Digital Platforms:

Producing and Infrastructuring Users in the Age of Airbnb

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Introduction

How do digital platforms relate to processes of domination and emancipation?

A huge debate has emerged around this question, represented in two waves. In a first wave, digital platforms are put in connection with concepts such as "peer-to-peer", "digital commons", "online cooperation", "liberation of work", "crowdwork", "crowdfunding", "horizontality", "democracy", "innovation from below", "post-capitalism" and, foremost, the "sharing economy" (Benkler 2006; Botsman and Rogers 2010; Bruns 2008; Gillespie 2010; Sundararajan 2016). In other words, platforms are seen as helpful tools that contribute to the pursuit of ideas of freedom and free circulation of knowledge. In fact, one can say that the Internet itself was built on these values, which in past times had found in open software and "hacker ethics" their principal references (Himanen 2001). This first wave dates to the early days of Web 2.0, when the possibility of users interacting with the World Wide Web and going beyond the original designers' project (by customizing online spaces, uploading content and sharing them in a network of peers) seemed to give concrete support to facilitating commons and commoning (Plantin et al. 2018). As Van Dijck, Poell and de Waal (2018: 11) put it, it was as if "connectivity automatically leads to collectivity".

More recently, a second wave has stressed how the purest examples of commoning platforms are probably services such as Wikipedia (which exclusively consists of information exchanges), in that "many forms of digital commoning are not purely informational but are entangled within an organizational network of concrete (non-digitalized) economic practices" (Ossewarde and Reijers 2017: 612). The sharing of a car or an apartment (such as BlaBlaCar or Airbnb), as well as the delivery of food (such as Foodora or Just Eat) and/or a taxi service (such as Uber), are evidently linked to a set of heterogeneous practices, often 'material' (such as driving or riding) more than 'digital'. This second wave thus concentrates on the conditions of those working behind the platform and the ways in which platforms profit from users' labor (Irani 2015; Jin 2015; van Doorn 2016). Platforms are now associated with words such as "precariousness", "fragmentation", individualization", "erosion of workers' rights" and, most of all, "outsourcing". In fact, even if many differences occur between them, Airbnb, Uber, Amazon Mechanical Turk, BlaBlaCar, Foodora, or Taskrabbit all share a form of operating "through a hyper-outsourced model, whereby workers are outsourced, fixed capital is outsourced, maintenance costs are outsourced, and training is outsourced" (Srnicek 2016: 95).

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[1] This article is the result of a collaborative effort by the two authors, whose names appear in alphabetical order. If, however, for academic reasons, individual responsibility must be assigned, Attila Bruni wrote the Introduction, paragraphs 1 and 3.2, and the Conclusions; Fabio Maria Esposito wrote paragraphs 1.1, 2, 3, and 3.1.

Together with this outsourcing-based model, platforms seem to display a monopoly attitude, a high degree of institutional isomorphism (due to their graphical layout – Arcidiacono, Gandini and Pais 2018), an information architecture that sets the possibilities of interaction among users, and the ownership of software and hardware (Choudary, 2015). Through their software, platforms fulfill three main objectives (van Doorn, 2016): a) they provide a 'space' in which users, customers, and workers can meet, while the platform itself is positioned as purely intermediary; b) they create *ad hoc* (labor) marketplaces, apart from institutional rules and rights; and c) they optimize labor's flexibility and scalability, articulating a 'workforce-as-a-service' model (Starner 2015). Subsequently, notions such as 'algorithmic labor' (Rosenblat and Stark, 2016), 'algocracy' (Danaher 2016) and 'algorithmic governance' (Danaher et al. 2017) have been coined to call attention to how algorithms increasingly assess and manage human action.

In other words, if the first wave concentrated on the emancipatory and 'horizontal' side of digital platforms, the second highlights issues of power and domination. Despite these differences, both waves display quite a 'transparent' if not deterministic idea of technology, in that they assume that platforms will merely act as mediators/facilitators, or that they will directly and automatically 'impact' on some broader social dynamics (such as the circulation of knowledge or the labor market).

Notwithstanding this debate, in this chapter we are particularly interested in focusing on how issues of domination/emancipation arise in the relation that digital platforms build and maintain with their users and in the ways in which users give shape to this relation. The pertinent issue from an organizational point of view (still underdeveloped in the ongoing debate) is the relational and performative aspect of platforms, that is, how they "shape the performance of social acts instead of merely facilitating them" (Van Dijck 2013: 29). Mainly inspired by an actor-network approach and the recent "turn to infrastructure" Science and Technology Studies (STS) have witnessed, we will start from the assumption that platforms are not merely intermediaries; instead, they themselves constitute a "set of relations that constantly needs to be performed" (Van Dijck 2013: 26).

To provide evidence for our ideas, we focus on Airbnb, a platform-based company and current leader at the global level in the online hospitality industry, which provides users the opportunity to rent and book accommodations for short-term periods. Since 2007, Airbnb has expanded rapidly throughout the world (but mainly in European and Western cities), representing first an emblematic case of the so-called sharing economy, but being subsequently recognized for disrupting housing and local communities. The platform enables its members to become "Hosts" by listing and renting out their lodgings (with a probably higher yield than a residential long-term rental), while giving travelers ("Guests", as defined by the platform) the opportunity to book accommodation at often lower prices than the hotel industry.

Hence, we focus on the relation the platform tends to establish with the Hosts and on the ways in which Hosts are produced (Hyysalo et al. 2016), as well as the "infrastructure". We then consider how different Hosts translate this relation into practice, thus performing the platform and its infrastructure. From a

theoretical point of view, this will help to problematize the domination/emancipation dichotomy through which platforms are often interpreted, showing an apparently contradictory dynamic: platform-organizations produce and depend on the very subjects they dominate.

1. Digital platforms, infrastructures and the new production of users

Looking at digital platforms from an actor-network perspective (Callon 1984; Callon and Law 1992; Latour 2005) means to consider them as the ongoing product of a process of heterogeneous engineering (Law 1987), insofar as they imply the organization over time and space of human and non-human actors, texts and objects, technologies and knowledge.

Platforms widely rely on an "installed base" (Star and Ruhleder 1996) – pre-existing and "stabilized" infrastructures (like the Internet or the banking system) and technologies (such as smartphones). In this sense, digital platforms can be seen as the result of the connections between heterogeneous actors, systems and networks, which are able to interact and coordinate thanks to the adoption of standards and interoperability protocols (Van Dijck 2013; Platin et al. 2018). Digital platforms operate because they are embedded into a "digital ecosystem" (Peticca-Harris et al. 2018; Van Dijck, Poell and de Waal 2018), through which they can develop characteristics typical of infrastructures, such as ubiquity, reliability and wide accessibility.

Compared to infrastructures, platforms differ in scale and scope in that they do not seek to internalize their environments through vertical integration, but "are designed to be extended and elaborated from outside, by other actors, provided that those actors follow certain rules". (Plantin et al. 2018: 298). At the same time, given the massive diffusion of ICTs and ubiquitous computing, nowadays "platforms can achieve enormous scales, co-exist with infrastructures, *and in some cases compete with or even supplant them*" (Plantin et al. 2018: 302, emphasis in original).

Framing the infrastructural side of platforms allows us to focus on their relational, contingent, incremental, situated and processual aspects, as well as their 'transparence' and 'invisibility' (Star 1999; Star and Strauss 1999). In fact, the architecture of platforms entails a continuous relation, coordination and collaboration between a "programmable, stable core system" with low variability, and diverse "modular, variable complementary components" (Baldwin and Woodward 2008). If it is true that platforms represent a "centrally controlled and designed system (often under corporate control)" (Platin et al. 2018: 302), it is also true that they are built on a modular architecture and would remain "empty boxes" if they are not continuously performed, refined and repaired (Star and Bowker 2002) through coordination and articulation work (Schmidt and Simone 1996), which (like the infrastructure itself) remains partly invisible. Therefore, an "infrastructural inversion" (Bowker 1994) is needed to give visibility to the work and the resources required by the "core system" to enrich it with new complementary components. This means to embrace the relations

and the activities that platforms call into question, as well as the (online and offline) work required to fulfill such relations.

By taking into account the "script" (Akrich 1992) of the platform online interface it is possible to highlight how it "configures" its users by "setting constraints upon their likely future actions" (Woolgar 1991: 59) and by establishing some standards to adhere to. STS have widely acknowledged the fundamental role users have in technological and innovation processes (Oushdoorn and Pinch, 2003). Since the early experiments of "consumer research" conducted by General Motors in the 1930s, companies, producers and designers have always tried (albeit for different purposes and with different extents) to engage users "as partners in inventing, designing or visioning new products" as well as "testers of early beta and later pilot versions of the technology" (Hyysalo and Johnson 2016: 80).

Nowadays, however, there is a novelty: companies tend not only to involve users, but to find strategies to stimulate their activity, while users engage autonomously in creative forms of production. As stated by Hyysalo, Jensen and Oushdoorn (2016: 2), "the new production of users is thus about users' creativity *and* about changing involvement strategies that produce creative users". In other words, if the configuration of users takes place during the design process and 'materializes' in the technological script, their production refers to a much wider process, which starts at the design stage but extends to the variety of ways in which the company 'activates' users. In this regard, if configuring and scripting usually implies setting limitations to users' actions, the production of users is oriented to making users do more than what is inscripted in the technical object.

Framing the relationship between digital platforms and their users in terms of "production" thus not only enables us to consider how users are configured, but also to explore the activities users perform, the strategies implied by the platform to stimulate their performances, and the ways in which users react to these strategies. Users have a significant degree of freedom in giving shape and substance to the platform, so that it becomes important to analyze not only how they decode (Mackay et al. 2000) the platform, but also the concrete practices performed to complete them and keep their relationship with the platform alive. Given the heterogeneity of platforms (and the services they provide), a shared claim in the ongoing debate refers to the need to concentrate on the features of the specific platform one wants to analyze. Thus, before presenting our data and analysis, we will first zoom in on Airbnb by briefly recalling the main results of the research conducted on it.

1.1. Zooming in: The debate about Airbnb

In "*The Platform Society*" Van Dijck, Poell and de Waal (2018: 18) consider Airbnb the epitome of "the invasion of online platforms in the hospitality sector" and of "the many battlegrounds in a society where social and economic interaction increasingly happens through a digital infrastructure that is global and highly

interconnected". Guttentag (2015), one of the first scholars to focus on Airbnb, uses the concept of "disruptive innovation" (Christensen 2006) to show how Airbnb is transforming the market of tourist accommodations (for example by differentiating itself from hotels) and attracting different kinds of travelers compared to traditional lodging opportunities. In his conclusions, the author proposes some thematic areas for future inquiry: Airbnb's impact on forms of short-term lodging and on urban areas (for example in terms of the perception of local residents or changes in the price and availability of homing solutions); the kind of people it attracts; and factors which affect the choice of the lodging.

It can be said that Guttentag's suggestions mirror today's debate: Ikkala and Lampinen (2015) for example, conceptualize platforms as services that facilitate the offline sharing of material and immaterial resources; Molz (2014) shows how even though most people started their hosting experiences on Airbnb for economic reasons, they continued because of the possibility of meeting and socializing with guests. However, during research conducted in Boston, Laadegard (2018) develops the concept of "comfortable exotic" to underline how, while getting in touch with diversity constitutes one of the principal added values of the service offered by the platform, Hosts tend to accept bookings made by people who are to some extent similar to them (for example by qualification or spoken languages). Cheng and Foley (2018) analyzed the possible forms of discrimination that the platform enables, assuming that having more information about potential guests creates conditions for making discriminatory choices.

With a more economic-oriented analysis, Liang et al. (2017) studied how information gathered and shared on the platform reduces the uncertainty of purchase-choices. The authors emphasize how a *gameification* of the service (i.e. "the application of game design elements into non-game contexts" – Liang et al. 2017: 456), inscripted in the "Superhost" status and other design elements, can influence consumers' decisions and ratings. Wang and Nicolau's (2017) research follows this path as well: through a quantitative comparison of 180,000 Airbnb listings in 33 cities they identify host attributes, site and property attributes, amenities and services, rental rules, and online review ratings as the main elements that influence listing prices. Fradkin et. al (2015) focus in particular on the feedback system, showing how it affects consumers' choices, but also how elements of the system design (for example the reciprocity of the feedback) determine a positive bias in ratings. It has also been shown how pre-existing racial biases may lead to negative-biased reviews towards members of certain ethnic groups (Condliffe 2016), which thereby cause a decrease in the 'price' of their offers or demands. In this way, reviews and feedback set an "economy of regard" (Offer 2015), which (in parallel with the money-economy) contributes to pricing dynamics while amplifying "differences between the 'haves' (those with a solid reputation) and the 'have-nots' (those without a good reputation)." (Ossewaarde and Reijers 2017: 617).

Recently, different research has paid attention to the impact Airbnb has on real estate markets. Horn and Merante (2017), for example, analyzed how Airbnb affects the availability and price of long-term residential rentals in the Boston city area, finding that there are negative effects on availability (which decreases) as well

as on the price (which grows) of rentals. Other research (Picascia et al. 2017; Gurran and Phibbs 2017) reaches similar conclusions, underlining how in extreme cases Airbnb's impact on the local economy and the real estate market leads to a displacement of the residential population. Consequently, cities like San Francisco ("homeland" of Airbnb), New York, Berlin, Amsterdam, Paris, Barcelona and Tokyo have all adopted policies to regulate the short-term rental market (Dredge et al. 2016).

Taken together with research conducted in the broader debate on digital platforms, these studies tend to frame Airbnb as an example of what Srnicek (2016) defines as 'lean' platforms: even if they try to build their identity upon an imaginary linked to the idea of "sharing", these platforms act as capitalist players focused on profit maximization (Ossewaarde and Reijers 2017). However, studies carried out so far have not taken into consideration the relation the platform establishes with its users, and above all, the practices through which users give shape to this relation, and consequently, to the platform itself. In the rest of this chapter we will concentrate precisely on these relations.

2. Methodology and empirical context

The data we present are the result of an analysis of the Airbnb platform, together with 20 in-depth interviews held with individuals signed up as Airbnb Hosts in the city of Trento, Italy. A first research step implied accessing the platform, detecting data from the website, and focusing on the elements that regulate the relation between the user and the platform (contained in the "terms and conditions of service") and on some processes and mechanisms implied by the platform architecture.

The researcher who conducted the fieldwork was a "participant observer", in the sense that he himself is an Airbnb Host (in a different city). We believe the Host identity of the researcher significantly contributed to the access to the field: being signed up as a Host since August 2015 and having built an online reputation through received feedback, the researcher was able to use his profile to contact potential interviewees directly through the platform's chat, requesting interviews instead of lodging. In other words, the researcher appeared as a somehow 'reliable' and 'accountable' person, triggering a reciprocal identification and legitimation between Hosts and interviewer, and creating a situation of complicity, which made it easier to approach details and delicate issues (like the Hosts' earnings or the way they managed their fiscal responsibilities). Moreover, an insider knowledge of Airbnb jargon, as well as the procedures and ambiguities connected to the Host role, was very useful in carrying out the interviews.

To deeply investigate Hosts' daily life and practices, we relied on the episodic interview technique (Flick 2000), asking interviewees to focus on specific episodes and concrete situations. The main criterion used to select the Hosts involved in the research was to balance the number of Hosts who rented out an entire apartment and those who rented out a private room. We started from the premise that different kinds of spaces would imply a different engagement, different starting conditions and a different experience of the Host role. Moreover, this criterion reflects the composition of the population of the examined area, where

48% of the announcements were for private rooms and 51% were entire apartments (the remaining 1% were shared rooms). Thus, after contacting 62 Hosts, we gained access to ten subjects renting out private rooms, and ten Hosts offering entire apartments. The average duration of the interviews was 90 minutes; all the interviews were (audio) recorded and transcribed integrally.

Trento, the area in which the research was carried out, is a town in the north-eastern part of Italy, well-developed in tourist terms, being the capital city of a region well known for outdoor tourism as well as for the presence of numerous festivals/fairs and the city University (with its related conferences). In the city, the platform's users have grown significantly during the last two years (with an annual growth rate of 57%), however Airbnb is not diffused as much as in other Italian cities, featuring 343 listings for a total population of 115,000 residents. At the moment of the research, these listings corresponded to 228 active Hosts, with 25% of them having more than one rental. In this regard, it is interesting to notice how this 25% owns 171 lodgings, exactly 50% of the total listings[2]. Finally, and above all, compared to bigger Italian cities (like Rome, Naples, Milan or Florence), delegating the management of the houses rented on Airbnb to a company is not widespread in Trento. Thus, it was possible to reach Hosts who were personally involved in the management of their spaces, and to investigate how they concretely gave shape to the role of Host and the tasks required by the platform. We are aware that it is becoming more and more common to find on Airbnb ordinary tourist structures or properties managed by professional agencies that use the platform (together with others, such as Booking.com) simply as a showcase, but we were not interested in looking at the progressive 'professionalization' of the platform. On the contrary, we believe that focusing on the experiences of "real people" provides the possibility of considering how issues of domination/emancipation arise in the relationship between the platform and its users.

3. **Airbnb: Producing users, performing the platform**

We begin with a description and analysis of the platform's main features and the relation it tries to establish with Hosts; we then consider how different Hosts interpret this relation and put it into practice.

Beginning with the "terms and conditions of service" available on the website (Article 1.1 and 1.2), Airbnb defines itself as:

"online marketplace that enables its registered users ("members") and certain third parties which offer services (the members and third parties who offer services are the "Hosts" and the services they offer are the "Hosts' services") to publish their "Hosts' services" on the Airbnb platform ("listings") and to communicate and negotiate directly with the members who try to book these Hosts' services (the members who use the Hosts' services are "Guests").[…] Airbnb doesn't own, create, sell, make available, control, manage, offer, deliver or provide listings or Hosts' services, neither it

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2 Source: https://www.airdna.co/market-data/app/it/trentino-alto-adige-sudtirol/trento/overview

is an organizer or reseller of package travels pursuant to the (EU) Directive 2015/2302. Hosts are exclusively responsible for their listings and services."

Airbnb depicts itself as a place of direct encounter and interaction between offer and demand of short-term rentals, setting out its role as a mere "intermediator" and service provider[3]. As happens with other platforms, the organization is therefore not responsible for platform content and/or listed spaces, nor for the potentially illegal behavior of Hosts (for instance, regarding local short-term rental regulations). A clear division of labor and responsibilities is thus presented, together with the fundamental characters involved with the platform: Airbnb Inc. and its "members", subdivided into Host (provider) and Guest (consumer) roles. These two roles (which are not mutually exclusive) do not have the same strategic importance for the platform: Hosts are those who make their 'space' available and build the platform market; moreover, Hosts interact with Guests and are in charge of setting the physical space listed on the platform. In other words, beside the "service fee"[4] the company imposes on transactions between users, Hosts are the main source of value for the platform.

3.1. Becoming Host: Configuring and producing users

For Hosts (as well as Guests) the first task to enable them to operate on Airbnb is to create an account on the platform. This involves providing an e-mail address and a Google or Facebook account, choosing a payment method (credit card or PayPal), and providing a brief self-description (including a picture) and a phone number (verified by the organization through a code sent by SMS). It should be noted that in this way Airbnb integrates other platforms (Google, Facebook, PayPal) into parts of its infrastructure, and verifies that its users: are connected to the most common elements of the global digital communication infrastructure (and therefore have an e-mail address and/or some other type of digital account); possess and can make use of specific technologies (such as a mobile phone); and are equipped for online money transfer (thanks to a credit card or a PayPal account). Thus, in terms of configuration, a basic characteristic that users have to satisfy is "connectivity", and therefore having already been configured by other platforms or digital infrastructures.

From the online procedure one must follow to become a Host (see Box 1), the platform approaches users with direct and informal language, trying to frame the relationships that occur in the context of Airbnb into a dimension of 'friendship' and peer exchange. At the same time, expressions such as "*earning*", "*successful ideas*", "*being in control*" and "*managing the whole procedure*" are evocative of a more entrepreneurial and

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3 Point 7.1.7 in "Terms of Service" declares that the Host signs a legally binding contract with the Guest, not with the platform.

4 The "service fee" represents the income Airbnb earns from every transaction. It covers the 9% - 12% of the fee paid by the Guest and the 3% - 5% of the Host's reward. This difference in the 'fee' applied by Airbnb to Hosts and Guests further testifies to the crucial role of Hosts for the platform (the platform has an interest in 'charging' them less than Guests).

managerial dimension. Finally, the platform wants to reassure Hosts by stating that there is continuous "assistance" and a community of "peer experts" to refer to, and that the "control" of the rented space is preserved. The first features the platform seems to promote and tries to produce are therefore informality, resourcefulness and trust in the platform itself.

Become a Host: the online procedure

- On the top-right of the Airbnb homepage, one can find the 'button' "*Become a host*": by clicking this a drop-down window opens, indicating the potential income for accommodations in the city in which the search was made.
- The wizard leads to another screen where the platform tells the potential Host that: "*Regardless of what kind of home or room you have to share, Airbnb makes it simple and secure to earn money and reach millions of travellers*"; "*Airbnb offers tools, hospitality tips, ongoing support, and an online community of experienced hosts for asking questions and sharing ideas for success*"; "*you are in full control of your availability, prices, house rules, and interaction with guests. You can set check-in times and handle the process as you wish*".
- The Host must specify the type of accommodation to be rented (full apartment, private room, shared room), its approximate address and the number of people that it can accommodate. Then, further information about the type of accommodation is required: options range from "*home, apartment, hotel, apartment with hotel service*" to less common possibilities such as "*igloo, boat, train or tree house*". One must specify the number of bathrooms, bedrooms, and beds available, and to declare if the accommodation has been explicitly arranged for guests, or if there are "personal effects". The Host must also specify the address of the accommodation, while the platform ensures that: "*Your exact address will be shared only with confirmed guests*".
- By tackling the boxes of a long list, the Host states which spaces can be used (kitchen, swimming pool, elevator, and so on) and which services the guest will find in the accommodation, starting from those defined as "essentials" (towels, sheets, pillow, soap and toilet paper), to Wi-Fi, hairdryer, washing machine, A/C, lock in room or safety devices (such as fire extinguisher, or smoke detector). The platform recommends to: "*Provide the main services to make your guests feel at home. Some hosts offer breakfast, others just some coffee or tea. None of these amenities are mandatory, but they can help your guests to feel at home*".
- In the second phase of the listing procedure (what Airbnb defines as "*Preparing the scene*") the platform asks Hosts to upload at least one photo of the rented space, remembering that "*many Hosts have more than 8 photos*", that "*Sometimes taking a picture from a corner instead than frontally makes the image better*", but also that "*if you want, for now you can skip this step*". Then, a description of the space is requested (maximum of 500 characters). Hosts must state if the space is suitable for "*families with children*", "*elderly*" or "*furry friends*", while they are given suggestions about what to describe ("*Describe the furnishings, the lighting, what's nearby, etc.*"). It is possible to give further details about the neighborhood or the kind of interaction with Guests: basic and limited to the organization of their stay, or more informal and personal. Finally, the listing must be characterized by a short title/slogan (maximum of 50 characters).
- The third step concerns the setup of management tools (calendar, payment methods, house rules and booking settings). One can set the criteria potential Guests must meet (such as having uploaded an ID on the platform and/or having been recommended by other Hosts), but the platform reminds Hosts that more criteria to be met could mean fewer bookings. Regarding the acceptance of Guests, for example, the platform sets "*instant booking*" instead of "*booking request*" as the default option. The option is editable, but if one decides to evaluate requests, s/he has to confirm to be aware of the following statements: "*Are you sure you want to receive a booking request from your guests? You will only have 24 hours to answer the request without incurring in a penalty. Your listing will be ranked lower in Guests' search results, so you may receive fewer bookings. You will lose some security and control tools for Hosts, including the option to cancel a reservation without penalty if you do not feel comfortable with it*". The Host is also reminded that: "*In the rare case problems should occur, Airbnb protects you with 24/7 customer service and a Host Guarantee of €800,000*".

- Finally, the platform asks the user to denote how many days shall pass between the booking and the check-in, to set a minimum/maximum number of nights for stays, and to set the time-span the lodging will be available for rent (1 month, 3 months), while warning that: "*Keeping your calendar up to date is the starting point for being a successful Host. A cancellation is a big inconvenience for Guests. If you make a cancellation because your calendar is not accurate, you will be charged a penalty and the dates in question will not be available for further bookings*". The Host must set a fixed price or adopt the "smart price" service, which (depending on the market demand) lets the price fluctuate between a minimum and maximum set by the Host.
- The last page of the listing procedure states: "*Since you are responsible for your decision to offer your space to rent, you should familiarise with the existing law before starting to rent through Airbnb. By accepting our terms of service and by publishing your listing, you declare that you will follow the laws and norms in force*".

In addition to a personal profile, Hosts must set up a listing to represent the rented space. The listing procedure can be considered the first activity performed by the Host for the platform and, at the same time, the most concrete step in the process of configuration and production of users. During the listing creation, Hosts are stimulated in a variety of ways to fulfill what distinguishes the service/product provided by the platform: making people feel 'at home'. The platform encourages Hosts in making available to Guests not only "essential" resources but a whole paraphernalia of household tools and technologies (TV, wi-fi, washing machine, hair dryer), as well as some 'services' (such as breakfast). Thus, a further feature of the Hosts the platform tries to foster is their capability to recreate a sense of familiarity in their spaces, thanks to the presence of a series of objects, technologies and services.

Through the listing procedure, moreover, the platform enacts selective communication: for instance, it provides Host and Guest with 'private'' information (telephone number, e-mail address, accommodation address) only after the transaction has occurred. Thus, the platform positions itself as an information hub, while qualifying as a discreet interlocutor: the fact that the Host makes some information available to the platform (such as the exact address of the rented space) does not mean that other users will automatically be able to access it. In this way, a sense of trust towards the platform is reinforced.

Through all these steps, the platform tends to establish a 'coaching' relationship with the Host, guiding them through the listing procedure. Most of all, the platform presents a set of options while providing suggestions about the choices to be made and/or examples of what other Hosts usually do. Thus, the Host's action is oriented and somehow controlled by the platform through the suggestion of a variety of possible actions. In other words, and even if it may appear paradoxical, it is exactly by giving Hosts the impression that they are free to do what they prefer that the platform succeeds in setting (and controlling) their concrete possibility of action. In this way, Hosts are 'infrastructured' in that they are configured and produced as an integral part of the platform itself. This is quite clear in relation to the message which appears (as a clear "disclaimer") at the end of the overall listing procedure. For the first time since the beginning of the procedure, reference is made to possible sanctions and penalties, and Hosts are addressed as "pieces" of the platform itself, subject to an algorithmic logic ("if A then B"). Depending on various parameters (e.g. the settings of the calendar, prices, or the criteria Guests should meet), the Host will be connected to complex algorithms which govern

the visibility of the listings and (in the case of "smart prices") the oscillation of prices, and so, of the market itself. Which spaces are available on which dates, for how long, and at what price, are all essential elements for the correct functioning of a short-term rental market. Consequently, it is essential for Airbnb to infrastructure Hosts' actions as much as possible.

At the very end of the procedure, the platform reminds the Host that roles and responsibilities remain in any case different. In linguistic terms, accepting the terms of service and publishing a listing seem to have a performative power which extends towards the future, since the Host declares the will to follow local laws regarding short-term rental. From an organizational point of view, however, it is worth noticing how even if this message sanctions the end of the procedure of becoming a Host, the Host's actions actually start here. The next section considers how having published a listing practically affects the Hosts' daily life and through which practices they perform the platform.

3.2 Hosting: Preparing the scene, keeping in order and performing the platform

While narrating their Host experiences, several interviewees focused on the initial investment they made to "prepare the scene". Almost all the interviewed Hosts purchased a new set of linens; some increased the number of glasses, plates and pots in the kitchen; many bought a new mattress; and others repainted the apartment and/or partially renewed the furniture:

"Anyway, we bought a few things: new furniture for the bathroom, a carpet, pillows, lamps, things to let the house look nicer […] I tried to color the house up a bit… I bought some posters, I removed lots of personal items… I bought some plants…" (*Maria, 50, entire apt.*)

"Yes, everything is new… I went to buy duvet covers and pillows, for the bed… in fact I left them wrapped in their plastic, so that they [the Guests] know that they are new. Look, I spent €220 for this stuff to put into the room, and I let guests pay only €30 per night, but I want them to have a good service when they come to my home… that they have a good experience… like it happens to me when I go to them […] now I have to add a new lamp because otherwise they have to get up from the bed to turn the light off or on…" (*Marco, 30, private room*)

Both excerpts point to the initial economic investment that the two Hosts (like many others) felt they had to make, but also calls attention to what their Guests will "experience". In many cases, this means going well beyond the "essential" services required by the platform and starting to pay attention to details. In the second excerpt, having already been an Airbnb Guest encourages the Host to refer not only to the platform's requests, but also to his personal experience ("like me when I go to their home"). In other words, almost all of the Hosts, through their previous experience as Guests, witnessed the ways in which their peers "prepared the scene" and, as in the most classic of isomorphic processes, they tried to replicate the average comfort

standards they experienced. The 'freedom' Hosts have in arranging their space thus resolves in their willingness to do more (and not less) than the platform suggests.

In the first excerpt, the interviewee refers to another practice related to "preparing the scene" – removing personal items. In fact, especially if they rent-out an entire apartment, Hosts prefer to take out their personal belongings, or at least the objects they are particularly bound to:

"When I decided to start hosting with Airbnb I also decided that my principal home would have become another. […] In the apartment I have put on the website I only left those things which I wouldn't care about if they get broken or disappear… even if something happens I don't feel that much bad about it. I am really attached to the things I own. In fact, this was one of the reasons why I never did Airbnb before. Like... the idea that someone would come to my home and stain the cover of one of my books… unbearable! Let's say I emptied the house…" (*Annibale*, *45, entire apartment*)

"Filling" and "emptying" the spaces are two sides of the same process – rearranging the spaces of the house. In several cases, spatial displacements were connected to finding a more appropriate space to host Guests: an interviewee switched his room (which had private access from the outside) with her daughter's room when the latter went studying abroad; one began to sleep regularly in what was previously the guest room, with the aim to leave his (more spacious) bedroom to the Guest; another Host gave up her studio and transformed it in order to make it available to Guests. In situations of shared spaces, Hosts usually gave the priority to Guests in using the bathroom or the kitchen, or they tried to stay at home as little (or as discretely) as possible:

"I wake up very early in the morning… at 6:40-6:50 I'm already out of the house […] but if I have guests I take the shower in the evening, because in the morning it may disturb the guests […] when there is somebody, I don't use the hairdryer… I pay attention..." (*Gianna, 50, private room*)

In situations such as the one above, the possibility given to Hosts to rent-out portions of their apartment translates into a re-articulation not only of their domestic spaces but also of the Hosts' presence. Removing (or 'limiting') one's own presence is not something required by the platform, but that which Hosts autonomously feel it is opportune to do. In this case, the platform also prefers to rely on Hosts' initiatives (not specifying how should they behave), instead of trying to force them in a particular direction.

As emerged from different accounts, the preparation of the scene never really ends, becoming one of the activities Hosts enact throughout their whole experience:

"A guest comes and asks me… I don't know, if I have an ironing board, and I didn't think about that, so you buy one […] 'I would need two pillows because I have neck pain'… so you buy pillows […] All these small things, you know? […] We

also did a few things because the law prescribes it… like the minimum required square footage of the room and bureaucratic things like that." (*Ugo, 50, two entire apartments*)

"At the beginning you need to get yourself organized a bit. […] I had already thought about the bed sheets and towels before I began, so I managed to always run the washing machines when it is full… but for the hairdryer or the plates, the pans… it took me some time to figure that out… I mean, guests asked me for these things, so I understood I had to get them." (*Monica, 30, private room*)

These two excerpts highlight how preparing the scene becomes an activity that, stimulated by the platform, recurs continuously, aim to provide a sufficiently stable space configuration, which remains an open process. This stems from the fact that new Guests always bring new needs or requests, as well as from the fact that often Hosts decide to invest earnings from Airbnb in improving some aspects of the rented space (for instance, one of the Hosts first renovated his living room, then the kitchen, and finally the bathroom). One could argue that Hosts are simply reinvesting profits to make their business grow. By doing so, they contribute to the growth of Airbnb itself, providing their economic resources and their time and energies to the platform-organization. It is as if the Hosts re-invest the profits realized through the platform into the platform itself.

Preparing the scene also entailed two further main practices, "keeping clean" and "keeping in order":

"I separate things a bit… I tend to separate things more… let's put it like this: I myself try not to leave things around when I'm home… I try to keep things in order." (*Annibale, 45, entire apt.*)

"Yes, I have to clean up much more… I try to keep everything more in order. […] I used to leave stuff around, and now… knowing that there are guests, before they arrive I clean everything. If I am in the living room and go to my room I bring my stuff with me… I try to wash the dishes as soon as I finish eating… I mean, I have to keep the house clean… it obliges you to do things you normally wouldn't do. Sometimes it's positive, I may also be happy about it, but sometimes I say to myself: 'Fuck! Today I really don't want to…', but I have to!" (*Monica, 30, private room*)

As seen in the two excerpts, sometimes "keeping clean" and "keeping in order" coincide, but it is interesting to notice how the latter also means making one's presence in the apartment invisible, thus fulfilling the "emptying" of the spaces. Hosts tend to highlight the positive side of cleaning and tidying up, but in some accounts (as in the final part of the second excerpt above) they underline the "heaviness" of carrying out this activity and how it becomes a duty. Indeed, the same person added:

"The thing that is a bit burdensome is the cleaning issue (…) and then sometimes it's stressing to receive these messages, when I don't want to use or watch my phone." (*Monica, 30, private room*)

Through this excerpt, we begin to see how the platform continues to produce and infrastructure Hosts by keeping the relation with them alive, for example through several 'reminders'. All Hosts dwelled on this aspect, underlining how sometimes the timing required by the platform does not match their personal attitudes:

"I'm a bit slow in getting things done. […] Also, for bookings, maybe I read about a reservation and then I tell myself: 'I'll answer in an hour' […] I don't know why… I could do it immediately, there's no reason to wait an hour. But I've noticed that guests want a fast answer. Also, because otherwise they may book somewhere else… And the site puts pressure on me, there is this countdown… On one hand, the site offers a service to people looking for a place to stay and it wants an answer in a given time… that seems quite fair to me… I mean, it puts pressure on me, but it tries to mediate." (*Maurizio, 35, private room*)

The "countdown" the interviewee talks about refers to the messages Airbnb sends to the Host whenever they receive an e-mail from a Guest or a booking request. Hosts have 24 hours to answer these messages (after this the booking request will expire) and the frequency of the platform's reminders increases while approaching the deadline. It is interesting to notice how in the interviewee's opinion, the pressure the platform puts on Hosts is justified as a form of mediation between different needs, as if the platform had an impartial position, without having any goal itself.

Thus, we are finally able to acknowledge the web of practices the platform uses to keep its Host infrastructure going, and to which Hosts also refer while performing the platform. This web can be found in the e-mails and notifications sent to the Hosts, in the response-rate of the latter, and above all (as with many other platforms), in the rating and feedback system established by the platform:

"I've noticed that when you get negative feedback Airbnb sends you a preset e-mail in which they write things like 'try to maintain high standards, anyway you are doing good!'. They write it very informally and put some hearts there… but you still notice it's standardized, because it happened twice to me and it was the exactly same e-mail. And they tell you that listings with low standards get cancelled. That means if you go under a certain rating… I don't remember well, like under two stars out of five… it's practically impossible […] I lived in that house before starting Airbnb, so I tried to maintain a good standard anyway. Obviously now you notice it more if something is broken, or if something is particularly ugly, you pay more attention […] because the apartment is still yours, but you need to keep higher standards." (*Giacomo, 27, entire apartment*)

The excerpt highlights a peculiar dynamic. Following negative feedback, the platform reminds the Hosts to fulfill certain standards. Hosts are the first to know that it is "practically impossible" to get below the required standards, given the positive bias that affects ratings between users (Fradkin et al. 2015). Building on Knorr Cetina and Preda (2002), it could be argued that the main purpose of the message is to 'appresent' the platform and state to the Host that the standards required by the platform are higher than the ones Guests

are satisfied with. To be kicked off the platform one has to reach an average rating of 2/5 stars, but some negative feedback (i.e. inferior to four or five star rating) is enough for the platform to take action towards the Host. This is probably the most concrete and explicit demonstration of the kind of actions (and sanctions) the platform could undertake toward the Host. Again, the platform is not interested in exerting its power explicitly over Hosts; it is much more effective in making Hosts aware of what could happen, so that they 'spontaneously' undertake corrective action. As already noted during the user configuration process, the mention of sanctions and penalties reminds the Host that they are part of an infrastructure and that, even if the rented-out spaces remain their private property, the standards to be fulfilled are now the property of the platform.

Hosts also perform the platform not only in relation to potential sanctions, but also by autonomously finding strategies for managing their relationship with it:

"Since there's the app, I use it. […] Obviously, I pay more attention to my mobile… sometimes it's a source of stress, for example in the daytime I don't use the mobile at all because I'm at work […] I noticed that the only times I look at it it's exactly because of Airbnb, or in the morning when I'm on the bus… it is a one-hour ride, so I answer to all the… for instance, I write and publish all the reviews… all at once, in the morning during the bus ride, or when I get back home…" (*Anna, 25, private room*)

This excerpt is representative of the many ways in which Hosts themselves translate the platform into an everyday practice. As in the case just seen, this commonly happens by linking activities related to the management of the online ad (such as answering requests or publishing guest reviews) into everyday routines. This brings us back to the 'new' production of users (Hyysalo et al. 2016): for platform-organizations it is fundamental not only to produce active and creative users, but also to find ways of stimulating users' activity and creativity (for example, by making a smartphone app available), so that they will keep the platform update and alive.

Concluding remarks

Coming to the end of this chapter, we would like to provide an answer to our initial question: how do digital platforms relate to processes of domination and emancipation? More precisely, how do issues of domination/emancipation arise in the relation that digital platforms build and maintain with their users and how do users give shape to this relation?

In the case of Airbnb, it seems to us that the answer points to processes that imply "infrastructuring" users and brokering communication and information flows.

We have seen how the platform aims to configure and produce users with specific characteristics: informality, entrepreneurial and managerial attitudes, connectivity, and, above all, trust in the platform itself. In

becoming Hosts, users are not just configured and produced, they are progressively infrastructured in that they are turned into elements of the platform itself (so that at the end of the process they become sanctionable by the platform). Users produce a large part of the website content, and own, manage, prepare and maintain the listed space (with the associated costs and risks), making available to the company a series of technologies essential for the management of the service (such as smartphones or PCs). Users must perform the contents of the platform and this performance often coincides with a more general rearticulation of the house spaces, made up of "filling" and "emptying" practices aimed at meeting Guests' expectations and preserving the Host's intimacy. In particular, such "emptying" often implies the removal of the presence of the Host themselves (such as when the Host 'gives' to the guests a part of the house previously used by them) or the effort to become invisible in their own home. Also, in keeping the spaces clean and tidy, the idea of "order" often coincides with removing personal effects around the house, while "cleaning" is aimed at eliminating traces of the Host. Thus, Hosts continue the 'production' started by the platform, linking its contents to concrete practices, and becoming parts of its infrastructure. Airbnb largely relies on Hosts' engagement and activity, turning private time and spaces into productive elements for the platform itself.

Curiously, Hosts seem to voluntarily enter into this relationship and to be willing to maintain it. This result is achieved through a process of "generification" (Pollock, Williams and D'Adderio, 2016), which gives to users enough autonomy to decide how to perform the requests of the platform. In a way, it is as if control and standardization are exerted not through limiting the possibilities of action but multiplying them. In so doing, the platform can approach Hosts with different local conditions, resources, and levels of engagement in a standardized manner. It is here that the management of communication and information by the platform becomes of crucial importance.

In subscribing to the platform, and even more so during the listing procedure, the interaction between the platform and its members shifts and alternates continuously between identification and verification procedures, templates, explanations, advice, clarifications on responsibilities and reassurances. The platform thus manages to gather and distribute selectively detailed information about the Host and their space. Gathering information is of fundamental importance for the platform, in that this data constitutes a large part of its contents and allows the coming-into-being of Airbnb itself. Moreover, detailed and updated information, thanks to Guests' reviews, allow for the monitoring of Hosts' 'performances' and their adherence to the standards required by the platform. The platform itself continues to produce the Hosts, maintaining a constant relationship with the latter through a system of notifications sent via SMS and e-mails that reminds them of the tasks to be performed (such as the arrival of guests, a reservation request or the writing of a review). Adopting communication and information to put pressure on Hosts, the process of production and "infrastructuring" of the user is thus articulated into a kind of coercive isomorphism (Powell and DiMaggio 1991) expressed through suggestions, recommendations, and "friendly reminders".

In reference to domination/emancipation processes, we can thus highlight an apparently contradictory dynamic: Airbnb produces the very subject it dominates, so that, at the same time, it totally depends on them. In our view, this is also the main reason why the platform not only tries to produce its members, but to infrastructure them: if they would leave the platform, it would cease to exist. As with domination or control, emancipation is just to be enacted.

References

Akrich, M. (1992). The description of technical objects. In W. Bijker, and J. Law (Eds.), *Shaping Technology/Building Society: Studies in Sociotechnical Change* (pp. 205–224). Cambridge, MA: MIT Press.

Arcidiacono, D., Gandini, A., Pais, I. (2018). Sharing what? The 'sharing economy' in the sociological debate. *The Sociological Review Monographs, 66*(2), 275–288.

Baldwin, C.Y., & Woodard, C.J. (2009). The architecture of platforms: a unified view. In A. Gawer (Ed.), *Platforms, Markets and Innovation* (pp. 19–44)*.* Cheltenham, U.K. and Northampton, MA: Edward Elgar Publishing.

Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom.* New Haven, CT: Yale University Press.

Botsman, R., & Rogers, B. (2010). *What's mine is yours: The rise of collaborative consumption*. New York, NY: HarperCollins.

Bowker, G.C. (1994). *Science on the run: Information management and industrial geophysics at Schlumberger, 1920–1940*. Cambridge, MA: MIT Press.

Bruns, A. (2008). *Blogs, Wikipedia, Second Life and beyond: From production to produsage*. New York, NY: Lang Publishing.

Callon, M. (1984). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc bay. *The Sociological Review*, *32*(1), 196–233.

Callon, M., & Law J. (1992) The life and death of an aircraft: a network analysis of technical change. In W. Bijker W., and J. Law (Eds.) *Shaping Technology/Building Society: Studies in Sociotechnical Change* (pp. 21–52). Cambridge, MA: MIT Press.

Cheng, M., & Foley, C. (2018). The sharing economy and digital discrimination: The case of Airbnb. *International Journal of Hospitality Management, 70*, 95–98.

Choudary, P. S. (2015). *Platform Scale: How an Emerging Business Model Helps Startups Build Large Empires with Minimum Investment*. Boston, MA: Platform Thinking Labs.

Christensen, C.M. (2006). The ongoing process of building a theory of disruption. *Journal of Product Innovation Management, 23*(1), 39–55.

Danaher, J. (2016). The threat of algocracy: Reality, resistance and accommodation. *Philosophy and Technology*, *29*, 245–268.

Danaher, J., Hogan, M.J., Noone, C., Kennedy, R., Behan, A., De Paor, A., Felzmann, H., Haklay, M., Khoo, S.M., Morison, J., Murphy, M.H., O'Brolchain, N., Schafer, B., Shankar, K. (2017). Algorithmic governance: Developing a research agenda through the power of collective intelligence. *Big Data & Society*, July-December, 1-21.

Dredge, D., Gyimóthy, S., Birkbak, A., Jensen, T.E., Madsen, A.K. (2016). The impact of regulatory approaches targeting collaborative economy in the tourism accommodation sector: Barcelona, Berlin, Amsterdam and Paris. *Impulse Paper No.9, European Commission DG GROWTH*. Copenhagen, DK: Aalborg University.

Fradkin, A., Grewal, E., Holtz, D., Pearson, M. (2015). Bias and reciprocity in online reviews: evidence from field experiments on Airbnb. *Proceedings of the Sixteenth ACM Conference on Economics and Computation.* Portland, OR: 15-19 June 2015.

Flick, U. (2000). Episodic Interviewing. In M.W. Bauer, G. Gaskell (Eds.), *Qualitative Researching with Text, Image and Sound. A Practical Handbook* (pp. 75–92). London, UK: Sage.

Gillespie, T. (2010). The Politics of 'platforms'. *New Media & Society, 12*(3), 347–364.

Gurran, N., & Phibbs, P. (2017). When Tourists move in: how should urban planners respond to Airbnb*?. Journal of the American Planning Association*, *83*(1), 80-92.

Guttentag, D. (2015). Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector. *Current Issues in Tourism*, *18*(12), 1192-1217.

Himanen, P. (2001). *The hacker ethic and the spirit of information age*. New York, NY: Random House.

Horn, K., & Merante, M. (2017). Is home sharing driving up rents? Evidence from Airbnb in Boston. *Journal of Housing Economics*, *38*, 14–24.

Hyysalo, S., Jensen, T.E., Oudshoorn, N. (Eds.) (2016). *The new production of users: changing innovation collectives and involvement strategies*. London, UK: Routledge.

Irani, L. (2015). Difference and Dependence among Digital Workers: The Case of Amazon Mechanical Turk. *South Atlantic Quarterly*, *114*(1), 225–234.

Ikkala, T., & Lampinen, A. (2015). Monetizing network hospitality: hospitality and sociability in the context of Airbnb. *Paper presented at CSCW conference*, Vancouver, BC: 14-18 March 2015.

Jin, D.Y. (2015). *Digital platforms, imperialism and political culture*. New York, NY: Routledge.

Knorr Cetina, K., & Bruegger, U. (2002). Traders' engagement with markets: a postsocial relationship. *Theory, Culture and Society, 19*, 161-185.

Ladegaard, I. (2018). Hosting the comfortably exotic: cosmopolitan aspirations in the sharing economy. *The Sociological Review Monographs 66*(2), 381–400.

Law, J. (1987). *Technology and heterogeneous engineering: the case of Portuguese expansion*. Cambridge, MA: MIT Press.

Latour, B. (2005). *Reassembling the social: an introduction to Actor-Network Theory*. Oxford, UK: Oxford University Press.

Liang, S., Schuckert, M., Law, R., Chih-Chien, C. (2017). Be a "Superhost": The importance of badge systems for peer-to-peer rental accommodations. *Tourism Management 60*, 454-465.

Mackay, H., Carne, C., Beynon-Davies, P., Tudhope, D. (2000). Reconfiguring the user: using rapid application development. *Social Studies of Science 30*(5), 737–757.

Molz, G.J. (2014). Toward a Network Hospitality. *First Monday 19*(3). Retrieved from https://journals.uic.edu/ojs/index.php/fm/article/view/4824/3848. (Accessed 9 July 2018.)

Oudshorn N., & Pinch T. (Eds.) (2003). *How users matter: The co-construction of users and technologies*. Cambridge MA: MIT Press.

Peticca-Harris, A., deGama, N., & Ravishankar, M. N. (2018). Postcapitalist precarious work and those in the 'drivers' seat: Exploring the motivations and lived experiences of Uber drivers in Canada. *Organization*. https://doi.org/10.1177/1350508418757332

Plantin, J.C., Lagoze, C., Edwards, P., Sandvig, C. (2018). Infrastructure studies meet platform studies in the age of Google and Facebook. *New Media & Society, 20*(1), 293–310.

Picascia, S., Romano, A., Teobaldi, M. (2017). The airification of cities: making sense of the impact of peer to peer short term letting on urban functions and economy. *Paper presented at the Annual Congress of the Association of European Schools of Planning, AESOP2017*. Lisbon, PT: 11-14 July 2017.

Pollock N., Williams R., D'Adderio L. (2016). Generification as a strategy: how software producers configure products, manage user communities and segment markets. In S. Hyysalo, T.E. Jensen, N. Oudshoorn (Eds.),

The new production of users: changing innovation collectives and involvement strategies (pp. 160–189). London, UK: Routledge.

Rosenblat, A., & Stark, L., (2016). Algorithmic labor and information asymmetries: A case study of Uber's drivers. *International Journal of Communication*, *10*, 3758–3784.

Schmidt, K., & Simone, C. (1996). Coordination mechanisms: towards a conceptual foundation of cscw systems design. *CSCW*, *5*, 155–200.

Srnicek, N. (2016). *Platform capitalism*. London, UK: Wiley & Sons.

Star, S.L. (1999). The ethnography of infrastructure. *American Behavioral Scientist*, *43*(3), 377–391.

Star, S.L., & Bowker G.C. (2002). How to infrastructure?. In L.A. Lievrouw, and S.L. Livingstone (Eds.), *The Handbook of New Media. Social Shaping and Consequences of ICT* (pp. 151–162). London, UK: Sage.

Star, S.L., & Ruhleder, K. (1996). Steps toward an ecology of infrastructure: borderlands of design and access for large information spaces. *Information Systems Research, 7*(1), 111–134.

Starner, T. (2015). Has 'workforce-as-a-service' arrived?. *HR Dive*. Retrieved from http://www.hrdive.com/news/has-workforce-as-a-service-arrived/402237/ (Accessed 29 April 2019.)

Sundararajan, A. (2016). The sharing economy. *The end of employment and the rise of crowd-based capitalism*. Cambridge, MA: MIT Press.

van Dijck, J. (2013). *The culture of connectivity: a critical history of social media*. New York, NY: Oxford University Press.

van Dijck, J., Poell, T., de Waal, M. (2018). *The Platform society. Public values in a connective world*. New York, NY: Oxford University Press.

Van Doorn, N. (2016). Platform labor: on the gendered and racialized exploitation of low-income service work in the 'on-demand' economy. *Information, Communication & Society*, *20*(6), 898-914.

Wang, D., & Nicolau J.L. (2017). Price determinants of sharing economy based accommodation rental: a study of listings from 33 cities on Airbnb.com. *International Journal of Hospitality Management*, *62*, 120–131.

Woolgar, S. (1991). Configuring The User: the case of usability trials. In J. Law A (Ed.) *Sociology of Monsters. Essays on Power Technology and Domination* (pp. 57–99), London, UK: Routledge.