Digital Platforms and the Transformations in the Division of Labor

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Contents

Abstract

This chapter analyses the labor transformations linked to the platform economy from a sociological perspective, applying one of the categories best established in the literature, namely the division of labor. The first section describes the main characteristics of digital platforms, with particular attention to lean digital work platforms. The three subsequent sections interpret the transformations linked to the spread of digital platforms, based on the concept of socioeconomic formation of labor propounded by Miriam Glucksmann and articulated in division of labor in the strict sense, total social organization of labor, and instituted economic processes. The final section summarizes the main tensions that emerges between: job searching via open and inclusive platforms and forms of labor organization that create strongly polarized markets; different platform models, ranging from the most extractive types of market to collaborative economy models, which are also related to urban governance; forms of prosumerism linked to the activation

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and involvement of the consumer and the (self-)exploitation of free labor; and also to a new kind of value extraction from the data produced unconsciously by the platform users.

Introduction

In the years following the economic and financial crisis, the spread of digital platforms for the exchange of goods and services was initially labelled the "sharing economy," a definition that highlighted its potential in terms of developing idle resources, reducing waste, and strengthening relationships between peers (Sundararajan 2016). Criticisms of the fragmentation of labor, lack of social protection, extractive dynamics, and monopolistic tendencies of these platforms resulted in a reversal in perspective and the formulation of terms such as "gig economy" and "on-demand economy" (Huws 2014). More recently, the search for a more neutral definition has popularized the term "platform economy," which encompasses a growing number of digitally enabled activities in business, politics, and social interaction (Kenney and Zysman 2016).

These platforms are based on network effects, through which the platform increases in value the more people use it. In their position as intermediaries, platforms can control the rules of exchange and have direct access to the data generated by the online interactions.

The most widely shared definition sees the platform as a digital infrastructure that enables interaction between two or more social groups for the exchange of goods and services (Srnicek 2017). The conceptual overlap between platform and infrastructure represents the main weak point in this definition, because it nullifies the differences between the two concepts, and also its strong point, because it highlights the convergence, through the two complementary and simultaneous processes of the "platformization" of infrastructures and the "infrastructuralization" of platforms, because the platform provides an infrastructure on which other platforms are built (Plantin et al. 2018). Studies of the infrastructure, originating in the fields of science and technology studies and information science, and dedicated primarily to historical analysis of large socio-technical systems (electric power grids, telephone networks, air traffic control, etc.), have identified key features of infrastructure, such as ubiquity, reliability, invisibility, gateways, and breakdowns. Studies of the platforms have mostly been developed within the field of media studies, through the study of architectures characterized by programmability, the provision of connection, and data exchange with applications developed by others. Platforms may be distinguished from infrastructure primarily by the latter feature: "unlike system builders, platform builders do not seek to internalize their environments through vertical integration. Instead, their platforms are designed to be extended and elaborated from outside, by other actors, provided that those actors follow certain rules" (Plantin et al. 2018, p. 298). Kenney and Zysman (2016, p. 64) also emphasize this aspect: "the key aspect is that they provide a set of shared techniques,

technologies, and interfaces to a broad set of users who can build what they want on a stable substrate [. . .] Indeed, platforms can grow on platforms."

Based on this definition, Kenney and Zysman (2016) define the main types of platforms: platforms for platforms (e.g., Apple IOS and Google Android); platforms that make digital tools available online and support the creation of other platforms and marketplaces (for example, GitHub, Zenefits); platforms mediating work (e.g., LinkedIn, UpWork, Amazon Mechanical Turk); retail platforms (e.g., Amazon, eBay, Etsy); and service-providing platforms (e.g., Airbnb and Lyft).

Snircek (2017) reworks this distinction and identifies: advertising platforms (Google, Facebook) that extract information about users, analyze it, and then use the results of this process to sell advertising space; cloud platforms (AWS, Salesforce) that own the hardware and software required by firms operating digitally and make it available on demand (cloud computing); industrial platforms (GE's Predix, MindSphere from Siemens) that build the hardware and software required to transform traditional manufacturing companies into digital processes based on the Internet of Things (for these processes and the related support policies, Germany has coined the term "Industry 4.0"); product platforms (Rolls Royce, Spotify, Zipcar) used to transform goods into services (good-as-a-service model), for instance, with the transition from car purchase to having access to the most appropriate means of transport as and when required; and finally lean platforms (Uber, Airbnb) that reduce the direct ownership of assets to a minimum, beginning with the labor force. Lean platforms can be divided into labor-based platforms, which directly broker professional performance and correspond to Kenney and Zysman's (2016) platforms mediating work, and capital-based platforms, which amalgamate retail platforms and service-providing platforms, divided instead into platforms for buying and selling goods, leasing space, and cost sharing.

If analysis is confined to lean work platforms only, platforms are differentiated by other factors (De Groen and Maselli 2016): localization of the service (online labor markets based entirely on remote exchanges and mobile labor market, where the task is remotely brokered, but provided in situ); skills required (high skilled or low skilled); the use of resources belonging to the worker or made available by the platform; the method of remuneration (monetary or non-monetary, with rates being defined by the platform, including the use of dynamic pricing algorithms, or by the users); functionality of the platform (limited to bringing together the supply and demand of labor, or global, when the platform also operates as a work provider); the method of assigning tasks (by the platform, whether manually or using algorithms, or by the client directly, including through a bidding process); and assignment of an entire project (work on demand) or subdivision into microtasks (microwork or crowdwork).

This last point is what most directly stimulated our reflections on the division of labor. To analyze this topic, the concept of the division of labor advanced by Miriam Glucksmann, emeritus professor at the University of Essex, will be applied. Glucksmann takes the traditional definition of the division of labor (DL), intended as a technical division of tasks and skills and their allocation to different categories of people, with the respective outcomes in constructing hierarchies of earnings,

prestige, and power, along with two further forms of differentiation and interdependence of labor: total social organization of labor (TSOL), which analyses the connections and interdependencies of labor through various socioeconomic models (market and nonmarket, formal and informal, paid and unpaid, etc.); instituted economic processes of labor (IEPL) through the analysis of the various phases of labor associated with economic processes: production, distribution, marketing, sales, etc. This approach also includes analysis of consumer labor, which is particularly relevant in a collaborative economy.

The combination of and interaction between these three dimensions (technical, modal, and procedural) constitutes the socioeconomic formation of labor (SEFL) as a whole. This analytical framework is then used to analyze the division of labor on digital platforms.

The Division of Labor

The first dimension – division of labor (DL) – follows classical tradition in analyzing the technical division of tasks and labor activities within particular labor processes, organizations and sectors, and their allocation to different types of people, via a hierarchy. Adam Smith, in his famous analysis of pin making (1776), shows for the first time the efficiency of the division and combination of various operations into successive tasks. Subsequent socioeconomic analysis highlights the consequences of the division of labor in terms of the transformation of models of social cohesion and solidarity (Durkheim 1893) and the emergence of new power hierarchies, from which arise the production and reproduction of social inequalities (Marx 1867).

The analysis of the division of labor returned to prominence during the latter half of the last century, as part of reflection on socioeconomic transformation: the "dequalification of labor" thesis (Braverman 1974) applied to the organization of labor in industrial capitalism; globalization and the new international division of production between companies, with the creation of global value chains (Gereffi et al. 2005); and the analysis of discrimination within the so-called "peopled" division of labor (Glucksmann 2009) also in light of recent studies on intersectionality (McCall 2008) and on free labor (Gershuny 2003).

The perspective of the division of labor – with attention not only to its vertical (technical) dimensions but also to the horizontal (spatial, and more generally, social) dimensions – is re-emerging strongly following the application of technological innovations to the organization of labor. Digitalization proceeds through reduction of the continuity of phenomena toward a discrete, binary logic. In organizations based on a digital platform, this entails the possibility of breaking down the productive process into micro-activities (*taskification*) and micro-transactions (*unbundling of tasks*). Platforms make it possible to transcend the traditional limitations on task specialization: transaction costs and the limited dimensions of markets. Unlike in the past, the fragmentation of labor is not a consequence of automation but a prerequisite for it (Casilli 2019): the reduction of human activities to the smallest unit of execution makes it possible, under certain conditions, to

automate them. The standardization and fragmentation of complex processes into normalized and simplified tasks was started with outsourcing and now becomes a necessary condition for the operation of a platform ecosystem. At the moment, the automation performed by crowd of human users – the "ghost work" – exceeds artificial intelligence (Gray and Suri 2019).

Available analyses clearly show that the new global labor chains mediated by platforms reflect local labor markets and, in some cases, strengthen rather than reduce the frictions linked to geographical dynamics (Kässi and Lehdonvirta 2018; ILO 2019; Graham et al. 2017; Gandini et al. 2016).

This has obvious consequences in terms of social inclusion. Platforms are primarily channels for job matching. Compared with the consolidated opacity of the labor market, platforms display an open structure and few barriers to entry. This characteristic has increased expectations in terms of the potential for inclusion, especially for workers who encounter greater difficulties in the traditional labor market (Martin 2016), including those arising from a lack of cultural and social capital. For this reason, digital platforms are also seen as a potential for local economic development. The first researches available show that this is a double-edged sword: "some of the frictions that are identified serve to harm or discriminate against workers who are unable to navigate the complexities of a digital work marketplace" (Graham et al. 2017, p. 158). This question is linked to the issue of the qualification of digital work. Ursula Huws (2014) introduced the concept of the cybertariat to identify workers who possess the general skills to access platform working (e.g., digital literacy) but who lack the skills to complete complex tasks and are therefore easily replaced. On the other hand, the category of "digital nomads" identifies qualified professionals who can autonomously choose their own workplace (Müller 2016). Fabo et al. (2017) show the prevalence of qualified workers in online labor markets and of low-skilled workers in mobile labor markets.

Studies undertaken to date often face methodological constraints that make their estimates of the number of platform workers somewhat unreliable (on this point, see OECD (2019) for a review and Current Population Survey Staff (2018) for an accurate reconstruction of the difficulties encountered in introducing questions about electronically mediated work in the Contingent and Alternative Employment Arrangements survey by the United States Bureau of Labor Statistics). This notwithstanding, all surveys seem to return a homogenous profile of the platform worker from a sociodemographic viewpoint: young, evenly distributed by gender, with a high average level of education, particularly among those who work exclusively online. From the COLLEEM survey (Pesole et al. 2018) relating to European countries, for example, it emerges that among platform workers aged over 25, the percentage of people with a high level of education (ISCED level 5 and above) is 50% higher compared with the Eurostat average (calculated across 14 countries) of 35.3%. Juliet Schor (2017) highlights the risk of exacerbating differences, through the "inequality-enhancement" effect. Her qualitative research based on interview with US providers on for-profit platforms present evidence for increased income inequality among the bottom 80% of the distribution: it shows a "crowding-out" effect in cases where highly educated people, many of them having well-paying

full-time jobs, are using platforms to do menial jobs that were traditionally the preserve of less-educated people.

The results relating to social capital are more ambiguous. It is worth mentioning a study by Parigi et al. (2013) concerning Couchsurfing.com, which in recording the creation of interpersonal connections between users, links these forms of reciprocity to the expansive phase of the platform and points out that these connections tend to weaken once the point of stability is reached. Social capital may therefore not be a product of the platform as organizational model, but a result of the movement that sustained its growth, which is lost with the related processes of institutionalization. This position is reaffirmed by Schor et al. (2016), who point out a loss of social capital in more mature platforms, at the time when they are strengthening their own commercial positioning. This would also explain the studies carried out on platforms that are more strictly marketplaces, such as the study of Zipcar by Bardhi and Eckhart (2012), which highlighted the absence of a sense of belonging, mutual support, and cultural identification among its users.

One of the most relevant studies in this area (Andreotti et al. 2018) instead shows the propensity of platform users to interact repeatedly with other users, just as with off-platform interactions, even on well-established commercial platforms (Uber, Airbnb, and BlaBlaCar). This is a central topic, because it allows a shift of attention from social capital on entry to that on exit: besides asking if the platform contributes to social capital, it is important to understand whether workers can then transfer any acquired capital outside the platform. Clearly, this goes against the interests of the platforms, which use lock-in mechanisms to retain their users.

Another pivotal question with regard to social inclusion concerns "reciprocity traps": the tendency to homophily in relationship dynamics, once incorporated into market mechanisms can generate forms of discrimination, as demonstrated, for example, by studies on Airbnb (Edelman et al. 2017). This also depends on the limits of the reputation-building mechanisms, which facilitate trust between strangers. Digital platforms facilitate mutual admiration mechanisms (Origgi and Pais 2018) in which the evaluator is also being evaluated, and evaluations are public and not anonymous. This creates ratings inflation that renders the reputation systems rather unreliable while being highly discriminating in terms of performance. Moreover, this peer-to-peer evaluation has consequences in terms of emotional labor (Hochschild 1983) embedded into these platforms: digital workers "perform emotional labour in exchange for ratings instead of tips" (Rosenblat and Stark 2016, p. 3775).

Lastly, labor fragmentation also carries risks in terms of social protection. Microtasking workers may struggle not only to earn a satisfactory income but also to have their work recognized so they can access key forms of social protection. This is an especially pertinent question for those who combine work activities in various fields: so-called "slash workers" – people who indicate multiple roles (separated by the "/" symbol) in their professional profile – who, as a direct result of their multiple career paths, struggle to assert their rights to social protection and the representation of their interests.

These multi-activity paths often move between online and offline, but they can also involve digital workers who perform different activities using a variety of digital platforms. A report on micro-work in France (Casilli et al. 2019) shows that only 18.5% users micro-work exclusively on one platform, while most of them are at least on two other platforms, websites or applications. The Debenedetti Foundation report in Italy shows that 60% of platform workers carry out these activities as a second job and over 25% work with more than one platform (Inps 2018). The main survey on platform working conditions (European Parliament 2017) indicate a polarization between a few highly regarded qualified workers able to obtain plenty of work with good remuneration, and a large number of workers who find less work than they hoped for, for which reason they operate on many platforms simultaneously and accept rates below minimum wage. Social protection is therefore low and inversely proportional to dependence on platform working.

Total Social Organization of Labor

This second dimension analyzes labor through various socioeconomic domains. Recent years have brought an increasingly evident emergence of multinational platforms, originating primarily in Silicon Valley and financed by venture capital, that tend toward extractive models, based on a monopoly in their sector and the resulting exploitation of labor; their main objective is economic sustainability and their valuation is based on forms of financial valuation (the performance of their shares on the stock markets). The risk of these practices is that they may attribute a "sharing label" or "sharing rhetoric" to organizations and companies doing "business as usual" (Arcidiacono et al. 2018; Arvidsson 2018). On the other hand, there are small-scale grassroots initiatives with a stronger social, environmental, and ethical grounding, but which often have problems with economic sustainability. Belk (2014) defines the former as pseudo-sharing, as opposed to true sharing platforms based on forms of collaborative consumption that create collective identities and cooperative relationships.

To avoid any ideological or moralistic analysis, it may be useful to link these differences between platform models to the forms of integration between economy and society identified by Karl Polanyi (Pais and Provasi 2015):

- Market platforms: The market regulates the prices of goods or services by matching demand and supply through an efficient allocation of resources. The motives that drive the actors are purely extrinsic and instrumental to maximization of their economic utility and their personal identity is irrelevant to the purposes of the transaction. The trust is based on systemic confidence and contracts are complete. The Uber platform operates largely in this domain.
- Redistribution platforms: Resources are allocated by a top level and the subordinates are bound by an obligation of obedience. Redistributive processes are inspired by agreed criteria of justice. The goods and resources assume the nature of public goods. The goods redistributed are unconcerned with the personal

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identity of the recipient, in order to respect the impartiality of public action. The MuniRent platform for equipment sharing between public agencies may be considered part of this domain.

- Reciprocity platforms: The person who starts the cycle of this reciprocity does so gratuitously and unconditionally, accepting the risk of not being repaid (brave reciprocity). This is an asynchronous and nonequivalent exchange such to generate a "mutual positive debt" mediated by personal gratitude. The motives that drive brave reciprocity may not be entirely instrumental; the intention may also be to safeguard a strong intrinsic component which consists in willingness to bet on the initial cooperation. It is a form of elective reciprocity that presupposes a direct relationship between individuals who know each other and accept each other. It generates a specific (inter)personal trust that involves the identities of the partners in the relation. Donation-based crowdfunding platforms operating at community level, such as DonorsChoose, for example, are included in this domain.

Beside the platforms that can be directly linked to the traditional Polanyian domains, it is interesting to note the emergence of hybrid forms, especially in terms of the expansion of reciprocity toward the market or toward redistribution, from which two further platform models emerge (Pais and Provasi 2015):

- Collaboration platforms: They are based on hybrid forms between reciprocity and markets. The reciprocity cycle becomes "short" and the instrumental motives prevail over intrinsic ones. The reciprocity is cautious. Knowledge, even if superficial, and a certain degree of trust in the partner, based on reputation, are necessary. One example is BlaBlaCar, which displays traits that cannot be linked directly to the market domain nor to that of reciprocity: for example, payment is involved but as a sharing of expenses rather than paying for a service at market rates. Additionally, users are strangers, so it does not fall within the domain of reciprocity, yet neither is there pure anonymity as in the market dynamic, due to the information left by users who have already interacted via the platform.
- Common-pool platforms: They are based on hybrid forms between reciprocity and redistribution. It consists of reciprocal bond between persons who share a strong sense of belonging to a community from which derive obligations on all members of the community. An example is civic crowdfunding: the municipality finances projects that are supported by the local community, in a hybrid form between public investment (redistribution) and grassroots activation (typical of reciprocal mechanisms).

Most of the platforms described in the literature as "collaborative" fall within this hybrid form precisely, because they display specific distinctive traits that can be linked to the expansion of the domain of reciprocity (and to the idealism that led to the identification of the first sharing economy platforms). The Dimmons research group at the Open University of Catalonia elaborated a framework for assessing the

prodemocratic qualities of collaborative economy initiatives, articulated around three main dimensions (Fuster Morell and Espelt 2018; Fuster Morell 2018):

1. Governance and economic model: The decision-making model of the organization and mechanisms and political rules of participation in the digital platform; the financing model; the business models; mechanisms of economic transparency, distribution of value generated; and equity payment and labor rights.
2. Knowledge policy and technological policy: Type of property, as established by the license used for the content and knowledge generated, type of data, the ability to download data, and the promotion of the transparency of algorithms, programs, and data; privacy awareness, the protection of property including personal data, and preventing abuse and the collection or sharing of data without consent; guaranteeing the portability of data and reputation; the mode of property and freedom associated with type of software used and its license; and the model of technology architecture.
3. Social responsibility and impact: Any source of awareness and responsibility regarding the externalities and negative impacts, such as social exclusion and social inequalities, compliance with health and safety standards that protect the public, the environmental impact, and the impact in the policy arena.

Attention to the democratic qualities of digital platforms led to the birth of a movement of intellectuals and activists that sustains platforms cooperativism, worker-owned cooperatives based on open-source technologies that respect ethical working conditions and redistribute their value among the users who produced it (Scholz and Schneider 2017). Scholz (2016) divided this idea into ten principles: collective ownership; decent pay and income security; transparency and data portability; appreciation and acknowledgement; co-determined work; a protective legal framework; portable worker protections and benefits; protection against arbitrary behavior; rejection of excessive workplace surveillance; and the right to log off.

This formula connects the new collaborative platforms with the cooperative tradition, based on a community vision of the means and purposes of production. The idea that guides this proposition is that if platforms were controlled by their users – organized in the form of a cooperative – most of the governance and social responsibility issues would be solved; the shared ownership of the platform would allow for a fairer distribution of the value produced to the people who actually created it; and it would also be an opportunity for strengthening solidarity and social ties among workers, fighting the tendency towards new forms of alienated on-demand employment (Scholz 2016).

The hybridization of platform and cooperative economy may assume two forms: that which has attracted the most attention proposes a transition from extractive to inclusive platforms (Robinson and Acemoglu 2012), through cooperative-style governance. This transition may occur through the shared acquisition of a platform (as in the attempt to acquire Twitter) or with the creation of new cooperative

platforms (as in the case of Stocksy). In his foundational article, Scholz (2014) stated "the algorithmic heart of any of these citadels of anti-unionism could be cloned and brought back to life under a different ownership model, with fair working conditions, as a humane alternative to the free market model." The opposite path, as yet little explored either in practice or in the literature, postulates the platform economy as a form of digital transformation of traditional cooperatives. The common thread between these two approaches is that the platform economy may benefit from contamination by the cooperative world in terms of stronger democratic qualities and reduced inequality, while at the same time, cooperativism can benefit from new models of value creation by opening up mutualism on a larger scale.

Despite the attention it has received in public and academic debate, the spread of platform models in the cooperative economy has been slowed by numerous obstacles: the difficulty of established cooperatives to develop and incorporate this type of innovation; the lack of appropriate financial instruments to attract equity capital and long-term investments, which slows down innovation and creates a disadvantage compared to capitalistic competitors; the tendency of recently created cooperatives to remain local, small in size, and insufficiently interconnected even if echnology would allow them to work on a larger scale; and the difficulty to "copy" ideas and models from the collaborative economy platforms without making the mistake of exactly replicating what they are doing (Como et al. 2016).

If Platform Capitalism reproduces the same limits and risks of the "neoliberal experiment" (Bowman et al. 2014), at the national and global level, platform cooperativism brings back to the core of the debate the potentialities of projects and initiatives developed more in the local and subnational areas, as a laboratory of an innovative model of governance.

The criteria for identifying democratic collaborative platforms are also the basis of the Common Declaration of Principles and Commitments for Sharing Cities, signed by 42 cities on 15 November 2018, based on ten principles, summarized as follows: platform models differentiation; new work agreements and adapted fiscality; fair, legally compliant and timely compensation and fair working conditions and access to benefits and rights for workers; fair and equal access to work for people of all incomes, genders, and backgrounds; health, safety, and security standards; environmental sustainable practices; data sovereignty and citizens' digital right, including algorithmic accountability and the portability of users' data, digital identity and reputations; city sovereignty; economic promotion of local collaborative economic ecosystems; and general interest.

This initiative confirms urban policies to be a privileged level of intervention for the governance of platforms (McLaren and Agyeman 2015). This may be consistent with the operating logic of the platforms, facilitated by the population density of urban areas, but also leaves unaddressed problems that can be confronted only at national or supranational level. Furthermore, it poses questions about the perspectives and specifics of nonurban areas, especially inland areas, where nascent "bottom-up" initiatives have thus far elicited little response in local policies. Lastly, it requires attention in the transition toward implementation, which represents the Achilles' Heel of collaborative economy policies.

Instituted Economic Processes

Lastly, analyzing the division of labor as instituted economic processes, in the collaborative economy, there is an evident collapse of boundaries between the various phases of the production process. In the case of crowdfunding, for example, the traditional order is overturned: purchase occurs before production, often through processes of co-design and co-creation.

The question of "consumer labor" (Glucksmann 2016) – defined as the labor performed by the consumer necessary for the purchase, the use and reuse of consumer goods that contributes to the completion of an economic process – therefore becomes central in processes where it is increasingly difficult to distinguish between production and consumption.

This poses some crucial questions about the boundaries between labor and nonlabor, between formal and informal labor, and between production and consumption.

The perspective adopted by Glucksmann (2016) defines labor as all paid labor in a formal context and unpaid activities of social reproduction. This is a key topic for the collaborative economy, from the moment a significant number of platforms are operating through nonmonetary systems, including those using barter or points systems, and also asset-sharing platforms where the saving or sharing of costs are the main components in the intermediation of the product or service. To this is added the ambiguity of platforms that allow visibility and potentially the emergence of transactions traditionally conveyed through undeclared work and, at the same time, they escape the fiscal regulation of the countries in which they operate.

Since the early 2000s, an interpretative contrast has emerged between those speaking of free labor (Terranova 2000), interpreting the gap between value extracted by the platform and missing return for the users in terms of exploitation and self-exploitation, and those who believe an activity can only be considered labor when considered as such by whoever performs it; the literature on prosumers (Dusi 2018) and amateur professionalism (Flichy 2014) refers to this approach. The concept of *prosumer* namely producer and consumer at the same time, first identified by Toffler in the early 1980s, finds a broadened and renewed agency and popularity in digital environments (Dusi 2018). Ritzers reworked version of the concept of prosumption (2014) taking a further step: while Toffler argued that prosumption is a third sector, further than production, Ritzer argues that individuals are always prosumers, namely they always are in the prosumption sector. This concept enables to consider every kind of usage of the Internet as relevant for productive paradigms. This approach is also linked to communication studies and the political economy of media, highlighting the productivist role of audience. The notion of audience labor has been recently revised by Fisher (2012), showing a dialectical link between exploitation and alienation in social network sites: in order to be de-alienated, social network users must communicate and socialize, thus exacerbation their exploitation, and vice-versa, in order for social network sites to exploit the work of its users, it must contribute to their de-alienation. These dynamics seem to be outdated by the shift

from users of digital media to actual paid workers in digital labor platforms but they are still relevant in terms of unremunerated or underpaid activities.

The collaborative economy has emphasized this profile but has lingered on the most superficial reading, that of the possibility for the user to be producer and consumer at the same time and on the same platform. The empirical research has shown that in reality, the person fulfilling a role tends always to remain in that same role (Andreotti et al. 2018).

Moreover, users of the platforms display little awareness of a central issue: the production of data. On one hand, platform users dedicate a great deal of time to the work of "maintaining" their profile (content creation, user ratings, etc.) – an unpaid working time that Uber drivers call "dead miles" (Rosenblat 2018). This labor, which is not directly remunerated, is however fundamental for the users to maintain their positioning within the platform's marketplace. Andreotti et al. (2018) showed that those who invest more time in these activities receive a return in terms of accumulating social capital, which on platforms translates into exchanges that increase their economic capital. On the other hand, the data produced by users through their behavior on the platform is sold, primarily for advertising purposes, which makes the users of those platforms "data workers." Andrejevic (2011) distinguishes between two type of information that are subject to exploitation on social media: intentional information, that pertains to data extracted from intentional actions of users, and unintentional information that pertains to data that users produce unintentionally while doing something else. As stated by Fisher (2012), this distinction is hard to make because most data that users produce on digital platforms has a dual character: while being intentional, they also produce unintentional information. On the other hand, even before their sale, the same analysis of data produced by workers raises questions in terms of managerial control and surveillance (Zuboff 2019), mainly through peer-to-peer control using feedbacks, reviews, and rating systems as instruments for the enactment of techno-normative forms of control (Gandini 2019).

This lack of awareness in relation to their own working status is directly linked to the question of building an individual and collective professional identity, corresponding to a weak capacity for the representation of their interests. This is a problem that affects all non-standard labor, but there are a number of features specific to platform working (Johnston and Land-Kazlauskas 2018; Kilhoffer et al. 2017). The first is linked to the trilateral nature of the platforms: workers' disputes are often addressed to clients rather than to the platform. On some platforms, workers are inherently encouraged to compete rather than collaborate (Graham and Woodcock 2018). Another point concerns the possibility for platform workers to meet. It is interesting to note that the main field in which workers have organized protests and strikes is that of home food deliveries, characterized by working conditions common to all workers and venues that allow the delivery agents to meet in person. Moreover, the chat organized by the platform to communicate with the riders was used by workers to build an autonomous digital space for discussing working conditions (Maccarone and Tassinari 2017; Woodcock 2016). Finally, the platforms exacerbate the issue of information asymmetries between workers and

employers: even where there are unions, they "cannot collectively bargain with an algorithm, they can't appeal to a platform, and they can't negotiate with an equation" (Gearhart 2017, p. 13). For these reasons, new forms of mutualism – as platform cooperativism – are often proposed as an alternative to the failure of trade unionism.

Summary

The concept of socioeconomic formation of labor propounded by Glucksmann enables us to analyze platform working in all its complexity and highlights the main tensions that run through it:

- Division of labor: Digital platforms are – at the same time – market intermediary and employer (or "shadow employer," Friedman 2014). As market intermediary, they re-mediate the social relations that determine the matching between labor demand and offer and could encourage new forms of labor inclusion, but at the moment, the research shows the reproduction of traditional forms of inequality between skilled and unskilled workers and between advanced countries and emerging or marginal ones, that create strongly polarized labor markets. As employer, the platform is responsible for the organization of labor: "the platform represents the place whereby the social processes of production are put under logics of managerialization and work organization within a single, clearly delimited environment (Gandini 2019, p. 1045). The characterizing element of this work organization is the taskification process that determines the fragmentation of work paths, with consequences both in terms of the construction of individual and collective professional identity, and in terms of social protection.
- Total social organization of labor: Despite the presence of common features, it is increasingly difficult to bring the platforms back to a single model. For this reason, the researches showing the processes of differentiation in progress both between the business models of the platforms and in terms of territorial embeddedness of the relative markets are particularly useful. The increasing polarization between the most extractive types of platforms and the collaborative models has favored the emergence of the platform cooperativism movement and the proposals for urban governance linked to the Sharing Cities program.
- Instituted economic processes: The platforms re-propose in new terms the debate between forms of prosumerism linked to the activation and involvement of the consumer and the (self-) exploitation of free labor. This applies both to activities carried out intentionally by workers on the platforms and to those carried out unintentionally, with particular attention to data analysis and the consequent processes both in term of managerial control related and value extraction.

The mapping exercises based on the identification of these interpretative polarities are returning socioeconomic contexts vastly different from each other. This variety depends on the characteristics of the platforms active in a territory, with a significant difference between platforms "native" to a given area, which therefore

incorporate its culture, and platforms "active" in an area other than where they originated; on their characteristics in terms of the users' human, social and cultural capital; on the local collective competition goods available; and on the types of regulation implemented locally. Socioeconomic analysis has to date allowed us to progress from a single platform economy model to the identification of a variety of types; the next transition is therefore the comparison between the various local socioeconomic systems, with the aim of identifying the most appropriate policy instruments for governing local and global platform economies.

Cross-References

▶ Quantity and Quality of Work in the Sharing Economy

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