analysis is to identify each of these levels independently, assuming that all three dimensions equally shape the social space of taxi driving. First, the lived space of taxi driving that is created by the socialities linked to driving, but also the personal backgrounds of the drivers, their migration experience, aspirations, hopes and fears, considering also forms of social exclusion and discrimination that many drivers experience due to their ethnicity and caste. Secondly, the space of taxi driving is produced by the spatial competences of drivers that are needed to drive as source of income, and the social connectedness that particularly characterizes the practice of driving in Mumbai. Furthermore, both conventional and platform-mediated taxi driving practices are very closely connected to the spatio-temporal rhythms of the city (daily, weekly, seasonally), such as the regular peak commuting times when traffic jams occur on major highways, temporary hotspots of nightlife activity, or periods of afternoon heat or monsoon rain when life comes to a standstill. Thirdly, the space of taxi driving comprises different conceptualizations and narratives of driving, revealing the power relations and politics behind different interpretations of platform mobilities, especially vis a vis conventional taxi driving. These different perspectives on ridehailing become visible in primary sources such as regulations and court cases related to taxi driving on different spatial levels, but also in the way the platform companies portray ridehailing in their advertisement and in their own reports. These perspectives then are reiterated in government reports, newspaper articles as well as in interviews with drivers and passengers, providing another layer of interpretation. Observing conventional and platform-mediated taxi driving in parallel and in conjunction, this first step has the objective to understand the historical and socio-spatial (dis)embeddedness of taxi driving, as well as its scalar production (global and local, private and public, individual and collective, etc.). Here, the overlaps and fault lines between the two forms of taxi driving are revealed: the practices and narratives that are long rehearsed or abandoned, transferred between the two modes and thereby reproduced, but also newly emerging.

The second analytical step traces the linkages between the three dimensions, owing to the idea of the trilateral dialectic. This step more specifically reveals the power relations that shape taxi driving and how they are mediated concretely in specific practices in everyday life, or in narratives and concepts on the levels that are detached from the driving practice.

Here it is specifically important that in the reality of taxi drivers, the spatial practice of driving is closely interlocked with their lived space, since drivers usually spend the majority of their day in the car and/or with their colleagues at the taxi stand or the shift change site. It is also very characteristic to both forms of taxi driving in Mumbai that particular ethnic communities and their networks dominate these sectors (see also Bedi 2016b, 2018). But even more importantly the questions are: how do (collective) experiences of taxi

driving shape (or not) the narrative level, how are they represented in spheres outside the taxi sector itself? For example, driver experiences of income loss can lead to official fare revisions, attained by collective action that involves unions. Another example are the platform algorithms that mimic many of the characteristic aspects of conventional taxi driving. And other way around: how do dominant narratives, such as those that the firms actively nurture, become part (or not) of driving practices, how do they change socialities and identities of taxi driving? As these conceptualizations “touch the ground” through legal regulations, day-to-day bureaucracies, but also algorithms, they permeate everyday practices of taxi driving, but they are also negotiated and appropriated on an everyday basis. The way such “grounding” or “upscaling” is either nurtured or impeded reveals the politics of taxi driving that a multiplicity of actors are involved in.

Lefebvre’s concepts of *abstract* and *differential* spaces help to identify and understand these linkages better. Lefebvre claimed - building on Marx’ historical-materialist approach - that modern capitalism with its transition towards Fordism has produced, and at the same time built and builds on, *abstract space*, which is the space of the commodity. In negotiation with the homogenizing and fragmenting tendencies of abstract space, an utopian *differential space* emerges (Lefebvre 1991, 285f; Schmid 2005, 246-249, 260-276). I locate contemporary taxi driving in this context of ongoing mediation between abstract and differential space that is characteristic for the urban condition of late capitalism with its crises. Taxi driving is an *urban* phenomenon, because it is historically produced by, is part of, and produces the negotiation between spatial abstraction and difference.

Abstract space works through processes of fragmentation of the reality and simultaneous homogenization and reduction of the reality. To Lefebvre, this is the quintessential mechanism to make the capitalist mode of economic production operational in societies (Lefebvre 1991, 317, 383). Lefebvre writes: “Power – which is to say violence – divides, then keeps what it has divided in a state of separation; inversely, it reunites – yet keeps whatever it wants in a state of confusion” (Lefebvre 1991, p. 358). The politics of taxi driving are largely produced by this seemingly contradicting process: The representations of taxi driving in rules and regulations, union activities, court proceedings, narratives of urban elites or the platform companies are always portraying a particular aspect of the taxi driving reality, according to the particular purpose of the activity (e.g. promoting or curbing ridehailing). These fragments, stripped from the details of the messy reality, become powerful, first, due to their simplification and essentialisation. Secondly, a particular force is developed when different fragments are reassembled to become a coherent mechanism or strategy, by a logic of forced unity (Lefebvre 1991, 308, 334f, 355). This is most evident in the strategies of platform firms to make their ridehailing model hegemonic: they combine publicly visible activities, such as the proliferation of specific narratives in reports and articles, or government and court interventions, with more hidden ones, such as constant tinkering with algorithms and providing selective and opaque access to information and data.

In the interplay of fragments becoming powerful representations and entering the level of knowledge, Lefebvre argues that two notions are powerful: That of Euclidian space that is measurable and quantifiable, and the primacy of the visual sensorium over all other senses of the body (Lefebvre 1991, 75, 285; Schmid 2005, p. 263). For the space of taxi driving, I assume that the geometries of quantifiable space and the primacy of the visual complement each other: narratives and conceptualizations about taxi driving, reiterated by actors external to the taxi sector, are often underpinned by seemingly rational, universal and “global” arguments, such those of the “free market” and “fair competition”. The alleged righteousness of platform mobility model is thereby supported by a visible dominance of platform advertisement and ridehailing services in cities, and a strong focus on their aesthetics with global and modern appeal.

Thirdly, abstract spaces develop their power in the interplay between spatial scales and temporalities. The everyday life of taxi drivers and the local scale – or the near order, as Lefebvre calls it (Lefebvre 1991, p. 230, 2003, p. 172) – play significant roles for producing and grounding abstract concepts of taxi driving. Everyday life - as it is marked by triviality, repetitiveness, monotony and the familiar - guarantees the reproduction of the abstract space (Kipfer 2008, p. 199). In the conjunction of the local, everyday with the global lies the specific logic of the abstract space: its production is organized on the level of the strategic, global “far order”, but to take effect, it relies on localized resources and the temporalities of everydayness (Schmid 2005, p. 262). For Lefebvre, state institutions are the principle mediators to establish abstract space by shaping social spaces according to the logics of globalized capitalism (Lefebvre 1991, 282, 317-319), represented in the state bureaucracy and in a spatial order that it tries to enforce (Lefebvre 2003, pp. 159–164). This order is very visible in Mumbai’s taxi regulation with its system of license restrictions, access barriers and operating zones that was created over decades in attempts to discipline the burgeoning and “unruly” conventional taxi sector. In times of platformization, it is rather the narratives of the platforms that reproduces abstract space in everyday life, often by the drivers themselves who insist that the narratives of flexibility and autonomy actually work in their favour and not (only) to the benefit of platform firms.

Differential space in taxi driving, then, is produced in conjunction with abstract space: “Abstract space carries within itself the seeds of a new kind of space. [...] Inasmuch as abstract space tends towards homogeneity, [...] a new space cannot be born (produced) unless it accentuates differences” (Lefebvre 1991, p. 52). Hence, the “force” of differential space is located in the social practice, the lived experience and the moment. For Lefebvre, these are the sources of radical societal transformation towards *autogestion*, a term that may be best be described as “grassroots control” (Lefebvre et al. 2009, p. 14).

Lefebvre’s concept of differential space eventually informs my attempt to detect the potentially hidden and unimagined phenomena that arise in the urban arena, emerging from the driving practices under very demanding circumstances. Against the totalizations of abstract space, differential space seeks to create its independent unification of all levels of spatial production, including the global, the local, the private and the

everyday, while at the same time accentuating differences in this unity (Lefebvre 2003, pp. 100–101; Schmid 2005, p. 289). But it is not straightforward to identify “real” differences under the hegemony of (platform) capitalism, since capitalism is successful in its capacity to incorporate everyday life and aspects of the lived space into abstract space (Kipfer 2008, pp. 201–205). This claim becomes apparent in the observation of platforms: platform mechanisms intrude into all aspects of drivers’ lives, making their daily life very much aligned to the rhythms of algorithmic driving. At the same time, platform narratives trigger driver aspirations for social uplift that drivers themselves often appraise as justifying the everyday hardships caused by platform work. Lefebvre’s differentiation between *minimal* differences that are part of the isotopy and homogeneity of abstract space and *maximal* differences that create otherness or *heterotopias* is helpful to evaluate driver’s practices between affirmation and opposition (Lefebvre 1991, 37–39, 366, 372; Schmid 2005, p. 277; Kipfer 2008, p. 202).

4. Methodology

The research methodology comprised ethnographic fieldwork in Mumbai as well as expert interviews and a review of relevant documents and newspaper articles. The fieldwork was conducted between January 2019 and February 2020, shortly before the Covid-19 pandemic brought public life to a standstill. 74 in-depth² and 48 short interviews³ and 32 informal conversations⁴ were conducted, of which 128 were with (current and former) taxi drivers, vehicle owners, fleet managers and others directly involved in the taxi sector, such as car cleaners. These interviews and informal conversations aimed at understanding taxi driving - in its conventional and platform-mediated forms – as everyday spatial and economic practice, including the regulations that govern taxi driving. Furthermore, they served to investigate the biographies of drivers (especially the personal migration experiences), their aspirations and motivations, but also their socialities and circumstances of living. Furthermore, I conducted 26 interviews with representatives of various organizations. These included interviews with representatives of planning and transportation authorities,⁵ the platform companies⁶, unions⁷ and non-governmental organizations⁸ as well as further planning experts and academics, to understand the current and future governance of the taxi sector on different regulatory

² Interviews touching upon a wide range of aspects and perspectives on a given topic, using a semi-structured interview guide. They were usually conducted in a secluded setting whenever possible.

³ Interviews conducted with drivers in time-restricted situations. A structured interview guide was used. Such interviews took max. 15 minutes.

⁴ Unstructured, open-ended conversations in busy locations such as taxi stands, usually involving more than one driver.

⁵ These included interviews at the federal level (Niti Aayog), Maharashtra state level (e.g. Motor Vehicles Department) and city level (representative of the Metropolitan Corporation of Greater Mumbai).

⁶ Visit with informal conversation at an Uber Greenlight Hub in Mumbai, an interview with representatives of Ola Mobility Institute and an interview with a former IT expert at one of the major platform companies.

⁷ Interviews with representatives of various unions and taxi associations in Mumbai.

⁸ These included further transport experts, representatives of a consumer organization, and researchers from various academic institutions in Mumbai.

scales (federal, regional, local), the overlaps and delimitations of the two sectors, the historical evolution of the taxi sector and the recent development of the platform-mediated sector. Furthermore, I conducted interviews with regular passengers of taxi services, to understand the evolution of Mumbai's taxi sector from the passenger perspective. The interviews were supported by observations at taxi stands, train stations, shift change sites, gas stations and government offices and on numerous taxi rides across the city and region. These observations - conducted along Henri Lefebvre's methodology of the rhythm analysis (Lefebvre 2013) - helped me to understand the everyday socio-temporal repetitions and variations of taxi driving and the differences between their conventional and platform-mediated forms. The primary fieldwork area were the eastern suburbs of Mumbai (mostly M East ward), with additional interviews and observations in the island city, the western suburbs, in Navi Mumbai and Kalyan.

5. Mumbai's past and present of taxi driving: contentious encounters between practices, socialities and narratives

Until the late 2000s in Mumbai, the black and yellow metered taxi (*kaali peeli*), along with the auto rickshaw, represented the quintessential mode of intermediate public transport (IPT) for many decades. Being an omnipresent sight, the *kaali peeli* is often identified as symbolic and representative for Mumbai's distinctive spirit, and is as much a myth as it is part of the urban everyday reality. With emergence of radio taxis in the late 2000s, and later platform taxis in 2013, the number of *kaali peelis* in the city has reduced drastically.⁹ Juxtaposing the "old" metered taxis against the "modern" platform taxi, commentators in Mumbai commonly highlighted the obsolescence of the metered taxi and predicted their disappearance.

I start my empirical part by investigating the spatial practices and the lived space of platform taxi driving. Afterwards, I examine how powerful abstractions of taxi driving are actively produced by platform firms and state institutions to create a differentiation between "old" and "new" forms of taxi driving, linked to longstanding governance attempts to delegitimize the established IPT sector. Thirdly, examining the ambiguous role of state institutions, I offer a few observations on differential space.

5.1 The everyday of Mumbai's taxi sector: Gaining access and navigating life as a driver

The evolution of taxi driving in Mumbai is closely linked to the city's linear topography and historic spatial structure. Notoriously dense and congested in the inner city since colonial times, the city grew northwards along two major railway corridors. Taxis (and rickshaws) have been serving as feeders to the suburban railway system and as alternative to the railway. However, Mumbai's geography changed drastically in the

⁹ Between 2014 and 2019, the number of platform-attached taxis in Mumbai grew from 10.000 to 75.000, while the number of metered and radio taxis fell to 45.000 (Rao 2019; Korde 2019a, 2019b). Additionally, more than 200.000 licensed auto rickshaws operate in Mumbai.

last decades. Evolving into a polycentric metropolitan region with several nuclei of economic activity outside the core city, but also dispersed residential areas.

Against the notion of “disruption” that divides the evolution of Mumbai’s taxi sector in “before” and “after” of platform emergence, I will first focus on how platform driving is interwoven with established networks of metred taxi driving, and then I observe emerging platform driving practices.

Metered and platform taxi driving: Reciprocal relations on volatile grounds

Taxi and rickshaw driving in Mumbai have long been considered occupations undesired by the native Mumbai population, instead “belonging” to the migrant population hailing from northern or southern India and other parts of Maharashtra. In this context, practices of taxi driving are guided by attempts to achieve stable working and living conditions, also with a prospect for social mobility.

Metered taxi driving in Mumbai is often organized along family, friendship and community lines, creating an “infrastructure from below” (Bedi 2016b, p. 394) that provided stability, reliability and familiarity for drivers (Bedi 2018, 2020). Those who started to drive metered taxis in Mumbai several decades ago led lives on the move for many years, in many regards: Frequent shift of places and occupations were conducted - including regular work stints in Gulf countries or South East Asia - always in prospect for other and better livelihood opportunities. Many young platform drivers today have been found to share similar mobile lives.

Community and kinship ties are also important for organizing contemporary platform driving. Communities from northern India that earlier were active as small-scale taxi owners have ventured into the platform business, and started to operate large platform-attached fleets (Kuttler 2022).

It was observed that drivers shift between different forms of taxi driving. For example, many veteran meter taxi drivers shifted to platform driving, but were quickly dissatisfied with the earnings and working conditions and returned to driving metered taxis and rickshaws. Although narratives of competition between “old” and “new” taxi services are present among drivers, expressions of solidarity across all kinds of taxi drivers were frequently encountered in fieldwork. With rising fuel and living costs and shrinking earnings, both meter and platform drivers felt increasingly paralysed and neglected by the state, platform firms and the established unions.

While platform driving has borrowed and built upon metered driving practices, the latter have also changed due to the arrival of platform mobilities. One widely reported effect is that kaali peeli drivers take increasing care of the upkeep and cleanliness of their cars, and refusal of rides has decreased (see also Khatua et al. 2017). Kaali peelis have extended their operations where platform taxis do not commonly operate, for example as shared feeder taxis to and from suburban railway stations in south Mumbai, or for the transportation of goods in commercial and industrial areas.

Most taxi drivers operate in, and hail from, settings that are characterized by exclusion, marginalization and deprivation. Since many taxi drivers have a migrant background and belong to Muslim communities, they are often excluded from public life (e.g. Hansen 1999; Jaffrelot and Gayer 2012). Taxi driving provided a relatively stable source of income, however, with the emergence of nativist politics in Mumbai - with a particular Hindu nationalist orientation since the 1980s (Hansen 2001, p. 76; Mhaskar 2013, p. 18) – taxi regulation in Maharashtra changed in a way that it disadvantages newly arriving and non-Marathi speaking migrants. The conventional taxi sector has high entry barriers nowadays, while ridehailing is comparatively easier to access.

For both forms of taxi driving, socio-material infrastructures and forms of collaboration and solidarity play a key role in creating stability. The example of taxi driving in Mumbai also shows that at the same time, it is important for taxi drivers to be “mobile” in many ways and to flexibly manoeuvre relationships and possibilities. The provisional and fluid character of many socio-material relations can be an advantage and an urban strategy in itself, to become resilient and adaptive to changing urban conditions (Simone 2015, p. 382; Maringanti and Jonnalagadda 2015, pp. 366–367; Simone 2014, pp. 31–33; Tonkiss 2015, p. 388; Parthasarathy 2017, p. 45). Accordingly, not only the driving practices themselves, but also the lived socialities are important in both metered and platform taxi driving in Mumbai. Taxi driving as a source of income is tightly linked to socialities in and around the taxi vehicles, making vehicles and taxi stands important sites for material appropriation and place-making (e. g. Hansen 2006; Sopranzetti 2014). Metered taxi stands in Mumbai serve the sharing of information among drivers and are important interfaces between the taxi associations and the neighbourhoods they operate in. The material configuration of taxi stands express their significance for political and community organization and identity formation, and make group affiliation visible (Kuttler 2023). Platform taxi driving in Mumbai are characterized by similar socialities. For platform fleet operations, shift change sites resemble taxi stands in their significance as neighbourhood interface, for exchange and social control among drivers and vehicle owners (Kuttler 2022). Other shared infrastructures such as gas stations, government offices, repair shops, washrooms, temples and mosques also serve as sites for exchange of knowledge, information and work opportunities among all kinds of drivers.

These observations of metered and platform taxi driving practices highlight one particular aspect of the *urban* negotiation around taxi driving, that of access. Denied citizenship rights, urban *inhabitants* become members of the city by contributing to its everyday life and its lived spaces, as Lefebvre argued in his famous call for the “right to the city” (Lefebvre 1996, pp. 157–159; see also Kofman and Lebas 1996, pp. 33–35; Purcell 2002). In that sense, disenfranchised migrant taxi drivers, via their driving practices, claim their right to urban life and their right to make use of the many resources that Mumbai offers.

Emerging practices of platform taxi driving

New driving practices emerged with digital mobility platforms that are independent from metered taxi driving. In the early years of mobility platforms in Mumbai, bonuses for offering rides in peak demand periods were high, and targets for completing a number of rides within a given time period easy to achieve. Hence, platform-attached taxi driving emerged as a part-time occupation for mostly middle-class urbanites, such as students and entrepreneurs who drove only during peak demand hours when high earnings could be quickly achieved.

Also, new forms of sociality can be found among platform drivers. Apart from among drivers via messenger chat groups that is very common, the moving vehicle assumes heightened significance for handling socialities, leisure and income generation simultaneously with the use of several phones: Drivers are in permanent communication with their driver colleagues or friends and families at home, at the same time processing their trip bookings on another phone, all while manoeuvring the dense Mumbai traffic (Kuttler 2023). Such mobilization of place-making and sociality reveal forms of “dwelling-in-motion” (Sheller and Urry 2006) or “mobile homeliness” (Jirón Martínez 2012) that otherwise vanish under the restrictive and robotic conditions of platform driving.

Taxi driving in Mumbai has been characterized historically by a degree of autonomy of the sector and its drivers. However, as it will be explored in the following subchapters, taxi driving has always been subjected to processes of urban restructuring and societal change. Within these changing contexts, state institutions and urban elites have frequently intervened into the taxi sector based on their abstractions and imaginations of the transport sector.

5.2 Concepts and imaginations of taxi driving: Legitimacy, modernity and aspiration

Today’s platform mobilities are not only interlaced with existing practices of passenger vehicle driving, but also in settings of governing transport, spaces and populations. Today’s platform mobilities are sustained by powerful narratives of individual entrepreneurship and urban problem solving. Along with these narratives, digital mobilities are put forth as orderly, organized and innovative, against the established means of transport that are considered irregular, unorganized and *informal*. Hence, to understand conceptualizations of contemporary taxi driving, the historic production of informality needs to be understood.

Governing transport and people: Producing the illegitimate other

In Mumbai, like in many other cities, governance mechanisms of delegitimization and circumvention can be traced back to colonialism: Like other infrastructures, transport systems in colonial cities have served to link places of resource extraction and processing, and to cater to urban elites that colonial power relied on. At the same time, transport infrastructures served to organize, invisibilize and bypass indigenous populations and their uses of city spaces (Graham and Marvin 2001; Harris 2013).

In the post-independence era before 1991, when Mumbai experienced economic growth, two major processes shaped Mumbai's transport landscape: First, taxis and rickshaws assumed importance as means of transportation for the growing urban population, but also as a source of income for the migrant population (Naryan 2010; Sharma 2019b). In fact, in the postcolonial era, modernist visions of "rational" transport infrastructures according to a networked infrastructure ideal sought to "remake" cities, thereby eliminating social inequalities and provide basic services for the majority urban population (Graham and Marvin 2001, pp. 84–85). However, the ideal of universal service provision failed in Mumbai, and the slum population grew (e. g. Anand 2017). Second, subsequently the "slum dweller" associated with unorganized labour and illegal housing emerged as category and target for governance intervention and welfare provision. Consequently, categories of transport and labour result from the state's attempt to govern the majority population: Acknowledged as quintessential to the economic functioning of the city, but otherwise perceived as threat and violation to property and citizenship rights (cp. Chatterjee 2004). Hence, transport services such as taxi and rickshaws have remained, to various degrees, unregulated and in legal grey areas for many decades. Despite the restrictions, transport workers and their unions established themselves as considerable albeit slippery force in a city with a complex political landscape (Hansen 2001).

With economic liberalization in India after 1991, governance of urban transport and space was again reshaped, on the one hand, by the emergence of more outspoken urban middle class and elite politics. Demands for "good governance", sanitized urban spaces and a disciplined, nuisance-free public realm aimed at achieving a higher quality of life for the growing group of citizens that is oriented towards world-class standards and aesthetics (Anjaria 2009; Ghertner 2015; Ong 2011). Furthermore, efforts to implement large transport projects supported by international expertise and finance were intensified, spurred by aspirations to transform Mumbai into a world-class city (Harris 2013). With Lefebvre, one could say that both processes mark the transition towards the visual as primary force and mechanism of spatial abstraction that seeks to dominate space.

In Mumbai, the city's taxi drivers and their aging fleet of taxis became the target of interventions that aimed at aesthetic rejuvenation. The state began to strongly regulate the sector, challenging the status of taxi operators as independent, self-employed workers (Bedi 2016b, 2020). Backed by local business elites, middle class citizens and the transport industry, Mumbai's taxis experienced "modernization" from 2006 on, with transport authorities and city planners privileging taxi fleets over the established metered taxis (Bedi 2016a). Such orientation towards air-conditioned, phone-hailed taxis paved the way for the emergence of platform-mediated mobilities.

Platformization as magic formula: Entrepreneurship, growth, innovation

To make their concept of platform-mediated, standardized mobility services operational, platform firms have been circumventing or seeking reforms of taxi regulations globally and in India (Thelen 2018; Poovanna

2020) or pursued confrontational strategies, as the ‘Uber Files’¹⁰ revealed. In parallel, firms have been producing narratives and rhetorics that shall legitimate their operations. In India, the firms actively nurtured the *entrepreneurship* narrative to justify and counterbalance their activities that undermine existing transport regulations. It aims at recruiting drivers by advertizing flexibility and adaptability of the platform-driving model as highly beneficial to drivers (“Earn anytime, anywhere”)¹⁰. But more importantly, this narrative aims at government institutions and the public by positioning platform firms as motor for economic growth and as remedy against the exacerbating employment crisis among young Indians (see also Kuttler 2023). The affective dimension of the modern nation state is important for the entrepreneurship narrative: Predominantly English media, federal government institutions and civil society organizations reproduced these narratives, “based on shared neoliberal assumptions that the [...] model of entrepreneurship [...] will contribute to the growth story of a developing nation striving to become a global economic powerhouse” (Mishra and Bathini 2020, p. 406). To foster such “micro-entrepreneurship”, platform firms have partnered with two Indian states governments to “skill” young people by offering driver trainings (Press Trust of India 2015; Sangani 2016).

The entrepreneurship narrative is an early example of how platform firms, despite challenging legal provisions, succeeded in forming an argumentative alliance¹¹ with state institutions: First, by agreeing on the beneficial model of the flexible, risk-taking entrepreneurial driver who is in full responsibility of his own fate, with this discourse both companies and the state absolve themselves from responsibilities towards drivers (Doody et al. 2016; Graham et al. 2017). Secondly, platform firms succeeded in harmonizing their objectives with ideologies of the Indian federal state that considers fair competition a cornerstone of economic success and growth of a liberalized economy. With the state and the platform companies “placing responsibility for individual fairness and competition on the individual” (Vila-Henninger 2019, p. 241), drivers are not only fully responsible for their own success, but also responsible for maintaining the market order.

With more conciliatory strategies in recent years, the firms have further aligned their development strategies with state ambitions to foster technological and social innovation. Among these are the promotion of electric vehicles (Peermohamed 2017), tackling traffic congestion and air pollution, fostering promotion of alternative energy sources (Wani 2022; Toshniwal 2022) and improving access to transport options for women and people with disabilities (Shah and Raman 2019; Kulkarni 2021). Highlighting the benefits of mobility platforms for “inclusive growth” as well as increased women’s labour force participation and asset ownership, in these reports Ola argues for state support of platform firms and elimination of regulatory

¹⁰ <https://www.uber.com/in/en/drive/>

¹¹ The term *argumentative alliance* is introduced here by the author to describe a loose, at times fragile, but overall relatively stable conjunction of narratives and agendas across different actors. A further investigation of these narratives is conducted in Kuttler 2023.

barriers (Raman and Kulkarni 2021; Raman et al. 2021). Major platform firms in India have also closely collaborated with the state in combatting the Covid-19 crisis (Singh 2020; Chakravarti 2021).

In the ten years of mobility platforms' existence in India, it can be observed that these argumentative alliances between platform firms, governments as well as urban middle-classes and elites are relatively stable and enduring. Nevertheless, they are not without disruptions and fissures, especially when cases of drivers' sexual assault on women become public, such as in Delhi in 2014, or when transport regulations are too blatantly ignored by the platform firms. In such occasions, both state and platform firms variously employ either their confrontational or conciliatory machineries to solve disputes. As the Uber files revealed, Uber used various strategies to mislead authorities, such as delaying responses or illegally blocking access to company data (Sarin 2022). However, overall platform firms have been facing only momentary consequences of these disruptions, such as temporarily revoked operating licenses (Menezes and Peermohamed 2019).

It can be concluded that the presented abstractions of taxi driving are far apart from taxi drivers' everyday realities. With Lefebvre, one could argue that the firms seek to produce an affective dimension of platform driving: By highlighting flexibility of the driving model, it appears to be better reconcilable with an imagined "private life" of middle classes. It shall also distinguish itself from both the monotony of formal work and the insecurity of informal work. However, with rising commissions and decreasing bonuses, this appealing side of platform driving increasingly appears as illusion, since drivers need to constantly work longer hours to gain a sufficient income (see also Surie and Koduganti 2016; Sharma 2019a; Pati and Dhal 2021). Furthermore, the emphasis on individuality in entrepreneurship discourses does not match the socio-spatial connectedness and embeddedness of both metered and platform-based taxi driving in Mumbai. Hence, enthusiasm for "modernization" and the appeal of the new mobility platforms are not necessarily shared among metered taxi driving communities (see also Bedi 2016a, 2020). In fact, studies in different cities have shown that drivers of conventional IPT services have many reasons to reject joining mobility platforms (Phun et al. 2020; Chalermpong et al. 2022).

So far, I have portrayed state governance as instrumental for producing the abstract space that serves commodity circulation, in a state practice to "intervene continually in space [...] so achieving a certain cohesiveness if not a logical coherence" (Lefebvre 1991, p. 378). However, the emergence of digital platforms not only marks the crisis of capitalism to generate surplus value, but also – in view of all-embracing platform power – a crisis of state institutions and their modes of governance. Hence, when identifying differential space, the ambivalent responses of the contemporary state need to be examined.

5.3 The state in search of platforms' control: Of conflicting rationales and dwindling certainties

Different government levels have responded ambiguously and sometimes contradictory to the emergence of digital mobilities. While the Indian federal government opted for deregulation of the taxi sector, the government of Maharashtra has not developed an unequivocal standpoint. It can be argued that accommodating capital circulation through state intervention is only rationality of state institutions. With platform firms establishing their own sets of rules, it can be argued that state institutions' attempts to regain or maintain control of the organization of spaces is an important further rationale. Here the "urban" level is the prime mediator between diverse local logics and the state's role as facilitator of capital accumulation (Lefebvre 1991, pp. 281–283; see also Brenner 1997, pp. 154–155, 2001, p. 796). Urban economies are profoundly restructured due to platform firms' intervention. Not only the platforms' assault on state regulations as well as the technological and organizational "disruptiveness" with continuous adjustments of business models is challenging the state's rehearsed modes of organizing space (Valdez 2023). Also the platformization of informal economies and the changing modes of worker representation, including the decreasing role of traditional unions in platform economies is catching state institutions largely red-handed (e.g. Bertolini et al. 2023; Bessa et al. 2022). State attempts to retain control are hence also ways to "catch up" with conceptualizations of labour, technology and value that govern the platform economy.

The proceedings of the Maharashtra state government are indicative of such attempts to come to terms with the logics of the platform economy, in a local context that has for long been characterised by the contentions of neoliberal urbanization.

Such an example is the state's dilemma of disciplining platform firms that has its roots in the era prior to platform emergence (see also Kuttler 2023): Digital platforms respond well to state and city administrators' demands for modern taxi services; also the middle classes and many citizen organisations welcomed the new mobility choices (Deshpande 7/5/2017). However, considerable critical voices about the platforms also exist in Mumbai. As interviews with Mumbaikars revealed, many citizens rather value the reliability and familiarity that "their" regular kaali peeli drivers operating at neighbourhood taxi stands provided, and the dependability of the meter taxi fare system. In contrast, the anonymity of the relationship with platform drivers and the unpredictability of the surge pricing model disgruntles many passengers. Furthermore, the road transport authorities of the state recognized that mobility platforms undermine the sophisticated regulatory regime that aimed at disciplining the IPT sector. As it is summarized in a report commissioned by the state government: "As disrupters, they [the platform firms] not only demolished the carefully crafted state policy of providing distinct operational spaces and price frameworks to different segments of the traditional IPT operators but also started operating in the penumbra of the legal framework of licensing and permit regimes and demolished long held policy certitudes. [...] Their operations are, as of now, mostly on the margins of the legal framework" (Khatua et al. 2017, pp. 1–3). In the light of these conflicting

rationalities and vanishing certainties, the state could not ignore the calls of metered taxi unions and parts of the public for regulation of platform services.

Hence, Maharashtra, as one of the first states in India, drafted provisions for regulations of the platforms and passed them with delay in 2017. However, they never became enforced because the large platform companies dismissed the new regulations and instead moved to court (Korde 2017). In the following years, the Maharashtra state tried to manoeuvre different pressure forces by making concessions to both the platform firms and metered IPT services. Eventually, in 2020 the federal government passed new regulations for mobility platforms to be implemented across all Indian states.

These regulatory contentions exhibit that, with platform firms arriving on the scene, the already ambivalent workings of governance processes have further become contradictory. Petitions and legal proceedings involving the Supreme and local High Courts take on important roles in contestations, providing governments with argumentative grounds to either take up or delay enforcement of existing or new taxi regulations.

One interpretation of these ambivalences can be made along the lines of Ananya Roy's arguments (2009, 2018) that the state itself is an informal entity, using practices of (de)legitimization as flexible instruments to exert power and maintain control. In that sense the state is using ambivalence as a strategy to exercise control, however mostly to the detriment of workers, but not curbing platform power. Many state authorities in India, including those of Maharashtra, have utilized situations of legal uncertainty to take action against "illegal" drivers in situations when the legal provision was unclear to drivers because court decisions were pending or not yet reflected in the law (see e.g. Mahale 2019). With contradictory proceedings – creating regulations but not enforcing them, withdrawing firms' operating licenses and days later revoking the withdrawal, targeting drivers but not the platform firms directly – state institutions have created an opaque abstract space to demonstrate their power and their "upper hand" to the concerned public and the drivers. At the same time Maharashtra state allowed platform firms to operate with only small disturbances for many years. As one interviewed insider who was familiar with the platform business in pre-pandemic times stated to me in late 2019: "In Maharashtra, there will never be any policy that really acts against the platform firms. It is as simple as that". One can argue with Lefebvre that the small concessions that the Maharashtra state made explicitly to metered taxi drivers and unions are only *minimal* and *induced* differences, not hampering platform power.

5.4 Towards *real* differential space?

Reducing ambiguity to a strategy of the informal state to ultimately secure capital accumulation could potentially underestimate how everyday processes and practices permeate conceptualizations of decision makers and platform firms on the ground level. Whether ambiguous relationships between the state and the

platform firms potentially enable drivers to navigate the exploitative nature of platforms remains largely unexplored.

In his deliberations on the state, Lefebvre explicitly highlighted that the state could be an arena and enabler of direct democratic control and the affirmation of difference: “The democratic nature of a State or any other apparatus can be evaluated in terms of its capacity to avoid snuffing out contradictions by restrictions or by formalism; it should not only allow their expression and allow them to take shape but should also directly provoke them” (Lefebvre 2009, p. 135; cp. also Brenner and Elden 2009, p. 16; Brenner 2001, p. 796). With Lefebvre, it can be asked: In what way does the state contribute to the production of *real* differential space that support taxi drivers in their claims for self-determination or autonomy, or better earnings and working conditions?

“Below” the argumentative sphere, and despite extensive regulation, taxi driving has always been governed by practices that have the character of “intimate encounters” (Buire 2018, p. 2221) between ground-level state institutions and taxi operators. Practices such as meter tempering or bargaining about fares, driving without commercial taxi licenses, ride refusal etc. have been frequently enraging Mumbai’s middle classes, but have been either tolerated or not consistently tackled by the authorities. Such tactics common in the metered IPT sector can be seen as attempts by drivers to maintain independence and autonomy against increasing regulation and hostility of Mumbai’s “modernization” alliance.

Drivers on mobility platforms in Mumbai can be found to engage in similar tactics by manoeuvring between provisions of the platforms and the state. When Maharashtra state tried to implement the new taxi license system, drivers benefitted from the platform firms’ judiciary and rhetoric campaigns against regulations that the firms understood as “regressive” (Poovanna 2020). At the same time, platform drivers have been circumventing platform rules by operating on different platforms, cancelling unprofitable rides, or conducting off-platform jobs. Different to the state, the platform firms usually quickly take disciplinary action against what they call driver “misconduct”. Hence, for platform drivers, it is rather essential to manoeuvre quietly the provisions of the platforms on a small-scale manner, since tactics that become widespread or public are sanctioned drastically by both the platforms and the state, as in the case of the “Ola Fraud”¹².

With physical and mental strain that platform driving causes (Bartel et al. 2019) and in the context of shrinking remuneration offered by the platform firms, such driver claims for additional gains must be evaluated cautiously. Confronted with the uncertainty and instability of platform work, such “provisional agency” that tinkers with platform mechanisms can be understood “as a moral virtue that reflects qualities of both temporary necessity and social–material capability” and “a ability to act in ways that provide a social

¹² Over a time span of two years, a group of 40 platform drivers were charging passengers higher fares, using a technical glitch in an outdated version of a platform application (Thaver 2020).

good” (Jauregui 2014, pp. 84–85). From such a perspective, these claims by both metered and platform drivers can be understood as everyday practices of negotiating legality and illegality, usurping legal practices that frequently administer illegalities of the wealthy differently than those of the poor (Holston 2007; Yiftachel 2009; Genova and Roy 2020). This confirms Lefebvre’s observation that the everyday practices on the ground level is the sphere where abstract space is reproduced, but also most effectively challenged.

6. Conclusion: Platform frictions

The conditions and power relations that enable platform mobilities’ increasing dominance are rooted in Mumbai’s conventional taxi sector, both in the ways the sector is governed and how workers organize their everyday taxi driving. Disenfranchisement of drivers has been a stable characteristic of Mumbai’s taxi sector, and drivers are well aware of their subordination. However, platform drivers’ experiences also significantly depart from their colleagues in the metered sector. Subject to both state intervention and the platforms’ omnipresent mechanisms of surveillance, platform drivers rather stay under the radar when opposing to the platforms or trying to circumvent platform provisions. Since more overt and collective forms of resistance among platform drivers are rare in Mumbai, these hidden practices of non-affirmation aim rather at individualistic, personal gains such as expanding the quality of life or creating new spaces of sociality and intimacy.

As platforms increasingly intrude into, but also get contested in these lived spaces, it is becoming clearer that the “frontier” of platform capitalism is the lived space with its emotions and symbolism. Although this makes the analysis of the lived experiences a promising alleyway, the resulting observations elude an unequivocal interpretation. Platformization seemingly can make people’s lives richer, more connected and more meaningful, and therefore could potentially create situations in that the “*total* body breaks out of the temporal and spatial shell developed in response to labour, to the division of labour, to the localizing of work and the specialization of places” (Lefebvre 1991, p. 384). However, it is difficult to imagine that under platforms’ deep penetration of human life, a more radical vision of “alternate platform futures” (Graham 2020, p. 455) can emerge from such experiences of the platform reality. When platforms’ presence in human life is becoming more normalized, one can assume that this leads to an increase in platform firms’ capacities to integrate contradictions into abstract space and to continuously produce replicable emotions that, despite their hollowness, appease people’s desire for “real” difference. Understood with Lefebvre, this would mean the elimination of “urban” politics from human life. Also, ultimately, capitalism would have reproduced the conditions of accumulation.

Recognition of urban life at the margins is a challenge to academic epistemologies and theorization, since, as Simone (2011, p. 356) argues, “the urban is always ‘slipping away’ from us, always also somewhere else than where we expect it to be.” With digitally-mediated urban service provision and data-driven urban governance becoming widespread, but also scientific analysis more and more relying on big data analysis,

urban multiplicity is further made invisible (Amin 2013; Peters 2020). Hence, studying platform realities and politics *with or in* southern cities will always remain fragmentary.

Finally, mobility platforms are adopting an important role in socio-spatially fragmented cities like Mumbai, but also increasingly in the global north. Mobility platforms are at the disposal of Mumbai's elites and middle classes that are seeking more effective means to further decrease the burden of physical mobility and the "viscosity" (Doherty 2015) of everyday life in a crowded and exhausting city like Mumbai. The pandemics' lockdowns in Mumbai have shown that the city's elites and middle classes could instantaneously retreat to their own four walls in "capsular secession" (Graham 2018, p. 540) due to the availability of "essential" workers. All remaining migrant workers were left with no income and unprotected to the consequences of the pandemic. Hence, from the perspective of uneven mobilities, platform mobilities are further cementing class hierarchies in the service society, thereby also securing the future of capitalism.

Competing interests statement

Declarations of interest: None

Acknowledgments

The author would like to thank his research participants and field assistants in Mumbai. He is also grateful to his PhD supervisors and to the journal's editors and anonymous reviewers for their valuable comments and feedback, which helped to improve the paper.

Funding

The Ph.D. research this article is based on was funded by the Hans- Böckler-Foundation in the context of the Doctoral Research Group mobil.LAB [Hans Böckler Stiftung Promotionskolleg 032]. The funding source was not involved in the study design; in the collection, analysis and interpretation of data; in the writing of the report and in the decision to submit the article for publication.

Statement regarding ethical standards

I hereby declare that ethical standards were followed during the study and all interviewees gave their informed consent (oral or written). All interviews conducted and reported in this paper are pseudonymed.

References

- Amin, Ash (2013): The urban condition: A challenge to social science. In *Public Culture* 25 (2 70), pp. 201–208.
- Anand, Nikhil (2017): Hydraulic city: Water and the infrastructures of citizenship in Mumbai. Durham, NC: Duke University Press.
- Anjaria, Jonathan Shapiro (2009): Guardians of the Bourgeois City: Citizenship, Public Space, and Middle-Class Activism in Mumbai. In *City & Community* 8 (4), pp. 391–406.
- Annavarapu, Sneha (2022): The Weight of Waiting: Suspended Mobility and Deferred Aspirations Amongst Cab Drivers in Hyderabad. In *Social Change* 52 (2), pp. 187–202.
- Ash, James; Kitchin, Rob; Leszczynski, Agnieszka (2018): Digital turn, digital geographies? In *Progress in Human Geography* 42 (1), pp. 25–43.
- Barns, Sarah (2019): Platform urbanism: negotiating platform ecosystems in connected cities. Singapore: Palgrave Macmillan.
- Bartel, Emma; MacEachen, Ellen; Reid-Musson, Emily; Meyer, Samantha B.; Saunders, Ron; Bigelow, Philip et al. (2019): Stressful by design: Exploring health risks of ride-share work. In *Journal of Transport & Health* 14, p. 100571.
- Bedi, Tarini (2016a): Mimicry, friction and trans-urban imaginaries: Mumbai taxis/Singapore-style. In *Environment and Planning A: Economy and Space* 48 (6), pp. 1012–1029.
- Bedi, Tarini (2016b): Taxi drivers, infrastructures, and urban change in globalizing Mumbai. In *City & Society* 28 (3), pp. 387–410.
- Bedi, Tarini (2018): Urban histories of place and labour: the chillia taximen of Bombay/Mumbai. In *Modern Asian Studies* 52 (5), pp. 1604–1638.
- Bedi, Tarini (2020): Thinking through Urban Obsolescence: Tinkering, Repair and the Politics of Joona in Bombay/Mumbai's Taxi Trade. In *International Journal of Urban and Regional Research* 45 (5), pp. 848–868.
- Bertolini, Alessio; Graham, Mark; Neerukonda, Mounika; Ojanperä, Sanna; Parthasarathy, Balaji; Srinivasan, Janaki et al. (2023): Platformizing Informality, One Gig at a Time. In Aditi Surie, Ursula Huws (Eds.): *Platformization and Informality: Pathways of Change, Alteration, and Transformation*: Springer, pp. 13–45.
- Bessa, Ioulia; Joyce, Simon; Neumann, Denis; Stuart, Mark; Trappmann, Vera; Umney, Charles (2022): A global analysis of worker protest in digital labour platforms. Geneva: International Labour Organization (ILO Working Paper 70). Available online at https://eprints.whiterose.ac.uk/194162/1/wcms_849215.pdf, checked on 13.10.23.
- Brenner, Neil (1997): Global, Fragmented, Hierarchical: Henri Lefebvre's Geographies of Globalization. In *Public Culture* 10 (1), pp. 135–167.
- Brenner, Neil (2001): State theory in the political conjuncture: Henri Lefebvre's "Comments on a new state form". In *Antipode* 33 (5), pp. 783–808.
- Brenner, Neil; Elden, Stuart (2009): Introduction. State, space, world: Lefebvre and the survival of capitalism. In Henri Lefebvre, Neil Brenner, Stuart Elden (Eds.): *State, space, world: Selected essays*, vol. 1. Minneapolis: University of Minnesota Press.
- Briziarelli, Marco (2019): Spatial politics in the digital realm: the logistics/precarity dialectics and Deliveroo's tertiary space struggles. In *Cultural Studies* 33 (5), pp. 823–840.

- Buire, Chloé (2018): Intimate encounters with the state in post-war Luanda, Angola. In *The Journal of Development Studies* 54 (12), pp. 2210–2226.
- Chakravarti, Ankita (2021): Uber will now offer free rides to and from COVID- 19 vaccination centres in India, here is how you can book free cabs. Edited by India Today. New Delhi. Available online at <https://www.indiatoday.in/technology/news/story/uber-will-now-offer-free-rides-to-and-from-covid-19-vaccination-centres-in-india-here-is-how-you-can-book-free-cabs-1783024-2021-03-24>, checked on 10/17/2022.
- Chalermpong, Saksith; Kato, Hironori; Thaithatkul, Phathinan; Ratanawaraha, Apiwat; Fillone, Alexis; Hoang-Tung, Nguyen; Jittrapirom, Peraphan (2022): Ride-hailing applications in Southeast Asia: A literature review. In *International Journal of Sustainable Transportation*, pp. 1–21.
- Chatterjee, Partha (2004): The politics of the governed: Reflections on popular politics in most of the world. New York City: Columbia University Press.
- Deshpande, Shirish V. (2017): Uber - Ola, the competition killer or the competition trigger. Research Partnership Platform, UNCTAD. Mumbai Grahak Panchayat (MGP -India), 7/5/2017. Available online at https://unctad.org/system/files/non-official-document/cicplp2017c7_ccContributionbyShirishDeshpande_en.pdf, checked on 7/7/2021.
- Doherty, Catherine (2015): Agentive motility meets structural viscosity: Australian families relocating in educational markets. In *Mobilities* 10 (2), pp. 249–266.
- Doody, Sean; Chen, Victor Tan; Goldstein, Jesse (2016): Varieties of entrepreneurial capitalism: The culture of entrepreneurship and structural inequalities of work and business creation. In *Sociology Compass* 10 (10), pp. 858–876.
- Ecker, Yannick; Strüver, Anke (2022): Towards alternative platform futures in post-pandemic cities? A case study on platformization and changing socio-spatial relations in on-demand food delivery. In *Digital Geography and Society* 3, p. 100032.
- Elwood, Sarah (2021): Digital geographies, feminist relationality, Black and queer code studies: Thriving otherwise. In *Progress in Human Geography* 45 (2), pp. 209–228.
- Ferrari, Fabian; Graham, Mark (2021): Fissures in algorithmic power: Platforms, code, and contestation. In *Cultural Studies* 35 (4-5), pp. 814–832.
- Frey, Bronwyn (2020): Platform labor and in/formality: organization among motorcycle taxi drivers in Bandung, Indonesia. In *Anthropology of Work Review* 41 (1), pp. 36–49.
- Genova, Nicholas de; Roy, Ananya (2020): Practices of illegalisation. In *Antipode* 52 (2), pp. 352–364.
- Ghertner, D. Asher (2015): Rule by aesthetics: World-class city making in Delhi. Oxford: Oxford University Press.
- Graham, Mark (2020): Regulate, replicate, and resist—the conjunctural geographies of platform urbanism. In *Urban Geography* 41 (3), pp. 453–457.
- Graham, Mark; Hjorth, Isis; Lehdonvirta, Vili (2017): Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods. In *Transfer: European Review of Labour and Research* 23 (2), pp. 135–162.
- Graham, Stephen (2018): Elite avenues: flyovers, freeways and the politics of urban mobility. In *City* 22 (4), pp. 527–550.

- Graham, Stephen; Marvin, Simon (2001): *Splintering urbanism: networked infrastructures, technological mobilities and the urban condition*. London: Routledge.
- Hansen, Thomas Blom (1999): *The saffron wave: Democracy and Hindu nationalism in modern India*: Princeton University Press.
- Hansen, Thomas Blom (2001): *Wages of violence: Naming and identity in postcolonial Bombay*. Princeton, N.J., Oxford: Princeton University Press.
- Hansen, Thomas Blom (2006): *Sounds of freedom: music, taxis, and racial imagination in urban South Africa*. In *Public Culture* 18 (1), p. 185.
- Harris, Andrew (2013): *Concrete geographies: assembling global Mumbai through transport infrastructure*. In *City* 17 (3), pp. 343–360.
- Hodson, Michael; Kasmire, Julia; McMeekin, Andrew; Stehlin, John; Ward, Kevin (2020a): Introduction. In Michael Hodson, Julia Kasmire, Andrew McMeekin, John Stehlin, Kevin Ward (Eds.): *Urban Platforms and the Future City: Transformations in Infrastructure, Governance, Knowledge and Everyday Life*. London: Routledge, pp. 1–21.
- Hodson, Michael; Kasmire, Julia; McMeekin, Andrew; Stehlin, John; Ward, Kevin (Eds.) (2020b): *Urban Platforms and the Future City: Transformations in Infrastructure, Governance, Knowledge and Everyday Life*. London: Routledge.
- Holston, James (2007): *Insurgent Citizenship: Disjunctions of Democracy and Modernity in Brazil*. Princeton, N.J.: Princeton University Press.
- Jaffrelot, Christophe; Gayer, Laurent (Eds.) (2012): *Muslims in Indian cities: Trajectories of marginalisation*. New York City: Columbia University Press.
- Jauregui, Beatrice (2014): *Provisional agency in India: Jugaad and legitimization of corruption*. In *American Ethnologist* 41 (1), pp. 76–91.
- Jirón Martínez, Paola (2012): *Repetition and difference: Rhythms and mobile place-making in Santiago de Chile*. In Tim Edensor (Ed.): *Geographies of rhythm: nature, place, mobilities and bodies*. Farnham: Ashgate Publishing, Ltd.
- Katta, Srujana; Badger, Adam; Graham, Mark; Howson, Kelle; Ustek-Spilda, Funda; Bertolini, Alessio (2020): (Dis)embeddedness and (de)commodification: COVID-19, Uber, and the unravelling logics of the gig economy. In *Dialogues in Human Geography* 10 (2), pp. 203–207.
- Khatua, B. C.; Jadhav, D. G.; Godbole, Girish; Doshi, Nitin (2017): *Report of the committee for determination of the fare structure of taxis and Auto Rickshaws in Maharashtra State*. Available online at <https://transport.maharashtra.gov.in/Site/Upload/GR/Part%201.pdf>, checked on 7/7/2021.
- Kipfer, Stefan (2008): *How Lefebvre urbanized Gramsci: hegemony, everyday life, and difference*. In Kanishka Goonewardena, Stefan Kipfer, Richard Milgrom, Christian Schmid (Eds.): *Space, difference, everyday life*. New York, London: Routledge, pp. 193–211.
- Kofman, Eleonore; Lebas, Elizabeth (Eds.) (1996): *Writings on cities by Henri Lefebvre*. Oxford: Blackwell.
- Korde, Kailash (2017): *Of 45,000 app-based cab aggregators in Mumbai, only 96 apply for permits in 2017*. Edited by Hindustan Times. Mumbai. Available online at <https://www.hindustantimes.com/mumbai-news/of-45-000-app-based-cab-aggregators-in-mumbai-only-96-apply-for-permits-in-2017/story-ehSWoxJBqVbdgqiwd4sCL.html>, checked on 7/10/2021.

- Kulkarni, Apoorv (2021): *On The Move: Urban travel experiences of Persons with Disabilities and a path to build more inclusive transport systems*. New Delhi: Ola Mobility Institute. Available online at <https://olawebcdn.com/ola-institute/on-the-move.pdf>, checked on 10/20/2022.
- Kuttler, Tobias. 2022. "Socio-spatial embedding of platform mobilities: A Study on Taxi Driving." In *Mumbai/Bombay: Majoritarian Neoliberalism, Informality, Resistance, and Wellbeing*, edited by Sujata Patel, D Parthasarathy and George Jose, 135–153. New Delhi: Routledge India.
- Kuttler, Tobias. 2023. "Formality and the Janus Face of the Platform: Production of the 'Space of Taxi Driving' between Everyday Realities and Rationalities of State and Market." In *Platformization and Informality: Pathways of Change, Alteration, and Transformation*, edited by Aditi Surie and Ursula Huws, 89–138. Cham: Springer International Publishing.
- Lefebvre, Henri (1991): *The production of space*. With assistance of Donald Nicholson-Smith. Oxford: Blackwell.
- Lefebvre, Henri (1996): *The Right to the City*. In Eleonore Kofman, Elizabeth Lebas (Eds.): *Writings on cities by Henri Lefebvre*. Oxford: Blackwell, pp. 63–182.
- Lefebvre, Henri (2003): *The urban revolution*. Minneapolis: University of Minnesota Press.
- Lefebvre, Henri (2009): *Comments on a new state form*. In Henri Lefebvre, Neil Brenner, Stuart Elden (Eds.): *State, space, world: Selected essays*. Minneapolis: University of Minnesota Press, pp. 124–137.
- Lefebvre, Henri (2013): *Rhythmanalysis: Space, time and everyday life*. London: Bloomsbury Publishing.
- Lefebvre, Henri; Brenner, Neil; Elden, Stuart (Eds.) (2009): *State, space, world: Selected essays*. Minneapolis: University of Minnesota Press.
- Leszczynski, Agnieszka (2020): *Glitchy vignettes of platform urbanism*. In *Environment and Planning D: Society and Space* 38 (2), pp. 189–208.
- Leszczynski, Agnieszka; Elwood, Sarah (2022): *Glitch epistemologies for computational cities*. In *Dialogues in Human Geography* 12 (3), 361–378.
- Mahale, Ajeet (2019): *Transport officials take Uber, Ola drivers to task at airport*. Edited by The Hindu. Mumbai. Available online at <https://www.thehindu.com/news/cities/mumbai/transport-officials-take-uber-ola-drivers-to-task-at-airport/article30398833.ece>, checked on 10/4/2021.
- Maringanti, Anant; Jonnalagadda, Indivar (2015): *Rent gap, fluid infrastructure and population excess in a gentrifying neighbourhood*. In *City* 19 (2-3), pp. 365–374.
- Massey, Doreen (2005): *For space*. London: Sage.
- Mazumdar, Anurag (2020): *Between algorithms and the streets. The everyday politics of ride-hailing taxis in India*. In Michael Hodson, Julia Kasmire, Andrew McMeekin, John Stehlin, Kevin Ward (Eds.): *Urban Platforms and the Future City: Transformations in Infrastructure, Governance, Knowledge and Everyday Life*. London: Routledge, pp. 235–247.
- Menezes, Naveen; Peermohamed, Alnoor (2019): *Ola may be back in Karnataka today after paying fine*. Edited by The Economic Times. Bengaluru. Available online at <https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/karnataka-govt-lifts-ban-on-ola-cabs/articleshow/68548482.cms?from=mdr>, checked on 10/4/2021.
- Mhaskar, Sumeet (2013): *Indian Muslims in a global city: Socio-political effects on economic preferences in contemporary Mumbai*. Göttingen: Max Planck Institute for the Study of Religious and Ethnic Diversity

(MMG Working Paper 13-04). Available online at https://www.mmg.mpg.de/60633/WP_13-04_Mhaskar_Mumbai-Muslims.pdf, checked on 10/26/2021.

Mishra, Smeeta; Bathini, Dharma Raju (2020): Uber's entrepreneurship discourse and its neoliberal appeal: analysis of coverage in English-language dailies in India. In *Critical Discourse Studies* 17 (4), pp. 394–411.

Murray, Padmini Ray; Datta, Ayona (2020): Wiki-urbanism: Curating a slum resettlement colony with open knowledge platforms. In Michael Hodson, Julia Kasmire, Andrew McMeekin, John Stehlin, Kevin Ward (Eds.): *Urban Platforms and the Future City: Transformations in Infrastructure, Governance, Knowledge and Everyday Life*. London: Routledge, pp. 177–190.

Naryan, Beena (2010): Migrant Workers In Mumbai: A Case of Transport Sector. In *Shodh, Samiksha aur Mulyankan (International Research Journal)* 2, pp. 62–67.

Nowak, Samuel (2021): The social lives of network effects: Speculation and risk in Jakarta's platform economy. In *Environment and Planning A: Economy and Space*, 0308518X211056953.

Ong, Ai-hwa (2011): Introduction: Worlding cities, or the art of being global. In Ananya Roy, Ai-hwa Ong (Eds.): *Worlding cities: Asian experiments and the art of being global*. Hoboken, NJ: John Wiley & Sons.

Parthasarathy, D. (2017): Global Flows or Rural–Urban Connections? Temporality, Public Spaces and Heterotopias in Globalising Mumbai. In N. Jayaram (Ed.): *Social Dynamics of the Urban. Studies from India*. New Delhi: Springer, pp. 33–59.

Pati, Surya Prakash; Dhal, Manoranjan (2021): Counterproductive Work Behavior by Drivers of Platform Based Cab Aggregators in India: A Human Rights Perspective. In *Japan Labor Issues* 5 (32), pp. 17–27.

Peermohamed, Alnoor (2017): Ola kicks off pilot of its electric mass mobility project in Nagpur. Edited by Business Standard. Bengaluru. Available online at https://www.business-standard.com/article/companies/ola-kicks-off-pilot-of-its-electric-mass-mobility-project-in-nagpur-117052601413_1.html, checked on 10/17/2022.

Phun, Veng Kheang; Pheng, Pharinet; Masui, Reiko; Kato, Hironori; Yai, Tetsuo (2020): Impact of ride-hailing apps on traditional LAMAT services in Asian developing cities: The Phnom Penh Case. In *Asian Transport Studies* 6, p. 100006.

Poovanna, Sharan (2020): 'Govt norms for cab aggregators regressive, will dampen investments'. Edited by Hindustan Times. Available online at <https://www.hindustantimes.com/business-news/govt-norms-for-cab-aggregators-regressive-will-dampen-investments/story-3g7Qa567xvFoLo7kGXDkN.html>, checked on 7/10/2021.

Press Trust of India (2015): Ola, Uber in skill development pact with Rajasthan government. Edited by The Hindu. New Delhi. Available online at <https://www.thehindu.com/business/Industry/ola-uber-in-skill-development-pact-with-rajasthan-government/article7846269.ece>, checked on 10/25/2022.

Purcell, Mark (2002): Excavating Lefebvre: The right to the city and its urban politics of the inhabitant. In *GeoJournal* 58, pp. 99–108.

Rachmawati, Riani; Zakia, Luthfianti; Lupita, Ayu; Ruyter, Alex de (2021): Urban gig workers in Indonesia during COVID-19: The experience of online 'ojek'drivers. In *Work Organisation, Labour & Globalisation* 15 (1), pp. 31–45.

Raman, Aishwarya; Kulkarni, Apoorv (2021): Women in the driving seat: Studying the interplay between gender and asset ownership in the platform economy. New Delhi: Ola Mobility Institute. Available online at https://olawebcdn.com/ola-institute/women_asset_ownership_platform_economy.pdf, checked on 10/20/2022.

- Raman, Aishwarya; Ramachandran, Sreelakshmi; Sindhu, Rajat (2021): Women in the Platform Economy: Breaking Barriers and Driving Inclusive Growth. New Delhi: Ola Mobility Institute and Children's Investment Fund Foundation. Available online at <https://olawebcdn.com/ola-institute/women-platform-economy.pdf>, checked on 10/20/2022.
- Rossi, Ugo (2019): The common-seekers: Capturing and reclaiming value in the platform metropolis. In *Environment and Planning C: Politics and Space* 37 (8), pp. 1418–1433.
- Roy, Ananya (2009): Why India cannot plan its cities: Informality, insurgence and the idiom of urbanization. In *Planning Theory* 8 (1), pp. 76–87.
- Roy, Ananya (2018): The potency of the state: Logics of informality and subalternity. In *The Journal of Development Studies* 54 (12), pp. 2243–2246.
- Sadowski, Jathan (2020): Cyberspace and cityscapes: On the emergence of platform urbanism. In *Urban Geography* 41 (3), pp. 448–452.
- Sangani, Priyanka (2016): Ola signs MoU with Maharashtra government to skill 1 lakh youth in state Read more at: Ola sings MoU with Maharashtra government to skill 1 lakh youth in the state. Edited by The Economic Times. Pune. Available online at <https://economictimes.indiatimes.com/small-biz/startups/ola-signs-mou-with-maharashtra-government-to-skill-1-lakh-youth-in-state/articleshow/51495702.cms?from=mdr>, checked on 10/25/2022.
- Sarin, Ritu (2022): Uber's crisis SOP: hit 'kill switch' meaning shut down to deny info. Edited by The Indian Express. New Delhi. Available online at <https://indianexpress.com/article/express-exclusive/uber-kill-switch-sop-india-8021187/>, checked on 10/25/2022.
- Schmid, Christian (2005): Stadt, Raum und Gesellschaft: Henri Lefebvre und die Theorie der Produktion des Raumes. Stuttgart: Franz Steiner Verlag.
- Schor, Juliet B.; Attwood-Charles, William; Cansoy, Mehmet; Ladegaard, Isak; Wengronowitz, Robert (2020): Dependence and precarity in the platform economy. In *Theory and Society* 49 (5), pp. 833–861.
- Shah, Sonal; Raman, Aishwarya (2019): What Do Women And Girls Want From Urban Mobility Systems? New Delhi: Ola Mobility Institute. Available online at https://olawebcdn.com/ola-institute/ola_women_and_mobility.pdf, checked on 10/20/2022.
- Sharma, Chhavi (2019a): Aggregators, Driver-partners and the State. In *Economic & Political Weekly* 54 (46), pp. 55–61.
- Sharma, Chhavi (2019b): Kaali-peeli: Yeh hai Mumbai ki jaan. In *Mumbai Reader* 19, pp. 13–27.
- Sheller, Mimi; Urry, John (2006): The new mobilities paradigm. In *Environment and Planning A: Economy and Space* 38 (2), pp. 207–226.
- Simone, AbdouMaliq (2011): The surfacing of urban life: a response to Colin McFarlane and Neil Brenner, David Madden and David Wachsmuth. In *City* 15 (3-4), pp. 355–364.
- Simone, AbdouMaliq (2014): Relational infrastructures in postcolonial urban worlds. In Stephen Graham, Colin McFarlane (Eds.): *Infrastructural lives: Urban infrastructure in context*. Milton Park, Abingdon: Routledge, pp. 31–52.
- Simone, AbdouMaliq (2015): Afterword: Come on out, you're surrounded: The between of infrastructure. In *City* 19 (2-3), pp. 375–383.
- Singh, Manish (2020): Ola opens its tech platform to Indian government to combat coronavirus crisis. Edited by Tech Crunch. Available online at <https://tcrn.ch/3crKlxK>, checked on 10/17/2022.

- Sopranzetti, Claudio (2014): Owners of the Map: Mobility and Mobilization among Motorcycle Taxi Drivers in Bangkok. In *City & Society* 26 (1), pp. 120–143.
- Stehlin, John; Hodson, Michael; McMeekin, Andrew (2020): Platform mobilities and the production of urban space: Toward a typology of platformization trajectories. In *Environment and Planning A: Economy and Space* 52 (7), pp. 1250–1268.
- Surie, Aditi; Koduganti, Jyothi (2016): The emerging nature of work in platform economy companies in Bengaluru, India: The case of Uber and Ola Cab drivers. In *E-Journal of International and Comparative Labour Studies* 5 (3).
- Thaver, Mohamed (2020): Explained: How taxi drivers in Mumbai manipulated the Ola app to dupe customers. Edited by Indian Express. Mumbai. Available online at <https://indianexpress.com/article/explained/how-cab-drivers-in-mumbai-manipulated-the-ola-app-to-cheat-customers-7064946/>, updated on 12/3/2020, checked on 3/31/2021.
- Thelen, Kathleen A. (2018): Regulating Uber: The politics of the platform economy in Europe and the United States. In *Perspectives on Politics* 16 (4), pp. 938–953.
- Tonkiss, Fran (2015): Afterword: Economies of infrastructure. In *City* 19 (2-3), pp. 384–391.
- Toshniwal, Roshan (2022): Opening up Mobility Data: Opportunity to revolutionise urban mobility in India. New Delhi: Ola Mobility Institute. Available online at <https://olawebcdn.com/ola-institute/mobility-revolution.pdf>, checked on 10/18/2022.
- Valdez, Jimena (2023): The politics of Uber: Infrastructural power in the United States and Europe. In *Regulation & Governance* 17 (1), pp. 177–194.
- Verma, Ravinder Kumar; Ilavarasan, P. Vigneswara; Kar, Arpan Kumar (2020): Inequalities in Ride-Hailing Platforms. In Adrian Athique, Vibodh Parthasarathi (Eds.): *Platform Capitalism in India*. Cham, Switzerland: Springer Nature Switzerland, pp. 177–198.
- Vila-Henninger, Luis (2019): The moral economy of neoliberalism: How voters use neoliberal ideology to (De) legitimate undocumented worker access to labor markets. In *Sociological Inquiry* 89 (2), pp. 239–262.
- Wani, Adhnan Nazir (2022): Waste to Wheel: Mainstreaming Bio-CNG for Mobility in Indian Cities. New Delhi: Ola Mobility Institute. Available online at <https://olawebcdn.com/ola-institute/waste-to-wheel.pdf>, checked on 10/18/2022.
- Wells, Katie; Attoh, Kafui; Cullen, Declan (2021): “Just-in-Place” labor: Driver organizing in the Uber workplace. In *Environment and Planning A: Economy and Space* 53 (2), 315–331.
- Yiftachel, Oren (2009): Theoretical notes on 'gray cities': The coming of urban apartheid? In *Planning Theory* 8 (1), pp. 88–100.