Article

Out of sight, out of mind? (In)visibility of/in platform-mediated work

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Abstract
With platforms accounting for 1–3% of paid work in advanced economies, discussions on their impact on labor are proliferating. Focusing on commercial platforms providing intermediation to a workforce available on-demand, we further systematize the field by approaching platform-mediated work through the lens of (in)visibility. We map four basic forms of platform-mediated work against three variations of (in)visibility: (1) perceptible, (2) institutional, and (3) individual, and discuss the implications through the stories of three protagonists of platform workers. The suggested meta-analysis tool for understanding the mechanism of rendering platform workers obscure exposes who is recognized as a worker, what is recognized as work, and how these questions are negotiated in a platform-mediated digital space. As such, the framework provides a joint space for the discussions of the core issues of the field—from regulation and uncertainties of platform employment, through exacerbating vulnerabilities of workers, to surveillance and self-governance.

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Staging platform-mediated work

In 2020, working on and through platforms is common for a growing number of people from various geographical locations and different professional, educational, and socio-economic backgrounds. According to a recent study, platforms account for 1–3% of all paid work in advanced economies (Schwellnus et al., 2019). Although this does not give us good estimates about the number of platform workers, excluding the digitally mediated "gray zone," scholars, politicians, and workers alike are turning toward platforms to discuss the potentials and influence of these successful labor market intermediaries on work.

Put on the agenda by Srnicek's (2017) contribution on platform capitalism and platform business models, a vibrant field of research emerged on discussions of the neoliberal nexus underlying platforms' architecture and operations (Healy et al., 2020; Montalban et al., 2019). This includes works on the regulation and governance of platforms (Gillespie, 2010, 2018b; Gorwa et al., 2020) and their impact on individuals and society, especially in the realm of labor (Berg et al., 2018; Langley and Leyshon, 2017). In this sense, platforms can be understood as a "technologically and materially constituted topos or stage" (Andersson Schwarz, 2017: 377) and as digital infrastructures (Plantin et al., 2018) that organize the matching and selling process of labor more efficiently.

The impact of platforms on the visibility of workers has not remained unnoticed. Both Graham et al. (2017) and Bergvall-Kåreborn and Howcroft (2014), for instance, emphasize the borderless nature of cloud workers and the seemingly spatially unfixed character of the work they provide via platforms as conditions for rendering workers invisible. In this article, we focus on commercial platforms that provide intermediation to a workforce that is available on-demand (Schmidt, 2016) and introduce a framework of three types of (in)visibility to elaborate systematically on the observation that platform-mediated work, in its own right and complexity, has been analyzed insufficiently.

Rather than claiming a complete visibility or invisibility of the platform-mediated workforce, we delve exactly into what spans between these two. In order to show how (in)visibility manifests itself in the daily lives of platform workers, we use the stories of three protagonists throughout the article, each performing a different type of platform work. Ankita, our first protagonist, is one among many crowd workers using Amazon Mechanical Turk (AMT) to take on small jobs, such as image labeling and transcriptions, to improve the family's income on the side. Sami lives in Paris and worked as an UberPop driver between 2015 and early 2018. He quit his job due to protests against Uber and the ruling of the European Court of Justice against the company, which changed the legal requirements for Uber drivers in France. Finally, Martyna, a student and US citizen with Polish roots, uses Care.com to find (off-the-books) babysitter jobs to cover her university fees. As argued in the discussion, all protagonists deal with particular shades of (in)visibility captured in the analytical framework offered.

Furthermore, we build our framework on the parenthetical expression of (in)visibility to stress the complexity of the area of investigation and the fluidity of what (in)visibility might mean for platform workers. Such an expression can be found in a range of fields, driven by similar motivations as ours. Robbins (2003), for example, looks into the (in)visibility of lesbianism in post-Franco Spanish literature and refers to "the simultaneous

presence and repression" thereof (p. 108). Casper and Moore (2009) discuss (in)visibility emerging in the modern age of surveillance. Scroggins and Pasquetto (2019) investigate (in)visible labor of data scientists, drawing attention to the heterogeneity of the workers in focus and of the particular ways in which their work is obscured or brought to light.

We observe the different extent to which (in)visibility in platform-mediated work is manifested in three variations: the perceptible, institutional, and individual. This framing, we argue, opens the opportunity to sketch the field of platform-mediated labor in a new light and facilitates the navigation through the different ways in which platforms affect work. Simultaneously, this perspective generates insights for understanding platform infrastructures more broadly and acknowledging their heterogeneity. We first revisit literature on platform-mediated work and (in)visibility, to subsequently address the identified gaps with the framework introduced in Chapter 3. Next, we use the protagonists of platform workers to discuss the framework extensively. Their development is grounded in the existing literature, including previous empirical and theoretical findings on platform workers and their realities, media accounts and the authors' own research experience in the topic.[1] The protagonists function as illustrative examples of selected "types" of platform workers. Moreover, the use of protagonists puts flesh on the bones of the suggested analytical framework, making platform workers more tangible to the readers and easier to relate to. By choosing this storytelling approach, we also aim to further contribute to a redirecting of the platform work discourse, often focused on exploring the digital infrastructure rather than workers themselves. Finally, we conclude with more details on the possible overlaps between the proposed three variations of (in)visibility and point to further areas that could be fruitfully explored with the suggested framework.

Literature

Platform-mediated work

The scope of platform-mediated work is contested, given the numerous and heterogeneous contributions. Graham et al. (2017), for instance, characterize digital labor as spatially unfixed and as perceived to transcend the limits of local labor markets. Others settled upon using the term gig-work (De Ruyter et al., 2019; see also Lehdonvirta, 2018), with Kässi and Lehdonvirta (2018) building an index measuring the size of the gig economy. Ticona and Mateescu refer to online labor platforms such as Uber, AMT, and TaskRabbit that "position themselves as intermediaries, matchmakers, or communications platforms, rather than as employers" (Ticona and Mateescu, 2018: 4385). Van Doorn refers to digitally mediated (service) work and examines the "gendered, racialized, and classed distribution of opportunities and vulnerabilities associated with [it]" (Van Doorn, 2017: 898). This links to criticism on platforms frequently voiced. Others have called attention toward exploitative and insecure labor relations (Aroles et al., 2019; Guarriello, 2019; Stanford, 2017) and aspects of surveillance and self-regulation (Shapiro, 2018, 2020; Wood et al., 2019).

This article is based on a conceptualization of platform work offered by Schmidt (2016). He excludes commercial retail platforms, commons-based peer production sites,

and social media platforms from his analysis and focuses on "commercial providers of an on-demand workforce that consists mainly of private individuals trying to generate an additional income" (Schmidt, 2016: 5). Following Schmidt, we approach platform-mediated work based on four major differentiations: being location-based (gig-work) or web-based (cloud work), both types distributed either to individuals directly or a crowd consisting of individuals, but appearing as a single mass toward the employer (Schmidt, 2016).[2] The protagonists represent a selection of these forms: Ankita is doing microtasking on AMT, that is, cloud work (web-based) delegated to a crowd. Martyna and Sami, on the other hand, are location-based gig-workers and use Care.com and Uber.

Invisibility of platform-mediated work

Schmidt (2016) also notes that gig-work and gig-workers are more visible than cloud workers. Irani (2015a, 2015b), who has long had a focus on the latter, highlights hierarchies that are reinforced by and incorporated in the platform's design and architecture of AMT (Irani, 2015a). She suggests that the bodilessness of cloud workers—the de facto invisibility—through AMT's interface is one crucial reason for entrepreneurs to imagine workers in a better place than they actually are (Irani, 2015a). Although invisibility of platform workers and their work has been mentioned by both Schmidt and Irani, this angle has remained a side note of their work. This is slightly different for Cherry (2016), who focuses explicitly on aspects of invisibility, on workers' non-perceivability and bodilessness. She argues that technology hides workers from view, for example, by means of profiles or avatars (Cherry, 2016), and thus feeds into the categories of perceptible and individual (in)visibility of the framework proposed in Chapter 3. Cherry complements Irani's work with a focus on changing perspectives of users and consumers. This, however, builds upon a very broad definition of the platform which includes social media platforms and also menial labor for platform companies, from which we deliberately differ by relying on Schmidt (2016).

Driven by the question of "how does one value something one cannot and often does not want to see," Van Doorn (2017) explores the role of platforms in shaping the value-visibility relation, particularly for vulnerable low-income workers (p. 899). He identifies three interrelated strategies in which platforms reconstitute this relation by (1) bolstering the immunity of platform intermediaries and clients; (2) expanding managerial control over workers; and (3) creating the feeling of fungibility and superfluity of the workforce. Through the process of *sociotechnical obfuscation*, workers are rendered "largely invisible to customers, to each other, and even to themselves" (Van Doorn, 2017: 904). The question of the different ways in which self-employed workers "negotiate the engineering of their visibility, agency, and income opportunities" (Van Doorn, 2020) is further picked up by the author in his most recent work on self-employed domestic platform workers (p. 2). Here, he posits the concept of *selective formalization* to characterize platform practices in an informal sector.

Ticona and Mateescu (2018) explore babysitting facilitated by three digital platforms in the United States. Along with Van Doorn (2020), they look to paid domestic work, which, next to unpaid domestic work, forms the foundation of invisible labor scholarship. However, it remains largely understudied in platform labor literature, which is

dominated by the "'Uberization' narrative" (Ticona and Mateescu, 2018: 4385). They highlight that visibility of platform-mediated work and workers differs depending on the degree of formalization within the disrupted sector. Referred to as *institutional visibility* (Ticona and Mateescu, 2018), this observation is reflected in the stories of our protagonists. As an Uber driver, Sami provided transportation services in Paris without fulfilling the formal standards to which non-Uber drivers providing essentially the same services adhere. As such, Sami is rendered less visible to various regulatory institutions by the platform. The situation of Martyna, our platform babysitter, largely inspired by Ticona and Mateescu's research, is substantially different. Care.com encourages the workers and employers to register with the help of the digital infrastructure but does not monitor user compliance with locally binding regulations. This ultimately turns the possible increase of institutional visibility of workers in this sector into an empty promise. What does increase is the *individual visibility* of the workers toward potential clients, operationalized, for example, via review and rating systems and online profiles of the workers, and serving as a proxy for quality assurance and platform trust building tools. In the care sector, crucially, platforms facilitate trust between the involved parties in a new way, leaving the "word-of-mouth" times behind while bringing new skills pertinent to how the workers find themselves in the digital landscape to the fore.

Thus, previous work on the invisibility of platform-mediated work has two major shortcomings. First, the platforms used as a basis for analysis vary. This makes an analysis of visibility and invisibility of platform-mediated work at large rather speculative, given that the various platform types seem to influence platform-mediated work in particular manners (Bergvall-Kåreborn and Howcroft, 2014). We, therefore, choose to build upon a clear categorization and definition of platforms and platform-mediated work following Schmidt (2016), with the aim of constructing a scope-wise comprehensive framework. Second, aspects of invisibility remain at times under-conceptualized. While most authors seem to understand invisibility as the absence of perception (i.e. of seeing the worker and the work), they rarely make this understanding explicit (Irani, 2015a, 2015b; Schmidt, 2016). Ticona and Mateescu (2018) operationalize invisibility of platform work in a comprehensive manner, yet they focus specifically on platform-mediated care work. In the proposed framework, we aim to fill these gaps, refining the meaning of the institutional and individual (in)visibility in platform labor and complementing the scope of (in)visibility in its actual, physical sense.

Invisible work

Looking at labor through the lenses of (in)visibility dates back to the late 1980s and Kaplan Daniels' (1987) coining of the term *invisible work*. Originally, the concept drew attention to the cultural and economic devaluation of housework, providing a milestone contribution to studies of feminized reproductive labor (Hatton, 2017). Ever since, the literature centered on various manifestations of invisible labor proliferates, both in its reproductive and non-reproductive meanings. Invisibility has been analyzed in relation to emotional labor and care work (Glenn, 2000; Macdonald, 1998), paid domestic work (Cox, 1997), the "dirty work" of household maintenance (Duffy, 2007; Schürmann, 2013), or sex work (Kotiswaran, 2011). It has found its way to health research (Allen,

2015), or home-based work of independent contractors (Hassan and Azman, 2014). Invisible work repeatedly resurfaces in criticisms of capitalism (Federici, 2012; Weeks, 2011), reflecting the missing recognition of domestic/reproductive labor realized by women (Duffy and Schwartz, 2018).

Along with Hatton (2017), we posit that while many studies delve into "the social dynamics that shape many different types of labor, they have done less to develop the concept of 'invisible work' itself" (p. 337). Hatton sets the first steps in systematizing and operationalizing the heterogeneous labor realities via the shared lens of invisibility—manifested in various shades and forms. Employing invisibility of work as an analytic category, she defines invisible labor as work rendered economically valueless via three interlinked sociological mechanisms of invisibility. S*ociocultural mechanisms* of invisible work center on the range of hegemonic cultural ideologies such as class, sexuality, or gender that impact what kind of work is valued and acknowledged. *Sociolegal mechanisms* influence the invisibility of work by restricting legal definitions of employment, leaving certain types of work (e.g. informal work) outside legal recognition. Finally, *sociospatial mechanisms* depict work per se hidden from sight, due to it happening in spaces beyond those socio-culturally defined as workspaces (e.g. private homes where work is provided overwhelmingly out of sight in a physical sense), but also criminal activities (where work happens informally/illegally, and hence remains institutionally invisible).[3] Thus, she offers an inspiring and comprehensive starting point for analyzing the different forms of invisible work. By focusing on the dual aspect of rendering both work and the worker invisible, Hatton manages to introduce a carefully designed framework to analyze the mechanisms of invisible work generally.

While appreciating the depth of Hatton's (2017) meta-framework, we do find shortcomings among the mechanisms when applied to platform work. Digital labor is explicitly brought up in the discussion of the sociospatial mechanisms as an example of labor which has no worksite at all. The definition thereof is limited to spatially dispersed crowdsourced work, thus including Schmidt's (2016) cloud work, but excluding gig-work provided by selected individuals. Considering the almost "rude" physical presence of, for example, platform delivery workers in urban settings, the sociospatial mechanisms, as outlined, do not cater for significant parts of the scope and diversity of platform work with regards to perceptible visibility. Similarly, the sociolegal mechanism does account for the invisibility of crowd workers emerging due to the fuzzy meaning of employment relation, yet leaves a range of platform workers invisible even from the framework itself.

"Framing" (in)visibility of platform-mediated work

Considering the above issues and aiming to add to the budding literature on invisibility of platform-mediated work and workers, we expand Hatton's call for a systematization of invisibility of labor. Based on Schmidt's (2016) classification of platform work, we propose a framework to analyze aspects of (in)visibility in its shades and forms specifically for platform-mediated labor. We ground our three-pronged framework in the existing discussions on platform work and (in)visibility and extend the vocabulary employed therein. The following section introduces our tool for operationalizing (in)visibility in
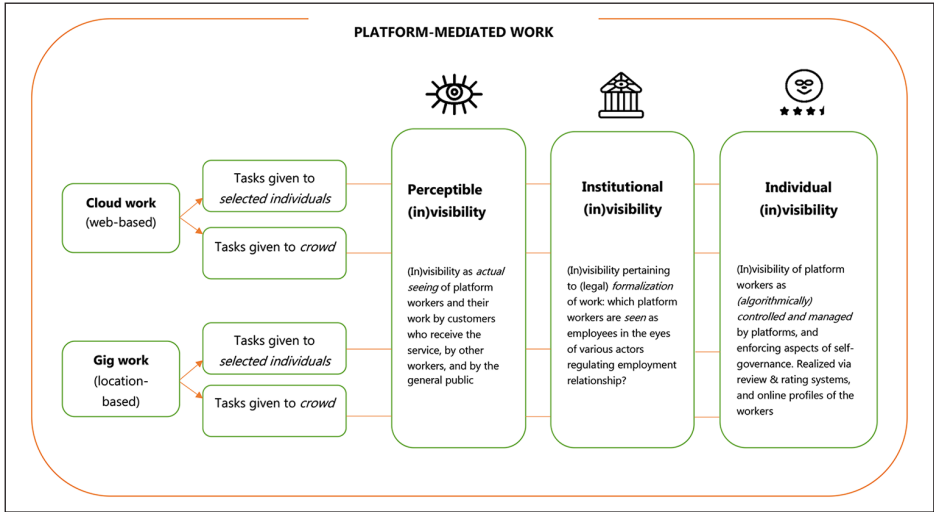
Figure 1. The analytical framework "(In)visibility of platform-mediated work" (icons by Bernhard Fuchs).

platform work in greater detail, identifying planes of similarities and discrepancies among the multiple types of platform-mediated work, as well as the different ways in which platform workers are exposed to and may experience (in)visibility.

We understand platform work as being either location-based (gig-work) or web-based (cloud work) and distributed to either individuals or a crowd, respectively. We map these four basic forms of platform-mediated work against three distinct forms of (in)visibility: (1) perceptible (in)visibility; (2) institutional (in)visibility; and (3) individual (in)visibility. The essence of the framework is captured in Figure 1, followed by a concise description of each variation of (in)visibility.

Perceptible (in)visibility

Among the three categories suggested here, perceptible (in)visibility is closest to the expansive literature on "traditional" concepts of invisible labor as being physically out of sight and devalued. We use it as a term to describe the (in)ability to see and perceive platform workers "in the flesh" and their work "on the spot"—be it in the eyes of clients, other workers, or the surrounding general public. This explicitly takes into account that platform-mediated work is also made visible in some cases (Ticona and Mateescu, 2018): We stress the fluid "gray zone" oscillating between different degrees of perceptible (in)visibility, which largely depends on the type of platform and the services offered on it.

Perceptible (in)visibility depends on, for example, wearing uniforms, using platform-branded equipment, and other ways of displaying platform visual identity during work, but also on the existence of a worksite in the "physical world." As such, perceptible (in)visibility is most relevant mainly to the platform workers individually providing location-based services and differs in its extent even within this group. For example,

app-based bike and scooter deliverers on Deliveroo, Foodora, or Uber Eats are clearly visible: they wear a uniform, use platform-branded outfits and backpacks, or ride branded bicycles. They are seen by their clients upon completion of the job, by the general public while passing down the city streets as well as by other workers due to the visual uniform-like clues. Some of them might have a physical space in the city, a "touch-base," where they pick up their bags or bicycles and have a regular possibility to see and interact with other workers. Although their work is atomized, uniforms and actual perception by the general public might have contributed to workers forging alliances (Healy et al., 2020). Curiously, interest alignment and unionization has also occurred among workers providing ride-hailing services, for example, in the EU or in selected US states (Gruszka and Novy, 2018), despite their utter invisibility to each other. The difference, however, is that although seen by their clients during the ride, these workers are also hidden from the direct view of the general public. Whom the latter group might see, though, are the non-platform workers whose sector is being disturbed, as shown, for example, during recurring protests of taxi drivers and licensed chauffeurs against UberPop drivers (Gruszka and Novy, 2018).

As widely discussed in the literature on cloud work, focusing on spatially dispersed and disembodied labor (Hatton, 2017; Poster et al., 2016), the (in)ability to actually see workers and their work is *also* influenced by algorithms and/or online profiles. Being visible by means of a profile, however, is fundamentally different from being seen due to wearing a uniform or from connecting to other workers at a worksite. With this explicit sensory foundation of perceptible (in)visibility, we depart from framing platform labor as algorithmic work in which laborers and the work itself are hidden from view and explore this area as individual (in)visibility further on.

Institutional (in)visibility

Institutional (in)visibility takes up the questions of governance of platforms (Gorwa et al., 2020). It is centered primarily on formalization of employment in different economic sectors in which platform-mediated work has been observed thus far. In other words, institutional (in)visibility pertains to the possibly most notorious question in the investigations of the impact of platforms on work, that is, who is to be legally considered a worker? Legal battles fought by Uber in multiple locations, overshadowed by country-, state-, or federal-specific definitions of what makes up an employee, are a perfect example of platforms rendering individuals less institutionally visible, and bring, for example, multilevel policy actors and trade unions to the fore (Cherry, 2016; Gruszka and Novy, 2018).[4] The lens of (in)visibility proposed in the framework enable us to capture the complexity of this question in an organized manner. Taking gig-work delivered by specific individuals under scrutiny, one notices various degrees of institutional (in)visibility. Within this group only, the arrival of digital platforms can both decrease and increase the obscurity of workers from the relevant regulatory institutions. In a sector already functioning mainly informally, platforms might potentially increase the visibility of workers toward the regulatory institutions. However, this potential often remains unused and would require an explicit decision of the given platform to execute and monitor user compliance with the binding regulations.[5]

Institutional (in)visibility takes another drastic twist in web-based, crowd-provided services in sectors often relying on independent workers, who are in practice expected to cater for the respective requirements for registering their work, hence gaining institutional visibility. While this might be the reality for some of the web-based crowd workers, for others (particularly those who are unprotected, sit in specific regions of the world, and perform highly individualized piece-work), platforms may contribute to their persisting institutional invisibility (Graham et al., 2017; Van Doorn, 2020; Wood et al., 2019). Institutional (in)visibility affects all categories of platform work, yet is characterized by substantial variety.

Individual (in)visibility

Finally, we refer to individual (in)visibility to describe how the interactions between platforms, workers, and clients occur. This includes a focus on governance *by* platforms (Gorwa, 2019) and the opaqueness of algorithmic management. Individual (in)visibility builds upon two pillars: First, by focusing on what workers do in their online profile and how they present themselves on the platform, we suggest that it is possible to learn about the relationship between platforms and workers, and workers and clients. Profiles not only hide workers (Cherry, 2016), but they also provide chances to make workers visible by catering for trust (Ticona and Mateescu, 2018). They become instruments for self-optimization and self-management in a competition for visibility that is, essentially, a competition for best-paid tasks (Healy et al., 2020). Second, by analyzing ratings and reviews on platforms and worker's profiles, we propose to focus on this aspect in order to gain a better understanding of how workers' (in)visibility is mediated through these tools. They create space for individual valuation and comparison, leading to the "emergence and consolidation of a new regime of moralized social classification" (Fourcade and Healy, 2017: 10).

A closer scrutiny of rating schemes also contributes to the opening up of the vital discussion of algorithmic management that might render individuals (in)visible by means of platform architecture and codes. This relates to forms of algorithmic governance and self-governance of the individuals, taking on specific forms and variations for different categories of platform work as reflected in the storylines of our protagonists discussed below.

Out of sight, out of mind?

While the framework itself suggests an innovative take on platform-mediated work and ways to analyze it, overlaps and relations between the different variations of (in)visibility remain abstract. Therefore, we discuss the framework with the use of our protagonists Ankita, Sami, and Martyna, letting the three characters take center stage. Protagonist and persona development can be found, for example, in HCI (Human-Computer Interaction) where they are seen as a "tool" for enhancing empathy in user-centered design (Haag and Marsden, 2019; Nielsen, 2013). There, personas stand for fictional people who ought to represent users in, for instance, software development processes or other technologies where the user is in the center (Marsden et al., 2017; see also Adlin and Pruitt, 2010;

Nielsen, 2013). Both qualitative (e.g. from focus groups, field observations and expert meetings) and quantitative data (e.g. from surveys) can be used for persona development, yet the former tends to provide more relevant grounds for the process (Marsden et al., 2017), which accommodates for a bulk of academic literature consulted in the development of our three protagonists. Research vignettes are yet another inspiring method used for representing typical biographies, typical perceptions, or attitudes. They are commonly used in social psychology as stories told to make a theoretical point (Langer, 2016). These two inspirational methods employ various processes of categorization and typology-creation in order to construct illustrative or typical examples. Ankita, Sami, and Martyna "originate" primarily from the body of academic literature dealing with various forms of platform-mediated work (see note 1). For each protagonist, we (re) constructed and elaborated specific information which corresponds to commonly encountered realities among platform workers, including, for example, education, age, worker earnings, advantages and disadvantages of working via the respective platform.[6]

We stress yet again the illustrative rather than representative aim of using the protagonists as a storytelling tool and highlight that the points discussed below are by no means exhaustive in relation to the highly heterogeneous platform-mediated work.

Perceptible (in)visibility

Ankita, our protagonist using AMT, works whenever her household and family duties allow it; mostly at night and while the children are at school (Berg et al., 2018). Although her friends and family know about this extra job, it is only her husband who sees her working due to her unfixed working hours and her work location inside the family's home. Her work is essentially not noticed (and potentially less appreciated)[7] by the people around her. Being seen (and recognized) as a worker by the surrounding people is one aspect of perceptible (in)visibility. Platform-mediated work, however, adds another layer to the analysis of this type of (in)visibility, because it asks for a greater differentiation of the relevant audiences. While being partly visible as a worker to her family at least, Ankita is only represented by an alphanumeric ID number without a profile picture or any other personally curated page on AMT. She is the ultimate example of a bodiless worker who is neither perceived by peer workers, customers, employers, and the general public, nor is the work she does appreciated and seen. This bodilessness is only challenged by herself when she uses *Turkopticon*—a tool designed to improve the agency of *Turkers* (i.e. AMT workers), frequently used to connect with other workers (Irani and Silberman, 2013). In this setting, she becomes visible to other workers digitally and also potentially in the flesh, thus actively dealing with variations of (in)visibility.

This is different for both Martyna and Sami, who do gig-work and are perceivable as workers "on site." Martyna is visible to her clients whose children she cares for. The platform she uses does not change her job per se, but rather adds a dimension to how she finds jobs. In order to demonstrate a successful job history, which eventually leads to more recommendations and offers, her performance at work needs to be reflected authentically in her online profile on the platform. This links to the literature on online self-representation on social media platforms (Duffy and Chan, 2019) and individual (in)visibility discussed below. The same is true for Sami, who worked as an Uber driver.

Despite being visible to the clients, he is one among a large pool of taxi drivers in the French capital (Rosenblat et al., 2017). Due to the public unrest of taxi drivers and licensed chauffeurs in 2017 and 2018, he has been especially careful to remain as invisible as possible to the public eye when working. His car was unmarked, and he followed the platform's advice of taking measures to hide his services from the public, such as taking the phone holder off the windshield (Gruszka and Novy, 2018). Yet, while he stayed as invisible as possible in perceptible terms, he became indirectly visible due to the same public protests that drove him into hiding his service.

Along those lines, work cultures, working hours, workspaces—in short, the physical presence of platform workers—are the essence of perceptible (in)visibility.

Institutional (in)visibility

Taking past discussions of the topic into consideration, the shades of (in)visibility are influenced by the degree to which people are legally considered to be workers. Ankita is not legally registered as an AMT worker, because the platform only intermediates and connects (rather than employs) workers and employers. The legal relationship of the involved parties is based upon the Participation Agreement as "the only governing document" (Bergvall-Kåreborn and Howcroft, 2014: 217), reducing AMT's responsibilities toward the workers and the *Requesters* to a minimum. This includes not being responsible for paying minimum wages (Felstiner, 2011) and, from Ankita's perspective, a complete loss of property rights to her work, as *Requesters* can simply reject her work and consequently not pay her while still keeping and using it (Irani, 2015a). Similar to content moderators analyzed by Gillespie (2018a), this institutional invisibility is, therefore, mirrored in missing workers' rights and a lack of social security generally.

Sami's situation is akin to Ankita's, as Uber is aiming toward low degrees of institutional visibility, thereby disrupting service provision in a thus far highly regulated sector of urban transportation. This has been to some degree favorable to Sami, because he lacked the monetary and legal resources to formally register as a taxi driver. In his case, however, the ruling of the European Court of Justice of 2018 that classified Uber as a transportation rather than technological company, made him more aware of the state's and union's active efforts to increase institutional visibility and, in essence, workers' social security.

The different shades of institutional (in)visibility are, thus, connected to how particular platforms react to attempts of governing them and translate this into governance of their workers. Martyna, for instance, is using a platform that encourages her to "formalize employment relationships through technologies that increase visibility" (Ticona and Mateescu, 2018: 4384). The platform provides job matching infrastructure and encourages the clients to register the household service through, for example, built-in tax tools, contract templates, guidelines of the locally binding laws, or payment interfaces. Nevertheless, these guideposts are not enforced by the platforms, while as much as 75% of US households evade tax registration while hiring care workers (Haskins, 2010; Ticona and Mateescu, 2018). Treading carefully in this digital infrastructure, Martyna can keep her institutional visibility at bay, for example, by opting out of more formal verification tools such as a DMV records check. She refuses to be the one to carry the

burden of a formal working relationship, and she feels that these ambiguous practices of formalization lead to her disempowerment and structurally favor the platform and its clients (Van Doorn, 2020).

Aspects of institutional (in)visibility, thus, oscillate between questions of responsibility of the platform, workers' rights, and burdens that are connected to being (in)visible. While gig-work might be more likely to be regulated and made institutionally visible (to changing degrees) because it is easier to be perceived, the adoption of the framework emphasizes the complexity of platform-mediated work and institutional (in)visibility.

Individual (in)visibility

Last but not least, our protagonists stories capture the essence of individual (in)visibility, which is, arguably, the most intricate area of how platforms control and affect workers.

The bodilessness of *Turkers* like Ankita is furthered by a "de-personalized" individual (in)visibility. Upon registration, she has been "allocated an alphanumeric ID identifier" (Bergvall-Kåreborn and Howcroft, 2014: 218). Lacking a platform-provided space for a more detailed online profile, Ankita relies on her output in negotiating her market value as a worker. She can technically choose the tasks (or human intelligence tasks [HITs]) she wants to do, yet the *Requesters* set restrictions to their searches through automated filtering criteria, for example, geographical location, average task completion time, or her approval rate, that is, the number of jobs that *Requesters* actually accepted from her, which is connected to her ID number. This rate is among the core mechanisms through which Ankita's individual (in)visibility comes to the fore. She responds to as many HITs as possible, not only to make money (Delfanti, 2019) but also to make herself more visible to the *Requesters* via impeccable stats. She can further boost these by completing "skill-specific qualification exams offered on the platform" (Irani and Silberman, 2013: 613). Ankita is often frustrated with the lack of opportunity to contact *Requesters* or complain if she feels she has been treated unfairly. She is limited to emailing *Requesters*, who most often do not answer (Bergvall-Kåreborn and Howcroft, 2014; Irani and Silberman, 2013). Once pre-selected for a HIT, her sole source of more information on the *Requesters*, such as their rejection rate, has been outside of the platform (e.g. via *Turkopticon*) until 2019, when AMT began to disclose this information to the workers.

For Martyna, short of personal networks helpful in finding babysitting gigs, the platform interface enables an easy outreach to clients. A native to social media, Martyna manages her online profile perfectly—finding a fitting composed but playful picture, writing an easygoing yet professionally sounding text, stressing the au-pair experience, outlining her study goals, and showing how babysitting jobs enable her to achieve them. Verifying her profile through direct links to her well-curated social media accounts adds the ultimate touch to Martyna's individual (in)visibility. Martyna knows that the better the profile, the better her ratings; and the better the ratings, the better her positioning in the search results, the more recommendations, and the more sustained access to good clients. She sometimes feels that she works on her rating constantly—replying to over 75% of messages within 24 hours and activating mobile alerts adds a CarePro badge visible on her profile (Ticona and Mateescu, 2018). She also tried purchasing Care Credits, which guarantee a high position in the search results for a limited period of time. Similar to Ankita, Martyna functions in a one-direction rating scheme, leaving her complaints

about the clients essentially hidden. Yet, Martyna also profits from the opportunity to steer the degree of her individual (in)visibility through instruments, like the information given on her profile and the connected social media accounts.

During his time as an UberPop driver, Sami enjoyed the ease of the app, and quickly understood that his currency on the platform was mainly expressed via his rating. He kept a high acceptance rate, tried his best to show up in a clean car for each ride, and approached each rider politely and friendly, making sure to appear spotless in their eyes. Although riders were not able to choose drivers depending on their rating, Sami aimed for five-stars, since dropping under a certain rating threshold would mean an algorithmically managed temporary lock-down of his access to ride orders (Rosenblat and Stark, 2016). He followed blogs and YouTube channels of other drivers who shared tips on "driver app know-how" (Chan, 2019). Occasionally, Sami fell victim to discrimination and verbal aggression during the rides, a situation well-documented for many ride-hailing platform workers (Ge et al., 2016; Montalban et al., 2019; Van Doorn, 2017). Although he could rate riders, oftentimes he would restrain himself, unsure whether this action could negatively affect his rating.

These glimpses into the individual (in)visibility of the protagonist platform workers illustrate the overwhelming relevance of review and rating schemes and online profiles, in their daily lives. Almost all platforms require their users to create a profile representing themselves, and virtually all implement a rating/review scheme. As shown above, some platform workers are always bodiless and rely on their profiles to attract attention. Be they more narrative or reduced to the "bare stats" minimum, online profiles and ratings are instruments in a competition for visibility. Both profiles and rating schemes demand careful management and curation (Graham et al., 2017; Schmidt, 2016; Uski and Lampinen, 2016), which might include changing geographical locations to access more jobs (Graham et al., 2017), or connecting to social media platforms to demonstrate authenticity (Uski and Lampinen, 2016). Ratings and rankings are essential to increase individual visibility by means of reputation (Ticona and Mateescu, 2018) and provide a tool to stick out of the superfluous masses of platform workers (Van Doorn, 2017), and are often the best shot for a continued job supply.

Crucially, both online profiles and rating schemes function as instruments of governance and surveillance (Gorwa et al., 2020). They are, essentially, an outsourcing of quality management to customers, possibly mediating discrimination (Rosenblat et al., 2017). This is particularly interesting in the case of workers on AMT, heavily reliant on positive ratings of completed HITs to be considered by algorithmic management for new jobs (Bergvall-Kåreborn and Howcroft, 2014; Irani, 2015a). But also gig-working platforms, like Uber, require their drivers to have a certain score to remain employable, leading to attempts to behave in a way that ensures good feedback (Chan, 2019; Rosenblat and Stark, 2016). Ticona and Mateescu (2018) further point out that care workers deploy practices of visibility management such as social media curation, crafting biographical narratives, and using photographic and video self-presentation. Profiles are always linked to platform architecture and metrics, and, therefore run the risk of reinforcing existing power relations and various stereotypes. However, these features allow for autonomy and agency of the workers. They thus navigate through the platform in a skillful and informed manner, yet oftentimes based on scattered information.

Conclusion

By utilizing the lens of (in)visibility to analyze platform-mediated work particularities of platforms and the specific relations to those using them were highlighted. The three variations of (in)visibility we suggest here enable a more thorough look into the realities of platform workers, exposing *who* is recognized as a worker, *what* is recognized as work, and *how* these two questions are negotiated in a platform-mediated digital space.

Crucially, these variations are not clear-cut, and intermingle and overlap frequently. Sami's case, for instance, illustrates the interrelationship between perceptible and institutional (in)visibility. The actual seeing of demonstrating taxi drivers has been crucial in recognizing regulatory battles, as in the case of protests of taxi drivers and other chauffeur groups against Uber as a company (Gruszka and Novy, 2018). Yet, it is vital who perceives Sami as a worker. In this case, the "indirect" perceptible (in)visibility to the general public might be key to building up pressure that eventually challenges institutional (in)visibility. This links to literature on platform capitalism arguing that platforms need to reach a particular number of users in order to be financially sustainable (and/or attractive) and considered politically important (Srnicek, 2017). In a slightly different vein, individual (in)visibility might constitute the grounds for less institutional visibility. With the description of Ankita, we have shown that cloud work renders bodies completely invisible on the level of perceptible (in)visibility. One could therefore argue that the low perception of Ankita on sight and as an individual on the platform is mirrored in her lack of institutional visibility. Her and other *Turkers'* superfluid workforce is algorithmically managed and creates an impression of being constantly available at low cost (Flanagan, 2019; Van Doorn, 2017). This perceived non-existence and fungibility makes it arguably more likely for these workers to remain institutionally invisible. Furthermore, the story of Martyna demonstrates the connection between perceptible (in)visibility and individual (in)visibility understood as profile work. She needs to be recognized as the person she is curating herself to be on the platform, because she uses her profile to attract clients and establish an online identity through profile management. Most scholars have consistently argued that platform work hides workers behind profiles (Cherry, 2016). We conclude, however, that this is too simplistic. Extending Ticona and Mateescu's (2018) point that profiles also cater for visibility, we use Martyna to show how she actively uses the tools available to her via the profile (i.e. individual (in)visibility) to increase her agency and manage her perceptible (in)visibility as well.

The framework also highlights governance *by* platforms and the hierarchies of power established between platforms and their users, addressed within individual (in)visibility. Platform work literature lively discusses, for example, information asymmetries characteristic to platform rating schemes and procedures tilted toward the benefits of platforms and clients rather than workers. This further boosts the immunity of platforms, whose control over an employment situation is essentially hidden behind algorithmic tools (Van Doorn, 2017). With the three protagonists, we illustrate how various tools of governance by platforms are much more than the highly criticized, tailor-made, complex drivers of high-quality services delivered via the platform. They require skillful and strategic day-to-day curation and care from platform workers, often with limited information (Ticona and Mateescu, 2018; Van Doorn, 2017). Among our protagonists, Martyna is arguably

most competent in managing her individual (in)visibility. With a detailed online profile and a complex rating scheme, she is also the one who has the largest platform-provided space "aimed at maximizing [workers'] visibility as individuals to potential clients, displaying specific qualities of workers in standardized and comparable ways" (Ticona and Mateescu, 2018: 4394). This feature affects virtually all platform workers *beyond* the care sector as shown with particular ways of dealing with individual (in)visibility of Sami and Ankita. Platform workers essentially oscillate between self-regulation of their online worker personas and a heavily surveilled digital landscape (Shapiro, 2018; Wood et al., 2019). This aspect also links to questions of work recognition and reputation. While the (in)visibility of work in the "old economy" has been coupled with its devaluation (Budd, 2016; Cherry, 2016) aspects of (in)visibility and the reputation of platform-mediated work gain even more importance in the online sphere. It could also be argued that they depend heavily on the degree of (in)visibility in its three forms and different factors (e.g. legal or cultural factors) influencing those (Hatton, 2017).

Thus, the above process takes many different forms and relates to heterogeneous experiences of platform workers, the analyses thereof being still rather under-conceptualized and scattered (Cherry, 2016; Irani, 2015b; Ticona and Mateescu, 2018). The framework suggested operationalizes the concept of (in)visibility in the area of platform work and provides an inherently comparative meta-analysis tool for understanding the mechanism of rendering platform workers obscure. With the three protagonists, we show that the lens of (in)visibility can function as the common denominator for the multifarious experiences of platform workers. (In)visibility of platform work opens a joint space for the core issues discussed in the literature—from regulation and uncertainties of platform employment, through exacerbating vulnerabilities of workers, surveillance, and self-governance. This joint space also allows for bringing the dominant "Uberization" narrative and the marginalized "platforms-in-informal-sectors" narrative closer within a three-pronged (in)visibility framework.

As a closing exercise, let us imagine again the platform as a stage, and the workers—Ankita, Martyna, and Sami—on it. Who is in the front, who is in the back? Who do we see in full light, who is dimmed in the shadow, who is completely obscured? How does our view change depending on our position in the audience? How is this "piece" directed and orchestrated, who or what is the light operator? This metaphorical take on the topic explored in this article reflects its complexity and intricacy. With the framework for (in)visibility of platform work, we aspire to both extend and systematize the vocabulary needed for an informed and comprehensive analysis of the ongoing digital transformation of work.

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Notes

1. The following literature has been used for protagonists' development: **Ankita** (Berg et al., 2018; Bergvall-Kåreborn and Howcroft, 2014; Cherry, 2016; Delfanti, 2019; Felstiner, 2011; Graham et al., 2017; Irani, 2015a, 2015b; Irani and Silberman, 2013; Kässi and Lehdonvirta, 2018; Lehdonvirta, 2018; Poster et al., 2016; Wood et al., 2018; Wood et al., 2019). **Sami** (Chan, 2019; Ge et al., 2016; Gruszka and Novy, 2018; Montalban et al., 2019; Rosenblat et al., 2017; Rosenblat and Stark, 2016; Shapiro, 2018; Srnicek, 2017; Van Doorn, 2017). **Martyna** (Flanagan, 2019; Graham et al., 2017; Haskins, 2010; Ticona and Mateescu, 2018; Van Doorn, 2017, 2020).
2. For more details, see (Schmidt, 2016: 6).
3. For details of the framework, see Hatton (2017: 339)
4. This question has been gaining increasing attention in the EU: see Daugareilh et al. (2019) for a comparative perspective on platform workers in the face of social law; see Eurofound (2018) for a comparison of employment and working conditions of platform work in the EU; see Garben (2019) for a discussion of regulatory challenges of occupational safety and health in platform-mediated work.Among the EU Member States, France was the first to regulate platform workers specifically via the El Khomri Act of 2016, putting the responsibility for social security of platform workers on the platforms. Platform workers are placed on equal footing with self-employed workers and explicitly granted collective rights. In Denmark, the governmental efforts to regulate platform-mediated work in the cleaning sector lead to a collective agreement signed between the United Federation of Danish Workers and a cleaning-mediating platform, granting platform workers the same working conditions (e.g. with regard to taxation) as to other workers in the sector.
5. Book a Tiger—a platform facilitating domestic and commercial cleaning is an example of a platform which fulfills its promise of improving the formality of employment for cleaners.
6. We elaborated the specificities of the protagonists along a set of criteria and relevant areas, including: (1) personal background, (2) age, (3) education, (4) tenure on the platform, (5) reasons for working on a platform, (6) worker earnings, (7) platform business model, (8) platform infrastructure and functionalities, (9) worker experience with the platform infrastructure, (10) advantages and disadvantages of working via the specific platform.
7. See Budd (2016) and Duffy and Schwartz (2018) for a discussion on the devaluation of invisible labor.

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