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**PLUS** (Platform Labour in Urban Spaces) is a Horizon 2020 project lead by Prof. Sandro Mezzadra (University of Bologna) and involves 15 academic and non-academic partners. The project started in January 2019 and aims to investigate the impact of so-called platforms on urban areas and labour organization, as well as to elaborate policies of fairer regulation. Contact: <https://project-plus.eu/contact-us/>

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# INVESTIGATING PLATFORMS. A CRITICAL LEXICON<sup>1</sup>

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## Abstract

The aim of this article is to propose an interpretative grid and a critical lexicon through which it is possible to frame in theoretical and methodological terms the disruptions and tendencies of platform urbanism and the main platform labour challenges. The article is organized along seven keywords as a set of tools for expanding and enriching the current debate on these transformations. We will start framing main features of platforms in terms of space and time organization, and then consider their role in social infrastructure as well as their impact on labour organization, not only in terms of value production but also in terms of production of inequalities and resistances. Finally, we will highlight how political categories as sovereignty must be reconsidered due to platforms expansion.

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## **Keywords**

Platforms, capitalism, infrastructures, digital technologies, labour, trans-urbanism.

## **Resumen**

El objetivo de este artículo es proponer una retícula interpretativa y un léxico crítico a través de los cuales sea posible enmarcar en términos teóricos y metodológicos las disrupciones y tendencias del urbanismo de plataforma y los principales retos laborales de la plataforma. El artículo se organiza en torno a siete palabras clave como un conjunto de herramientas para ampliar y enriquecer el debate actual sobre estas transformaciones. Empezaremos enmarcando las principales características de las plataformas en términos de organización del espacio y el tiempo, y luego consideraremos su papel en la infraestructura social, así como su impacto en la organización del trabajo, no sólo en términos de producción de valor, sino también en términos de producción de desigualdades y resistencias. Por último, destacaremos cómo categorías políticas como la soberanía deben ser reconsideradas debido a la expansión de las plataformas.

## **Palabras clave**

Plataformas, capitalismo, infraestructuras, tecnologías digitales, trabajo, trans-urbanismo.

The aim of this article is to propose an interpretative grid and a critical lexicon through which it is possible to frame, in theoretical and methodological terms, the disruptions and tendencies of platform urbanism and resulting main platform labour challenges. The article is organized along seven keywords as a set of tools for expanding and making more complex the current debate on these transformations. The materials presented have been developed through the Horizon 2020 project PLUS (Platform Labour in Urban Spaces); in particular, we have elaborated the reflections contained in the internal reports on existing literature reviews on platform capitalism and on urban transformations along industrial revolutions.

Four main points that traverse all keywords, are highlighted. First, platforms could be framed as a “total actor”, acting on and influencing society, politics and economy. Indeed, they govern social cooperation, absorb state functions, valorize services and user interactions: digital platforms today are increasingly more considered as infrastructures that have “penetrated the heart of society” (Van Dijck et al., 2018); they operate, conduct prediction through data, with problems in terms of corporate accountability, national and international regulation, and profit from data harvesting and workforce exploitation. This article supplies input on all these three levels.

Secondly, we collocate platforms inside a global transformation of a capitalist mode of production after Fordism. Multiple forms of contingent work and the use of new technologies to re-organise and intensify the labour process has found a point of condensation in this paradigm, a normative model not applied everywhere and in the same mode, but capable of being a reference point for labour organization and class composition in terms of entrepreneurialism, individualization, digitalization, and piece working. Put differently, platforms are extremely flexible; they absorb long-time socio-economic conditions and reshape them. This includes race and gender inequalities.

Third, platforms modify time and spaces through processes of territorialization and de-territorialization. On the one hand, the digitalization of labour process allows physical limits to the capitalist cycle of reproduction to be overcome, blurring the boundaries between living and working time, as well as extending labour control. On the other hand, platforms impact the existing infrastructural geographies of the city, adapting common features to specific backgrounds. That is why we promote a trans-urban approach to inquiry platforms resilience moving through contexts, resistances and opportunities.

Finally, we want to highlight the bidirectionality of such processes: capitalist valorisation can be turned into class struggles or social resistances. New forms of unionism have risen alongside platform expansion, as well as a set of counter-uses to gain more control over them. The point we want to underline is that behind the valorisation processes put in place by platforms, a battleground between them and other processes are also identified; i.e. social reproduction becomes a field of tension between forms of commodification through platforms and instances of universal access to them.

We will start by framing the main features of platforms in terms of space and time organization. Then we will consider their role as social infrastructure, and move to their impact on labour organization, not only in terms of value production but also in terms of production of inequalities and resistances. Finally, we will highlight how political categories as sovereignty must be reconsidered because of platforms expansion.

## **Platforms and the time/space transformation (Federico Chicchi, Andrea Fumagalli, Cristina Morini)**

Digital platforms are not spaces for aggregation and/or sharing of content among peer-to-peer users, as some optimistic literature on technological transformation proposed some time ago. On the contrary, they make operational infrastructure that has a strong impact on production processes, on logistic distribution chains, on subjectivity at work, and on consumption practices. These elements do not favour the horizontal exercise of processes but introduce new hierarchies and new pervasive forms of control over work and life. In network and digital platforms, the coordinates of time and space in capitalist societies are deeply reconfigured in this sense, in order to favour at once the extension and intensification of value extraction from social cooperation practices.

Within the digital platform economy, it is possible to trace a vector of redefinition of economic and social processes, which makes this emerging business model a disruptive innovation. In particular, it is possible to identify the presence of a new form of logistics that needs to be articulated with new synchronies and operating speeds so high that it is necessary to develop new modes of *datacracy* (Gambetta, 2018; Allen, 1997). Obviously, and in this sense, it is necessary to rewrite social temporariness at the level of production processes, and their new infrastructural articulation as determined by the diffusion of digital platforms. The diffusion of the platform model has, in fact, introduced new differentiation and spatial dissemination among productive functions, linking them to their growing interdependence. Regarding labour activity involved in these “supply chains”, it is the theme of adherence to the media immersion required by the digital context that has a binding impact on social experiences. As regards the way in which the digital platform specifically determines the temporal dimensions of labour and social experience, some particularly relevant aspects are identifiable: a) the increasingly porous and confused relationship between productive time and reproductive time; in other words, it is increasingly difficult to trace a space of autonomy between life time and work time, where the latter tends to absorb the former in its logic of valorisation. Antonio Casilli’s research analysed in depth the role of digital labour on the demand economy (2019); b) the increasing intensification, from a cognitive point of view, of the number of operations - simple and complex - to be processed during the performance of occupational and professional activities; c) the progressive loss of control of the cognitive worker’s ability to possibly determine in a flexible and personal manner the best

way to carry out his/her work. The reason lies in the fact that the operations are traceable and can be monitored through digital surveillance and control (Lehdonvirta, 2018). In this regard, the apps used by delivery workers to log in and receive orders reconfigure the organisational time of their work days, to meet the production needs of the market.

Platform capitalism is radically reshaping the same process of capital valorization, characterized by some new aspects that can be divided into three main phases. First, each platform is based on an intensive users' involvement and networking so to exploit their social cooperation. Social cooperation implies social reproduction. It is in this step that we have the first phase of the valorizations process, which leads to the production of use value as a result of the relational processes that are triggered within the platforms (Fumagalli, 2019). This use value presents itself in stored form, thanks to algorithmic mediation. The second phase of valorization is the one that is structured around the new business function that is defined "business intelligence" (Davempont, 2014), able to technologically refine increasingly more, the systematization, classification and organization of data. It is in this phase that the use value of the data collected through the platform is transformed into exchange value. The third phase is the monetary realization that derives from the final use of the data as exchange value.

In this valorizations cycle, the data presents itself as initial capital, not simply monetary capital but anthropomorphic capital, since it already holds the common value (Commonwealth) of reproduction and social cooperation (Morini, 2019, Fumagalli-Morini, 2020). We are in the presence of formal subsumption and real subsumption which feed each other to the point of redefining the relationship of production no longer exclusively understood as a conflictual dichotomy between machinic and human, but increasingly within human nature itself, between unconscious unpaid self-commodification and a desire of life, increasingly imbued with fear, individualism and uncertainty.

It is also worth pointing out how platforms and "ecologies" built around their functional boundaries act as an "extraordinary" and innovative means of value extraction, based on relational, symbolic, and affective exchanges. In this way, platforms are able to stimulate the formation and sedimentation of a new temporal "grammar" of experience, which unfortunately has a toxic impact on individuality. In this sense, the capitalism of digital platforms penetrates social cooperation and subsumes it to the point of reshaping its organisational and social aims (Pirone, 2018). Here, then, is the urgent need to oppose social behaviours capable of articulating the human experience in the new social order, as against the immersive modalities that are determined within the logic of enterprise, and which start from the algorithms of the platforms.

Regarding the theme of spatiality more specifically, however, platform capitalism, just as it is able to dilate working time to the point where it tends to be unmeasurable, so it is able to redefine and deconstruct space. It is important to consider that we are faced with two entities of space: the physical and geographical, within which distances have been reduced but are always present and represent negative externalities (constraints); and the virtual one, which tends to be without boundaries and limits. Precisely because it is production by flows (and not by stock), space becomes an indispensable strategic variable to define labour and organizational production models: it becomes a direct productive factor.

The workplace itself is detoured. From a homogeneous and univocal characteristic of material production by stock, it becomes a heterogeneous, flexible, and changeable element. Depending on the model of work organisation, we can have multiple situations: from smartwork and telework, which takes place within the home (“domestication of labour”, Bologna, 1997); to work in single workstations but in open spaces, such as in call-centres, to work in common spaces (e.g., co-working); to the use of different places depending on the project in which one is inserted. The material logistics that manages the circulation of goods is accompanied by the organisational logistics behind the apps that move the business of the platforms up to the logistics of the work that follows.

The management of time and space (virtual or not) is, in platform capitalism, the variable that more than any other allows today’s organisations to fully exploit the potential value of life put to work, at the base of those learning and network processes which determine the growth of social productivity (Fumagalli, 2017).

## **Towards a Trans-Urban Approach in a Planetary Perspective (Niccolò Cuppini)**

It is not possible to separate an analysis of industrialization processes, technical innovation and labour transformations from the environment in which they develop, the spatial configuration they create and interact with, which is to say from the urban. Therefore, we could state that industrialization and urbanization processes are somehow two sides of the same coin. Over the last decade the emergence of platform urbanism prompts a reimagining of existing infrastructural geographies of the city and the labour that underpins the operation of urban life. Platforms interact with existing infrastructures and environments transforming the way the urban is governed and experienced

through technology. These interfaces have become ubiquitous nowadays, but we think that it is necessary to endow the analysis of such phenomena with a methodological and genealogical investigation, to grasp the current transformations in a more complex and accurate way.

It is necessary to adopt a lens on the urban which can go beyond what has been defined as an ideological “cityicism” (Wachsmouth, 2015). Urban studies used to point out cities as specific units of analysis, as if cities are bounded entities that could be understood on their own. However, a recent wave of critical urban scholars (Merrifield, 2013; Roy, 2011; Robinson, 2011) have pointed out the necessity to destabilize this assumption, opening up a new theoretical and empirical terrain of urban analysis. Our attempt to contribute to this stream of studies elaborates on what we label as a ‘trans-urban approach’.

In fact, we have considered that the ways in which digital platforms are territorializing require an approach of inquiry into how they interact, the frictions that they produce, the adaptation they require in the urban texture in a planetary vision. In other words, rather than consider specific case studies as meaningful in themselves, we push towards a research attitude focusing on the continuities, resonances and commonalities that platform capitalism is producing on a large scale. This does not mean that specificities, differences and contextual and situated factors do not matter. On the contrary, a trans-urban approach should emphasize contextual dynamics by enlightening the common ground in which they are produced. The theoretical indications formulated here could also intimately interact with fieldwork research, aiming to go beyond the simple comparison between different case studies and also beyond the multi-sited analysis – our aim is to develop what we could call a trans-sited analysis.

Developing a trans-urban perspective means going beyond the hierarchical vision prompted by modern geography. The world is no longer organized on a defined scalar disposition (Farinelli, 2009). The local, the regional, the state, the continent and the global once functioned as analytical and political steps for the encapsulation of social phenomena. However, one of the main changes that globalization processes have prompted has been a complex re-scaling (Brenner, 2009) that implies an effort to search for new concepts. Thinking through a trans-urban paradigm strives to tackle this challenge. Moreover, an emerging epistemological paradigm must be considered. The urban should be conceived of as a relation rather than as a stable matter of fact (Brenner & Schmid, 2015), while enriching this perspective with the adoption of heterogeneous theoretical sources.

First of all, we are working towards an urban interpretation of the so called “world-ecology” field (Weis, 2013; Moore, 2015; Raj, 2017). World-ecology draws on a diversity of transdisciplinary, critical traditions across the human and physical sciences. The hyphenated term world-ecology derives from a reinterpretation by the historians Fernand Braudel and Immanuel Wallerstein. The history of capitalism marks the geographical expansion of a world-economy that becomes global in the twentieth century. In Moore’s early formulation, the capitalist world-economy could not be separated from its environmental history: capitalism is a “world-ecology” whose geopolitics and economic life was rooted in a particularly dynamic - and violent - relationship with the webs of life. Capitalism, as a system of endless capital accumulation, required a constant search for new, lost-cost sources - including enslaved humans. The destruction and depletion effected by capitalist monocultures and extractive systems exhausted the cheap sources discovered in a previous era, setting in motion new frontiers of violent accumulation. Moreover, world-ecology radically challenges the binaries through which the hegemonic thought of modernity has constituted itself, principally the division between nature and culture. An urban interpretation of this reflection points to a dismantling of the binary between urban and rural, the city and countryside divide, and again going beyond a vision of cities as bounded territorial unities by focusing on their constitutive interconnections, and the continuous mobility (of people, capital, cultures, goods etc.) through which they are produced and reproduced.

This elaboration dialogues with the theory of “planetary urbanization” (Merrifield, 2013; Brenner & Schmid, 2014), that we try to enrich with a second source of inspiration for the development of a trans-urban perspective. The reference is to the work of Donna Haraway, mobilizing her concern with deflating the uncritical acceptance of key oppositions (and their political implications) related to the domain of science. Haraway’s conceptualization of ‘cyborg’ (1985) as an entity combining cybernetic, organic and non-organic qualities is quite an intriguing approach, and can be tested on the analysis of platform capitalism from both the labour and urban perspectives. Her recent work, “Staying with the Trouble: Making Kin in the Chthulucene” (2016), examines the emerging planetary paradigms usually labelled as ‘Anthropocene’, providing a critical and alternative perspective. In this regard, a trans-urban conceptualization should be nurtured by the possible entanglement between the Chthulucene perspective, the “Anthropocene or Capitalocene” developed by Moore (Moore, 2016) and the ‘Planetary urbanization’ perspective above mentioned. Furthermore, we should add the “critical logistics” field of studies (see for example Tsing, 2017). These four theoretical fields

converge in a radical re-orientation of concepts, in a dynamic, relational, interconnected and trans-scalar way, and in a shift from the “global” to the “planetary”. All these characters are crucial for a definition of a trans-urban approach necessary to fully grasp platform urbanism and the ways in which it is radically reshaping planetary times and spaces.

## **Platforms as infrastructures (Mattia Frapporti, Giorgio Pirina)**

We are witnessing an increasing debate on infrastructural systems and their entanglements (Graham & Marvin, 2001; Monstadt, 2009; Monstadt & Coutard, 2019; Whiteside, 2019). From urban to digital and logistical infrastructures, all these sociotechnical systems act in an integrated way in order to ensure a coherence in the operations of capital (Mezzadra & Neilson, 2019). For example, the idea of an urban nexus (Monstadt & Coutard, 2019) has emerged precisely to emphasize the increasing entanglement and interdependence of urban infrastructures. In a broader way, the free zone represents a meta-infrastructure, «a dynamic crossroads of trade, finance, management and communication», an urban space in which a variety of infrastructures (technological, information, logistical, economic, legislative etc.) hybridizes in order to extract and produce value. The zone - an example of what Keller Easterling calls infrastructural space - is a spatial software characterized by a recursive matrix that enables the reproducibility of this space in other contexts (2016).

One of the main characteristics of infrastructures is to be considered taken-for-granted. Infrastructures are a kind of skeleton, “the nervous system” of economy and society (Opitz & Tellmann, 2015). On the one hand they are indistinguishable from everyday life: we constantly use them, and are influenced by them. They incorporate “politics and poetics” (Winner, 1980; Larkin, 2008) and they shape the material and virtual panorama where we live. On the other hand, they contribute to making society “readable” and governable by creeping into it (Scott, 1999). It is what Michael Mann (1984) called infrastructural power: “the capacity of the state actually to penetrate civil society, and to implement logistically political decision throughout the realm”. Digital platforms today are more and more considered as infrastructures that have “penetrated the heart of society” (Van Dijck et al., 2018).

Digitalization has strengthened the tendency towards the hybridization of platforms and infrastructures: for instance, Google and Facebook are intersectional between these two spheres (Plantin et al., 2018; Van Dijck et al., 2018). Google’s ecosystem acts at once

as a platform and as an infrastructure. In our everyday lives we constantly use Google's services, such as email, archives, data management, search engine, video streaming etc. Both the individual and the public actor lean on Google's information infrastructure. According to Brian Larkin infrastructures "are objects that create the grounds on which other objects operate, and when they do so they operate as systems" (2008, p. 329). Google, together with Facebook, Amazon, Microsoft and Apple (GAFAM), "form the heart of the ecosystem upon which many other platforms and apps can be built" (Van Dijck et al., 2018, p. 13). We can easily say that they are the infrastructures on which the digital side of society lean: "the most profound technologies are those that disappear" (Weiser, 2001).

Following the reasoning set forth by Stephen Graham on urban infrastructures' failure (2010), we look at the failure of a digital platform as a lens to understand the elements that make it possible for a digital platform to become (or not) an infrastructure. In fact, in the Covid-19 era on the one hand we are witnessing the enrichment of actors/firms such as Amazon, Facebook and Google, and on the other hand the weakening of predatory platforms such as Uber and Airbnb. Before the lock-down, these two platforms were increasing their extractive dynamics, imposing themselves as dominant players in the digital ecosystem of ride-hailing and hosting. For example, Uber has started an integration of public transport infrastructure in its app (as in the case of Lisbon). Although it is a lean platform – characterized by more flexibility compared than a tradition business model – Uber experienced a fall in revenues due to restrictions on urban mobility. According to Arun Sundararajan's notion of "consumerization of the digital", that is, the tendency to design a digital product primarily for individuals rather than for firms and government agencies, "companies have started to rethink what they might deliver to this digitally enabled consumer base – imagine Uber without GPS-enabled smartphones; simply not possible at scale – and what workforce models might be now feasible when a smartphone-equipped crowd of independent contractors can seamlessly enter and exit digital labor markets" (2016, p. 71). On this basis, it is possible to consider on the failure of a platform to become an infrastructure. Sectoral platforms (Van Dijck et al., 2018) such as Uber depend on an assembly of services, infrastructures, and digital tools, for example a GPS system (where Google dominates the market) integrated in a smartphone, for growth. This assembly is dominated by what van Dijck, et al. (2018) call infrastructure-platforms (such as GAFAM companies), which offer almost every digital product and service on which Uber and other sectoral platforms are based.

## Platforms and Labour (Moritz Altenried)

The rise of the platform economy has had a substantial influence on the world of work in the recent decade. Despite its often relatively small size in labour markets, it has to be understood as a laboratory for the transformation of labour also beyond the realm of digital platforms. Even though the labour arrangements of digital platforms have been made possible by new algorithmic technologies, and their self-presentation paints the picture of themselves as digital innovators and disruptors, platform labour has to be situated within broader and pre-digital economic and social transformations in the wake of the crisis of Fordism, just as well as in a distinct and even longer genealogy of flexible and contingent labour.

Amongst other things, the turbulent crises and transformations since the 1970s have brought about a loosening of workers' rights and labour market regulations that had been established in the post-war period in Europe and North America with its normative model of standard employment. While this normative model has always been a reality only for a certain segment of the working class (stratified by vectors such as geography, gender and racism), it served as a powerful aspiration for workers and a normative model for the understanding of labour in Western societies (Huws, 2016). The rise of platform labour must be collocated in the demise of this model through the multiple crises shaking the global economy since the 1970s, up to the economic and financial crises that became visible in 2007. These crises and the consequent reconfiguration of labour relations are the context in which we observe both a rise of multiple forms of contingent work, and the use of new technologies to re-organise and intensify the labour process, resulting in profound and global processes of the re-composition of class.

While the global economic and financial crises after 2007 (and the crisis of Fordism as its 40-year pre-history) plays a crucial role in the rise of platform labour, it is important to also situate it in an even longer history of contingent labour, reaching back at least to the *thetes*, the landless labourers of ancient Greece (van der Linden, 2014). Today the millions of contingent workers who are directed by an app through urban spaces work alongside more traditional forms of contingent work, such as day labourers waiting at street corners to be picked up for a day of work in construction or harvesting. To take their shared history of contingent labour into account helps to sharpen the analysis of contemporary platform labour.

In the previous century, this genealogy was heavily characterised by the logistics sector, which has always been a site of experimentation using hyper-flexible forms of

labour in order to find lean and cheap answers to the contingencies of global supply chains. Labour relations that are characteristic of the gig economy were around in the logistics sector long before the advent of digital platforms. One example is the trucking sector in US ports. In the late 1970s, the deregulation of the industry re-made many formerly employed workers into “independent contractors”. These terms describe individual drivers who own or lease their trucks and contract their services to bigger freight firms (Bonacich & Wilson, 2008:103ff). Contracting drivers as owner-operators who are often paid by the piece made it possible to reduce wages and push many of the entrepreneurial risks onto the drivers, who are not entitled to insurance, other benefits, or overtime pay.

These employment relations in the port trucking sector are in many respects an exact blueprint for the labour relations we find in what today is described as the gig economy. Today the legal status of “independent contractor” is key to the business model of platforms such as Uber or Deliveroo. This legal status is closely bound up with a digital renaissance of a seemingly outdated wage relation: the piece wage. Payment by the piece is a common system in platform labour; workers from Uber and Deliveroo, for example, are normally paid by singular deliveries or taxi rides. This way of organising labour contracts and payment are not only a means of creating a flexible and scalable workforce, but also crucial tools in disciplining workers. Through piece wages, duration and intensity of labour are directly reflected in the amount of income a worker is able to generate, which serves as an incentive for workers. The status of the independent contractor further pushes costs for downtime, insurance, and work equipment onto the workers themselves, experienced by both port truckers in the 1970s and Uber drivers of today. It seems important to acknowledge the multiple prehistories of today’s gig economy, in order to gain a better, historically founded understanding of the continuities and transformations that characterise the current rise of platform labour. Here, one especially important thing is the fact that the history of flexible and contingent labour is to a great extent also the history of migrant and female labour. With this history in mind, it is, for example, no surprise to see the extent to which labour in contemporary platforms like Deliveroo or Uber is migrant labour in many cities across the globe.

While many components of platform labour do have a long history, a crucial innovation of platform labour is the implementation of digital technologies to organise, supervise and automate control over the labour process. The software architectures employed by the platforms allow for the tight organisation of the labour process with little or no direct oversight of human managers, thus pioneering forms of algorithmic manage-

ment. This is the radical innovation of platform labour as digital technology allows for new levels of automated management and control previously unseen in the field of contingent labour. Software allows for a great number of things, from (automated) shift planning and communication to the tracking, tracing and rating of workers. These new methods of organising, monitoring, and measuring labour allow for tight control of platform workers, even if their workplaces are out of the direct sight of management, as is the case for example for Deliveroo riders. In this way, digital technology allows for the extension of forms and practices of organisation and control into urban spaces formerly only conceivable in the disciplinary spaces of factories (Altenried, 2019). It is this very combination of sophisticated forms of algorithmic organisation and control of labour with flexible contractual arrangements that makes contemporary platform labour possible and efficient.

## **Gender and Platform Labour (Carlotta Benvegnù, Eleni Kampouri)**

Statistical data show that the gendered composition of labour is relatively balanced in the gig economy, although in certain occupational sectors, and in the

Global South, male participation rates tend to be slightly higher (Berg, 2016; Iperiotis, 2010; EUROFOUND, 2015; Huws et al, 2019). However, studies found the persistence of occupational segregation inside the platform economy (Balaram et al., 2017), reproducing pre-existing gendered patterns. While, for example, workers in domestic work or care related platforms tend to be female, in ride-hailing platforms workers continue to be mostly male (Hunt & Samman, 2019). Moreover, a recent Europe-wide study claims that there are further gendered inequalities as ‘the proportion of women decreases as the intensity of platform work increases’ (Pesole et al, 2018:22). Another survey found that female platform workers work longer hours and their hourly rates are on average two-thirds of those of their male counterparts (Barzilay & Ben-David, 2017). While all these studies may be useful, they are based on limited samples of platform workers, mostly in Europe and the USA, while platforms in the Global South remain largely unresearched. There is also a lack of long-term and intersectional perspectives that go beyond the mere male/female dichotomy.

Another strand of the literature, mostly based on ethnographic studies, addresses the platformization of feminized and racialized sectors, such as domestic and care work,

and criticizes the overwhelming media and academic attention to a few companies, especially Uber, in which platformisation has disrupted previously regulated, and mostly male-dominated, sectors, i.e., taxi driving. Using Uber as a universal model (as for example in the popularization of the verb “uberisation”) obscures the differential impacts that platforms may have on sectors that are already unregulated, feminised and racialised (Mateescu, 2017). Cleaning and care work in particular, which were already characterized by widespread deregulation long before the emergence of app mediated possibilities, may provide a different paradigm to that of Uberization (Ticona et al, 2017 and Hunt and Machingura, 2016). The platformisation of domestic and care work may be understood as part of a wider process of growth of paid reproductive labour by private companies, which includes the emergence of temporary recruitment agencies that may be seen as precursors to contemporary domestic and care platforms (Van Doorn 2017). While labour union activism around these platforms has not caught public attention across the world, there are forms of unionization (such as in Denmark<sup>2</sup> or the USA<sup>3</sup>) that take advantage of platformization in order to regulate grey areas in domestic and care work, such as insurance and paid leaves.

As feminist critics have pointed out, most debates on the “disruptive” effects of platformization reproduce gendered and Western biases, taking as a starting point an idealized labour market preceding the advent of the platform economy. Kylie Jarret (2015 and 2018), for example, criticizes the assertion that labour conditions in digital capitalism are ‘new’ and calls for a Marxist feminist ‘return’ to the complex ‘economic but also cultural logics’ of reproductive labour. From a gender perspective, platform labour ought to be analysed in relation to both the actual work performed within the platform, and the interlinked unpaid, uncompensated and unrecognized labour that predominantly female workers devote to the vital tasks of care and domestic work at home.

By being labelled as “self-employed” or “free-lancers”, even when they are working full-time for a single platform, platform workers are deprived of the most fundamental labour rights (including gendered labour rights, such as pregnancy, maternity and paternity leaves and allowances). This condition renders them especially vulnerable to

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2. In April 2018, for example, the domestic workers’ union 3F managed to sign a collective agreement for 450 workers working through the platform Hilfr.dk, a cleaners’ website that provides services for around 1,700 customers in Denmark. With the agreement that came into force in August 2018, Hilfr.dk domestic cleaners seized to be self-employed and became workers covered by EU and national labour law.

3. Another example is that of the National Domestic Workers Alliance, in the USA, which in 2018 introduced a “Good Work Code”, composed of eight goals that gig economy companies should endorse voluntarily: security, stability and flexibility, transparency, shared prosperity, a livable wage, inclusion and input, support and connection. See <https://www.www.domesticworkers.org/worker-organizing-leadership>.

algorithmic pressures to be available and productive on an ongoing basis in order to secure a decent income, which, in turn, complicates the impossible task of “combining work with care”, productive and reproductive activities. While for many women and migrants used to working in precarious feminized and racialized sectors, these working conditions are anything but novel. For male workers accustomed to working in regulated markets the impossible timetables of full-time commitment and constant availability without corresponding benefits are putting into question masculine identities and the heteronormative gendered division of labour.

Outside the literature focusing on the platformization of specific feminized and racialized sectors, e.g. domestic and care work, in which reproductive labour was traditionally carried out, there is a lack in the existing literature on the ways in which gender, class and race are articulated in platform labour as a whole. There is also a lack of analysis of the impact of digitalization on gender regimes and especially on masculinities regimes. In order to bridge this gap, we argue that reproductive labour may provide a productive gender lens through which to also examine the emergence of potentially subversive precarious subjectivities.

## **Digital Struggles / Platforms (of) Struggles (Maurilio Pirone)**

Digital platforms generally present themselves as service marketplaces or free spaces for socialisation. They refuse the traditional framework of labour/capital relations with its hierarchies, responsibilities and conflicts. Self-entrepreneurialism is encouraged as a form of labour more autonomous than the employee, allowing workers to valorise their human capital without obligations. Furthermore, platforms could be considered more than a disruptive business model. They act as mythological machines (Pirone, 2018) producing values and expectations. In this sense, they embody a longer-time narrative, the so-called Californian Ideology (Barbrook & Cameron, 1995) that promised the web as free space for creative people without state control or forms of exploitation. So self-entrepreneurialism goes hand in hand with digital technologies innovations and the claim to avoid traditional legal norms. In this sense, there is an ambiguous closeness between platform mythology and post-capitalist visions (Srnicsek & Williams, 2015) of digital technologies potentialities for a fairer world.

Nevertheless, this narrative prompted by platforms gets cracked by emerging and different digital conflicts. Roughly, we may identify three main cruxes among this

business model and living labour. The first point of dispute is represented by legal contracts, with workers contesting the status of partners, independent contractors or micro-enterprises in favour of more stable and safe conditions. The second point is the algorithmic management of labour process, considered not as neutral by workers but as a hierarchical power to be compensated for with fairer wages. The third point regards the business model itself, with the attempt to launch alternative platforms based on cooperative models.

Around such cruxes, processes of organization and practices of protest emerged. Despite the no-unions philosophy adopted by platforms on behalf of a supposed no-employee character of their model, several and different forms of platform workers' organisation emerged. Traditional unions, indeed, have been challenged by emerging forms of informal unionism, based on workers' self-organization and variable practices of protest. The flexible nature of platform labour disables forms of unionisation based on fixed labour categories, bordered workspaces, and workers' representatives. Instead, we may highlight the blurring geographies of these innovative unions, moving through hybrid spaces – the digital places of communication such as chats or Facebook groups and the physical spaces of labour like restaurants or houses – and adopting urban spaces as the site of both production and organization. Furthermore, these experiences of platform workers' organization may adopt different approaches: in some cases, they aim to support workers to place themselves on platforms and to deal with bureaucracy and rules; in other cases, they openly struggle against platforms to improve working conditions.

Regarding the practices, we may highlight a wide set of different actions put in place by informal unions and platform workers: strikes, blocks, boycotts, critical mass rides, media campaigns. Such practices reflect both the urban nature of many platform services and the importance of communication for the appeal of self-entrepreneurialism. Furthermore, these practices represent different forms of challenging more general capitalist processes. Firstly, we may place some actions on the side of circulation struggles (Clover, 2016), assuming the central role obtained by logistics and undermining it: the integration of production and consumption through circulation is sabotaged by interruptions and slowdowns caused by blocks and strikes. Secondly, we may underline the construction of counter-logistics (Bernes, 2013) as the capacity to coordinate and integrate protests and channels of communication: workers do not simply submit to algorithms, but express autonomous power to organize themselves using the same digital technologies. Finally, we note some forms of Neo-Luddism, which is the strong refusal

of platforms, considered as dangerous and unadaptable business models (more than a generic blaming of technology). In many cases, local committees of citizens suffering because of platform expansion (i.e., local neighbours against Airbnb gentrification) or workers from traditional sectors who fear losing their jobs (i.e., taxi drivers against Uber) adopt such a perspective.

We may conclude that platforms do not simply represent a disruptive business model but could be framed as a point of contention between processes of capitalist valorisation and living labour autonomy. Considering such opposition, what emerges is how workers' self-organization represents the other side of self-entrepreneurialism supported by platforms, informal unionism as the other side of labour informalisation, digital struggles as the other side of social cooperation subsumed by algorithms. Such struggles aim not only for wealth redistribution, but also to unmask power relations and democratize decision-making.

## **The Politics of Platforms (Sandro Mezzadra)**

What is a platform? And do platforms have politics? Sure, we know even too well that platforms can be used for political purposes and that platform companies have a huge political influence. The Cambridge Analytica scandal is just one of several instances of the ways in which that use and that influence blur the boundaries between legal and illegal, challenging any standard of accountability and taking on a profoundly manipulative character. This is an important aspect of the relation between platforms and politics, which raises questions of corporate accountability, national and international regulation, and eventually a "good platform governance" (see for instance Gorwa, 2019).

Nevertheless, what we mean here by "politics of platforms" is somehow different. What we want to ask is whether the operations of platforms themselves deploy specific political effects even beyond decisions made by companies, firms, or political actors. In other words, since we consider platforms as crucial capitalist devices (see Srnicek, 2017) what we are asking is whether the logic of capitalist valorization and accumulation structurally encroaches today on the political field and its conceptual definition.

Platform studies scholars, Robert Gorwa writes, "show that platform services can significantly affect and mediate individual behavior; therefore, platforms engage in governance at the individual user level" (Gorwa, 2019, p. 857). This is a first significant outcome that we have to keep in mind. The operations of platforms have important

governmental implications. Shifting from the language of governance employed by Gorwa to the conceptual lexicon of Michel Foucault we can say that platforms today perform crucial roles in the *conduct of conducts*.

How does this happen? Basically, through the extraction and algorithmic manipulation of data that concern the most intimate domain of the individual. As we know, data are the “raw material” upon which the operations of platforms are predicated (see for instance Srnicek 2017, p. 40). As Shoshana Zuboff demonstrates, what is really crucial for platforms is what she calls “behavioral surplus,” which means the harvesting of data that exceed the specific set of data requested for a specific service (Zuboff 2019, chapter 3). It is precisely this behavioral surplus that allows the elaboration of predictive models meant to *anticipate* future behaviors. This moment of anticipation enables and makes even more compelling the conduct of conducts performed by platforms.

A first aspect of the politics of platforms as we understand it here regards, therefore, their governmental effects at the individual level. But platforms do not merely operate at the individual level, they are rather devices of intermediation that enable and organize social relations. If it is true that the data extracted and manipulated by platforms concern the most intimate domain of the individual, there is a need to add that they also concern the totality of his or her social relations. And this relational element is worked upon by platforms exactly like the individual dimension. The moment of anticipation is at work also here, which means that social relations are foreshadowed by the operations of platforms as well as individual behaviors.

Note that this is a moment that pertains directly to the operations and logics of platforms (independently of any “decision” or manipulation by external actors). In order to work and to prompt processes of capitalist valorization and accumulation, platforms structurally encroach on the domain of the individual and on social relations. Even conceptually, this means that the operations of platforms are political operations, or at least operations with important political effects, since they intervene in the field of the production of subjectivity and they intermingle with the domain of fundamental political categories – such as freedom, government, or self-determination. And it is important to stress that these political moments are part and parcel of the cutting edge of contemporary capitalism.

Platforms also have an impact on the state. Benjamin H. Bratton demonstrates that far from simply providing new ways for states to operate or building a new technology requiring governance, platforms instantiate “a scale of technology that comes to absorb functions of the state and the work of governance” (Bratton, 2015, p. 7). The notion of

“a specific kind of platform sovereignty” introduced by Bratton is particularly relevant here, since it points to dramatic transformations in the field of politics and law (what he calls “the *nomos* of the cloud”) connected with the operations of platforms. Feeding on the “indeterminacy of outcomes” platforms foreshadow a quite new logic of sovereignty, predicated upon the flexible management of differences as well as “unplanned and perhaps even unplannable interactions” (Bratton, 2015, p. 374).

Such a transformative effect on state and sovereignty is another important aspect of what we call the politics of platforms. Needless to say, there is a need to carefully investigate such an impact – and we do not think that we are living through a “smooth” transition from a traditional understanding of sovereignty to “platform sovereignty.” What matters more are the transformations and frictions engendered by the rise of platforms at the level of state and sovereignty (which are already under duress, transformed and even “corrupted” due to other processes).

What remains to be said is that for us the politics of platforms is a field of struggle. While we underscore the further entrenchment of the rule of capital through the operations of platforms, we are convinced that a counter-politics of platforms is possible and necessary. We are far from technophobe. A struggle for the appropriation of the very technological and algorithmic core of platforms is for us a struggle in the field of the production of subjectivity in which platforms ultimately operate.

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