Volume 34 Number 4 2019

Journal of Managerial Psychology

Number 4

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ISBN 978-1-83909-235-0

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Expanding perspectives on gig work and gig workers

The term “gig economy” was coined during the height of the great recession as a way to describe the increasing numbers of people, including the well-educated, who held multiple part-time jobs, were employed by temporary agencies or freelanced (Brown, 2009). These sorts of contingent work arrangements have long been studied by organizational researchers (Cappelli and Keller, 2013; Connelly and Gallagher, 2004). In the past several years, however, operational definitions of gig work have begun to converge on a more novel type of contingent labor: electronically mediated employment arrangements in which individuals find short-term tasks or projects via websites or mobile apps that connect them to clients and process payment. A variety of labor platforms now provide individuals the ability to choose when and whether to work, either remotely or in-person.

In this special issue we examine this form of gig labor: people who find work via digital labor platforms such as Upwork, Uber, Amazon’s Mechanical Turk (MTurk) and TaskRabbit. These and other labor platforms vary substantially in terms of their target markets and configurations, but all serve as intermediaries between consumers/clients and individuals who provide services (note this excludes platforms where tangible goods are sold or rented, such as Etsy and Airbnb). Some people work full-time hours via one of these platforms for years while others use them as an occasional source of extra income. Technically speaking, they are considered self-employed even though the design and policies of many platforms can lead some workers to perceive themselves as employees of the platform (Smith, 2016). While most of the research to date on this phenomenon has been conducted by scholars in information systems, strategic management, sociology and economics (e.g. Chen and Horton, 2016; Friedman, 2014; Lehdonvirta, 2018; Lin et al., 2016; Pallais, 2014; Stewart and Stanford, 2017), electronically mediated gig employment poses provocative theoretical as well as important practical questions for organizational psychology and human resource management (HRM) (Aguinis and Lawal, 2013; Ashford et al., 2018; Kuhn, 2016). In this introductory editorial, we present an overview of gig economy work and highlight key issues from the perspective of managerial psychology; we also situate the papers included in the Special Issue relative to this overarching framework to help readers understand underlying distinctions.

The nature and size of the gig economy

In the broader public discourse, gig work is often synonymous with the apps that provide on-demand in-person consumer services, such as ride hailing, food delivery, and home repair and errands. Many of these platforms determine compensation rates and actively manage worker behavior via algorithmic management techniques (Rosenblat, 2018), while still maintaining that the workers are independent partner-providers or even entrepreneurs. Other platforms allow workers some leeway to set their own rates or to offer differentiated services (Kuhn and Maleki, 2017).

For work that can be performed remotely, businesses ranging from the very small to the Fortune 500 now use online labor platforms to find and pay gig workers from around the world for tasks that previously would have been done by employees or contracted to traditional outsourcing firms and staffing agencies. The first online freelancing platform, Elance, was launched in 1999, Odesk was started in 2003 and the firm resulting from their merger, Upwork, reports over 12m registered freelancers as of 2018. These and similar freelance platforms originally operated as virtual open marketplaces where coders, graphic
designers and other skilled professionals could compete for project-based work. Some platforms now vet freelance talent, advertising curated talent pools in professions such as editing, law and accounting (Reader, 2017).

Online labor platforms where a largely undifferentiated crowd of anonymous workers perform microtasks are more often described as piecework (Lehdonvirta, 2019) or crowdwork platforms rather than as freelance markets. The most well-known of these, MTurk, was launched in 2005 to provide business clients a cheap way to hire remote workers for “human intelligence tasks” such as photo tagging, and has also proven to be a popular source of data for researchers in the social sciences (Buhrmester et al., 2018). MTurk is perhaps the most frequently researched gig economy platform, with numerous studies that have tested its efficiency as a labor market (e.g. Pallais, 2014) and the design of analytical quality management tools for clients of the site (e.g. Ipeirotis et al., 2010).

Because of their relatively low rates of pay and the repetitive nature of the tasks offered, MTurk and its competitors have been characterized as “digital sweatshops” (Cushing, 2013). But over the past few years MTurk has begun to make distinctions among workers, certifying some as “prime” with an associated higher commission fee. Some Mturk workers have reported they find tasks (such as training machine learning algorithms) to be complex and intellectually stimulating (see Katz, 2017). Conversely, some established freelance platforms like Upwork now offer clients virtual monitoring tools to facilitate paying workers on an hourly basis, sometimes for relatively mundane tasks, as well as services to help recruit and manage workers. Thus the distinctions between freelance and piecework labor platforms are becoming less marked. In sum, worker selection and management practices, as well as the nature of the work performed, can vary substantially within an online labor platform as well as across different platforms.

While the rise of gig labor platforms has attracted significant attention, debate continues as to their impact on the labor market and role in the broader economy, with some recent media reports characterizing the gig economy as “overblown” (Morath, 2018). Attempts to calculate the size of the gig economy, however, have been complicated by the lack of a universally accepted definition of gig work and by methodological challenges. Researchers still sometimes broadly define gig work as all non-standard employment and sometimes more narrowly (as we do) as flexible work mediated by online labor platforms. In the USA, household survey data have shown little evidence of recent growth in self-employment that should be associated with a surging gig-based economy, but administrative data do indicate such growth (Abraham et al., 2018).

It is increasingly clear that traditional household survey questions and techniques are inadequate to the task of assessing gig work (Abraham et al., 2018; Jarmin, 2019). For example, a survey that asks only about the respondent’s main job over the past week will necessarily fail to capture much of the gig economy, because many people do gig work as a side hustle to supplement a waged job or perform gig-based work only sporadically (Hall and Krueger, 2018). Some people work full-time hours via multiple labor platforms. In 2017 the US Bureau of Labor Statistics (2018) added new survey questions specifically targeted toward electronically mediated gig work, but admitted the questions “did not work as intended.” Writing questions so that respondents would clearly identify when they had used apps or websites to access gig work, rather than to find a regular job or as a consumer, was a significant challenge, particularly since platforms names such as Uber were intentionally not used as examples (US Bureau of Labor Statistics, 2018). Abraham et al. (2018) also find that traditional survey methods likely miscoded many independent workers as employees.

In general, economists studying the USA workforce find that structural changes over the past few years have boosted platform-mediated gig work, especially in transportation services, even if non-standard employment overall has not shown continued growth (Abraham et al., 2018; Bracha and Burke, 2018). An annual US survey of skilled professionals who work independently finds rising percentages using or planning to
use online platforms to find clients, even though offline sources still predominate (MBO Partners, 2018). Data on gig economy employment in other countries are limited, but available reports also indicate small but significant proportions. Surveys in the UK (Balaram, 2017) and Australia (Stewart and Stanford, 2017) estimate between one and three percent of the adult population to have earned money from gig labor platforms. At the global level, Kässi and Lehdonvirta (2018) calculate the worldwide demand for remote online-based gig work to be rising by roughly twenty percent a year.

Challenges and controversies

Public policy experts, politicians and the general public have all evinced concerns over the gig economy’s implications for individual and societal well-being (Friedman, 2014; Smith, 2016; Warner, 2015). Because labor platforms are not officially employers of gig workers, they do not provide benefits as such as paid time off or health and workers compensation insurance (De Stefano, 2015). Workers can easily be deactivated from a platform without the risk of wrongful termination claims, and there is often little recourse for a worker who feels he or she has been treated unfairly by either a platform or a client. Many American employees in both standard and contingent arrangements also lack benefits and have at-will status, but they still enjoy protection under major employment legislation governing compensation and workplace safety that (nominally) self-employed gig workers do not. And in contrast to traditional independent contractors, gig workers often lack power to negotiate their contracts or even, on many platforms, their compensation rates.

Classifying gig workers as independent contractors saves platforms considerable labor costs but shifts risk to individuals; their legal classification in many developed countries has accordingly been contentious for the past several years. In April 2019 the USA Department of Labor issued an opinion letter signaling wide leeway to continue classifying platform workers as independent contractors, in marked contrast to earlier guidance issued under the previous presidential administration. In the same month the European Union moved in the opposite direction, passing laws granting gig workers legal protections, including the right to refuse assignments outside of normal working hours and compensation for canceled work (Boland, 2019).

From the perspective of many management scholars, the precarious nature of gig work not only contravenes established organizational theory that views a stable workforce and strong culture as sources of competitive advantage, but also threatens worker satisfaction and well-being. According to Pfeffer (2015), “people are better off, covered by employment protections, offered benefits, and, most importantly, having both greater income security and the benefit of being affiliated with an organization and fellow employees who can provide social support.”

Other observers, however, take a more optimistic view of gig work, arguing that increased flexibility benefits workers as well as for firms. Based on their study of Uber drivers, Hall and Krueger (2018) argued that the low barriers to entry and considerable autonomy afforded by gig work offer opportunities for income smoothing and supplemental wages to meet immediate needs, although their methodology and conclusions have been criticized (Berg and Johnston, 2019). The same technological advances that fostered the rise of labor platforms can also provide workers opportunities to connect with one another and derive social support from their peers, even though those workers are also their direct competitors (Kuhn and Maleki, 2017).

Moreover, gig workers located in emerging-economy countries may reap significant financial benefits by being able to access clients from wealthy countries. Online labor platforms for remote work introduce a pool of comparatively high-wage jobs that would otherwise not be available to them. For projects requiring specialized skills, clients demonstrate a bias for selecting freelance gig workers from the developed world, but standardizing the worker history and quality information displayed on platforms disproportionately benefits those located in emerging economies, counteracting this bias.
Piecework labor platforms may also benefit workers in emerging economies relative to traditional outsourcing contract firms (Lehdonvirta et al., 2019), although the algorithmic management techniques that offer these workers more flexibility and autonomy can also lead to social isolation, overwork and exhaustion (Wood et al., 2019).

While all forms of gig platform-based work share some commonalities, such as reputation feedback mechanisms, the degree of variation across platforms and across workers necessitates care in translating behavioral theories of work and workers to the “gig economy.” Ashford et al. (2018) integrate a number of work psychology constructs to propose a model describing factors likely to shape individual thriving in the gig economy; they focus on skilled workers who choose to work full-time in this manner and who have a reasonable degree of control over their work, however, which does not necessarily describe the majority of gig workers.

Papers in the special issue
The papers in this special issue focus on different aspects of gig work to help advance our knowledge of this employment arrangement. They represent a broad range of approaches and research questions that, as a set, illuminate some of the complexities of the gig economy and its implications for understanding the nature of work in the twenty-first century. They include conceptual pieces and empirical papers using quantitative and qualitative methodologies.

Jabagi, Croteau, Audebrand and Marsan present a conceptual paper solidly grounded in work motivation theory that highlights the role of technology in gig work. While previous research has focused on the negative effects of algorithmic management for gig workers (e.g. Rosenblat, 2018), this paper develops an argument for the role of enterprise social media as a motivational tool, proposing a bridge between information technology and HRM functions that could benefit both workers and platform firms. This paper also illustrates how examination of gig work can advance research paradigms in well-established psychological theories.

In the second conceptual piece of the special issue, Meijerink and Keegan develop a “big picture” theoretical framework of HRM in the gig economy by examining labor platforms as ecosystems. While previous studies of consulting firms and staffing agencies have addressed triadic work relationships, this paper considers the multilateral exchanges among gig workers, platform firms and requesters/clients from a novel perspective appropriate to the distinct challenges of the gig economy. They argue that these actors are active participants as well as recipients of classic HRM functions such as training and performance management, and their analysis provides useful theoretical guidance for future HRM research within this context.

Duhaime and Woessner provide an in-depth empirical examination of one source of HRM-related tension among gig workers, clients and platforms: tipping for on-demand personal services such as transportation. Through a series of experiments and studies, they show that perceptions of the appropriateness of tipping are affected by whether workers are “independent” or employees. Their results illustrate the importance of considering changing social norms in this new work context, as well as how these norms are shaped by a platform’s design choices.

Bellesia, Mattarelli, Bertolotti and Sobrero’s paper presents an exploratory study of IT developers, graphic designers and translators located in many different countries who find remote work via one of the largest freelance labor platforms. They rely on interviews as well as other rich data sources to generate thought-provoking insights into the interplay between platform design and work identity construction. Intriguingly, they show how this process can foster a more entrepreneurial identity, and thereby highlight why interdisciplinary perspectives may be especially fruitful when studying the gig economy. This work also offers practical implications for how freelance labor platforms can better accommodate the diversity among freelancers.
Ravenelle’s paper also uses a qualitative approach, but compares and contrasts the experiences of workers on two different platforms that both offer location-based personal services. Her paper shows how underlying assumptions about workers, as enacted in the design and implementation of each platform’s management practices, affect gig workers.

MTurk is the most widely studied gig economy platform, and two papers in this issue utilize surveys of MTurk workers. But they ask distinctly different questions than those addressed in previous research. Keith, Harms, and Tay survey over one thousand Turkers and compare those who rely on this work for primary income to those who do not, and associated differences in worker attitudes and behavior. They also show that MTurk workers who view this work as a “job” are more likely to behave accordingly than those who do not. Bucher, Fieseler and Lutz surveyed MTurk Prime workers in two waves a year apart in order to develop a measure that assesses the extent to which these digital workers perceive that their work matters, and the implications of different dimensions of mattering for work engagement. They also demonstrate why platforms and their clients should care about crowdworkers’ perceptions.

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Further reading

Gig-workers’ motivation: thinking beyond carrots and sticks

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Abstract

Purpose – High-quality employee motivation can contribute to an organization’s long-term success by supporting employees’ well-being and performance. Nevertheless, there is a paucity of research concerning how organizations motivate workers in non-traditional work contexts. In the algocratic context of the gig-economy, the purpose of this paper is to understand the role that technology can play in motivating workers.

Design/methodology/approach – Drawing on the self-determination theory, job-characteristic theory and enterprise social media research, this conceptual paper explores how the architecture of the digital labor platforms underlying the gig-economy (and the characteristics of jobs mediated through these IT artifacts) can impact key antecedents of self-motivation.

Findings – Combining theory and empirical evidence, this paper develops a mid-range theory demonstrating how organizations can support the self-motivation of gig-workers through the thoughtful design of their digital labor platforms and the integration of two social media tools (namely, social networking and social badging).

Research limitations/implications – This paper answers calls for psychologically-based research exploring the consequences of gig-work as well as research studying the impacts of advanced technologies in interaction with work contexts on motivation. In theorizing around a large set of social-contextual variables operating at different levels of analysis, this paper demonstrates that individual-level motivation can be influenced by both task-based and organizational-level factors, in addition to individual-level factors.

Originality/value – The proposed theory provides novel insight into how gig-organizations can leverage widely accessible social media technology to motivate platform workers in the absence of human supervision and support. Theoretical and practical implications are discussed.

Keywords Motivation, Job characteristics, Human resource management, Self-determination, Virtual work, Temporary workers, Gig-work, Gig-economy

Paper type Conceptual paper

1. Introduction

Given evidence that high-quality employee motivation can contribute to an organization’s long-term success by supporting employees’ well-being and performance, several streams of research and theories have sought to enhance our understanding of employee motivation (Deci et al., 2017). While motivation is a relatively mature field of study, in recent years, the application of new information technologies (IT) to organizational design has led to a unique milieu that challenges our understanding of how organizations and managers motivate employees: the gig-economy.

The gig-economy is an emerging labor market wherein organizations engage independent workers for short-term contracts (“gigs”) to create virtual jobs, often by connecting workers...
to customers via a platform-enabled digital marketplace (Jabagi et al., 2018; Spreitzer et al., 2017). The technological foundations underlying these digital marketplaces are often known as digital labor platforms. Insofar as gig-organizations imply detached and distributed workers and entities, the gig-economy embodies “the most radical reinvention of work since the rise of industrialization – a massive shift toward self-employment and self-management in open networks enabled by information technology” (Resch, 2015). Yet, in this unique context, where gig-workers lack an official human supervisor, the processes by which organizations can support gig-workers’ self-motivation are unknown and under-theorized (Kuhn and Maleki, 2017; Spreitzer et al., 2017).

Drawing on the self-determination theory (SDT) (Deci and Ryan, 2000) and job-design research (e.g. Hackman and Oldham, 1980), this conceptual paper explores how the architecture of the digital labor platforms underlying the gig-economy and the characteristics of jobs mediated through these IT artifacts can impact key antecedents of motivation. In doing so, it advances the notion that the operational choices embodied in a gig-organization’s digital labor platform will act as critical determining factors of a worker’s motivation. Furthermore, this paper proposes the integration of enterprise social media (ESM) functionality within these platforms as a means to support and drive workers’ motivation. Two social media tools are specifically considered: social networking and social badging.

The remainder of this paper is structured accordingly. First, the research context (including key definitions and scope) is introduced, as well as an overview of the challenges in managing work on digital labor platforms. Next, the foundational theories of SDT and job-design research are presented and contextualized within the gig-economy; this discussion is followed by the theoretical development. The paper concludes with a review of its limitations and contributions, and a commentary on the need for increased scholarly inquiry into the gig-economy.

2. The gig-economy and digital labor platforms

2.1 Boundary conditions

Hailed as the “new economy,” the gig-economy is expected to account for more than 40 percent of the workforce in the USA by 2020 (Gillespie, 2017). Despite growing scholarly interest over recent years, the body of knowledge on the gig-economy remains characterized by definitional ambiguity and a variety of discipline-specific interpretations (Kilhoffer et al., 2017). To support theory-building efforts, the scope of this paper is limited to digital labor platforms in the gig-economy that satisfy the following conditions as outlined by Codagnone et al. (2016): function as digital marketplaces for alternative work; where the various services offered are produced primarily using the labor factor (e.g. the produced services are labor-intensive) rather than selling/renting physical goods/assets; where the produced services are exchanged for money; where the matching is digitally-mediated and administered, yet the fulfillment of the service can be virtual or physical; and where the distribution of labor and money is determined by a group of buyers and sellers operating within a price system.

Given these conditions, various platforms do not fall within the boundaries of the theory presented in this paper. For example, while the theory includes platforms like Uber and TaskRabbit wherein a labor-intensive service is the primary input, it excludes platforms such as Airbnb wherein the services delivered imply a decisive physical capital or goods component. Moreover, considering the limited understanding of the vast array of existing digital labor platforms, this paper adopts a further boundary condition to facilitate theory-building efforts. Specifically, while the gig-economy has been conceptualized by some to include crowd-sourced microwork (e.g. cWork), the theory presented in this paper is limited to “gigs” where the services/tasks are bound to a specific person.
Considering the aforementioned conditions, the digital labor platforms considered in this paper can be classified across two key dimensions of work: level of skill (low-skilled vs high-skilled) and how the services are fulfilled (physically, local vs virtually, global). Figure 1 presents this conceptualization which is based on De Groen et al. (2016), and expanded here to include various well-known digital labor platforms. It is important to note that skill refers to the skill performed concerning the service traded, and not the actual skills of the worker fulfilling the task.

### 2.2 Managing platform workers through effective platform design

Digital labor marketplaces involve at least three parties: buyers (platform clients), suppliers (independent workers) and the platform provider which serves as an intermediary that coordinates buyers and suppliers. In its role as intermediary, the platform provider is the only one of the three parties with full access to and control over the data, processes and rules of the platform (Schmidt, 2017). This is important to recognize because a digital platform’s architecture (mechanisms, processes, functionalities and rules) will determine a host of its properties, including: client–worker interactions; information and power asymmetries; platform workers’ autonomy, control and dependence; operational capacity and efficiency; and privacy and data security (Kuhn and Maleki, 2017; Schmidt, 2017). As all of these properties play a role in whether workers and clients will choose and continue to utilize a platform, managing a digital platform is a complex endeavor that is deeply rooted in the architectural design of the platform itself.

The long-term viability of a digital labor platform business model depends heavily on whether the gig-organization can address two key human resource management (HRM) challenges. First, gig-organizations are vulnerable given the relative ease with which workers can leave the platform/organization. A digital labor platform that cannot attract and retain a sufficient number of workers will not be attractive to clients, which threatens the platform’s long-term viability (Jabagi et al., 2018). The second challenge facing gig-organizations is the supervision of workers. Through the use of an app or website, the platform provider offers an entirely virtual service where, by virtue of definition, platform gig-workers do not have a formal human supervisor (Kuhn and Maleki, 2017; Schmidt, 2017). In traditional organizations, supervisors are not only tasked with ensuring high-quality performance, they are also meant to motivate workers and to

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<tr>
<th>Physical (Local)</th>
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<tr>
<td>Uber, Lyft, Deliveroo (Transportation and delivery services)</td>
<td>Fancyhands (Virtual assistant, Clerical and data entry)</td>
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<tr>
<td>Taskrabbit, Helpling (Household and personal services)</td>
<td>MTurk, Clickworker (Microwork)</td>
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<td>Medicast (MD housecalls), GlamSquad, TakeLessons (Specialized services)</td>
<td>Freelancer.com, Upwork, Labmate (Creative and/or technical freelance work)</td>
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provide social support. Yet when work is conducted by independent workers outside of traditional centralized offices and conventional work hours, organizations cannot rely on managerial supervision as a means of coordinating, controlling and motivating workers. Instead, gig-organizations (like other virtual organizations) must rely on gig-workers to self-organize and self-motivate to advance task performance and organizational goals (Wiesenfeld et al., 2001).

Given that self-motivation is positively associated with organizational commitment, employee retention, work effort, persistence and performance, as well as job involvement and organizational citizenship behavior (Deci et al., 2017; Van den Broeck et al., 2010), organizations that can propel self-motivation within platform workers may directly address the issues of retention and supervision, thereby promoting the long-term sustainability of the platform. Moreover, given the role that a digital platform’s architecture plays in a platform worker’s experience, gig-organizations have the advantage of leveraging the design of these IT artifacts to support workers’ motivation. Considering the importance of self-motivation, the next section introduces the SDT (a foundational theory of motivation) and its proposed application within the context of digital labor platforms.

3. SDT and digital labor platforms

The SDT is a broad framework for the study of human motivation and personality. According to the SDT, motivation can take two primary forms, both of which function differently: intrinsic motivation (i.e. doing something for its own sake – because it is interesting and a source of spontaneous satisfaction) and extrinsic motivation (i.e. doing something for instrumental reasons, such as tangible rewards and recognition) (Gagné and Deci, 2005). Although early interpretations of the SDT positioned intrinsic and extrinsic motivations as dichotomous and mutually exclusive, subsequent revisions to the theory have re-conceptualized them as lying on a continuum. In this view, individuals can simultaneously experience both extrinsic and intrinsic motivation in doing their work (Gagné and Deci, 2005), a phenomenon that is apparent in the gig-economy as well. Specifically, while gig-workers are known to participate in the gig-economy for financial reasons (extrinsic motivation), gig-workers have also been cited as being intrinsically motivated by particular features of the job. For instance, North American Uber and Lyft drivers were found to participate on these platforms for the autonomy it affords one to control their own schedule and the opportunity it provides for social connection (Rosenblat and Hwang, 2016). Similarly, high-skill, on-demand workers cited the flexibility and convenience of such work, as well as opportunities for social interaction, and the validation such work provided of their knowledge and as an expert within their industry (Rockmann and Ballinger, 2017).

While both extrinsic and intrinsic motivation can promote performance gains, leveraging intrinsic motivation and motivators has certain advantages over extrinsic motivation. First, intrinsic motivation has been connected with improved psychological well-being, increases in the extent and quality of effort exertion toward a given task, as well as enhanced creativity and learning outcomes (Gagné and Deci, 2005; Hon, 2012). Second, extrinsic motivators such as money neither alter the attitudes that underlie behaviors, nor can they create an enduring commitment to learning or a set of values. Rather, extrinsic motivators only temporarily change what individuals do. The use of extrinsic rewards within the workplace has not only been shown to reduce autonomy, it can also prompt employees to act opportunistically and/or to neglect aspects of their jobs that are not incentivized but that are nonetheless important to organizational functioning (e.g. knowledge sharing and organizational citizenship behaviors) (Deci et al., 2017). Thus, in the context of the self-managed gig-economy, engendering intrinsic motivation within gig-workers should be advantageous for platform firms. As such, delineating the factors that support intrinsic motivation in this unique context is of central importance.
According to the SDT, three universal psychological needs are said to motivate the self to initiate behavior, namely, the needs for autonomy, competence and relatedness (Deci and Ryan, 2000). The need for autonomy refers to an individual’s inherent desire to experience a sense of choice, volition, and psychological freedom when engaging in an activity. The need for competence concerns an individual’s innate need to feel skilled and efficacious with respect to a goal, function, or task in the social or physical world. Finally, the need for relatedness (or sense of belonging) refers to the desire to be meaningfully connected to others, to feel close to, cared for and understood by others. According to the SDT, the satisfaction of these needs promotes intrinsic motivation and psychological well-being (Deci and Ryan, 2000).

Through two empirical studies, Rockmann and Ballinger (2017) recently found that to the extent that on-demand work fulfills one’s innate psychological needs, on-demand workers will develop intrinsic motivation. While this study supports the possibility of intrinsic motivation in the context of digitally-mediated platform work, the context of their research was limited to high-skill, professional services where workers fulfilled services by telephone and had relatively high-control/autonomy in regards to their work. As demonstrated in Figure 1, this research context was restricted to digital labor platforms in the lower right quadrant (high-skilled, virtual services). Yet SDT research has found that levels of intrinsic motivation differ across types of workers (e.g. knowledge-workers vs regular workers) and the nature of the work itself with respect to complexity or the extent to which it is interesting (Gagné and Deci, 2005). Given that nearly 75 percent of platforms focus on low- to medium-skilled work (Fabo et al., 2017) and that platform workers’ autonomy varies greatly across platforms (Kuhn and Maleki, 2017), Rockmann and Ballinger’s findings may lack certain generalizability.

Drawing on various streams of literature including SDT, job-design research and ESM research (e.g. Archer-Brown and Kietzmann, 2018; Treem and Leonardi, 2012), the following theoretical development seeks to extend Rockmann and Ballinger’s (2017) findings in two ways. First, it aims to create a more generalizable model of motivation that can be applied across different platforms in the gig-economy by considering the impact of different types of platform services and taking a more nuanced view of the nature of autonomy within these platforms. Second, by exploring the impact of a digital labor platform’s architecture and the related job characteristics embodied within these IT artifacts on workers’ psychological needs, it provides a framework for platform organizations to understand the mechanisms underlying platform workers’ motivation. Moreover, by proposing the integration of social media within these digital labor platforms (as a means to support workers’ psychological need fulfillment), the proposed theory demonstrates how gig-organizations can motivate platform workers through the thoughtful design of their digital labor platforms.

4. Toward a theory of motivation in gig-workers

It is now time to further the theoretical development concerning gig-workers’ motivation, based on the SDT, job-design research and ESM research. In its application within the workplace, the SDT considers the effect of various “environmental factors (e.g. job design, pay contingencies, managerial styles) on workers’ motivations and experiences [to be] largely mediated” by the fulfillment or frustration of these basic needs (Deci et al., 2017, p. 22). Specifically, work climates that enable the satisfaction of these universal needs support intrinsic motivation, whereas conditions that thwart the satisfaction of these psychological needs undermine such motivation (Deci et al., 2017). Given this mediation effect, workplace contexts have commonly been described and assessed in terms of whether they support or thwart basic needs.

During the last decade, the SDT research has been connected with job-design research. One example is the job-characteristic theory (Hackman and Oldham, 1980), a theory of
motivation that focuses on the impact of five key job characteristics (skill variety, task identity, task significance, feedback and autonomy) on behavioral and attitudinal employee outcomes. Such research has shown that specific job characteristics at both the organizational level and task level can promote needs satisfaction and autonomous motivation. When taken together, these two theories indicate that organizations must provide work environments and jobs that are aligned with employees' needs as a means to attract and retain employees, as well as to promote organizational performance by enhancing employee motivation and well-being within the workplace (Deci et al., 2017; Gagné and Deci, 2005; Humphrey et al., 2007).

Figure 2 shows the core SDT elements considered in this paper and conceptualized within the context of the gig-economy.

In the context of the gig-economy, where platform workers lack an official human supervisor, this paper proposes that the digital platform itself can act as a critical determining factor of basic needs support. Specifically, the IT artifact itself can form and convey the workplace context, including the structural and social aspects of the environment, wherein the platform’s architecture can either support or thwart workers’ basic needs of competence, autonomy and relatedness. For example, many digital labor platforms mediating virtual professional services are characterized by high levels of surveillance. Upwork, for instance, uses Work Diary, an electronic-monitoring software that allows clients to “virtually look over-the-shoulders” of gig-workers by taking snapshots of their screens and tracking keystrokes. Although the integration of such software is an operational decision meant to reduce client risk, from a worker’s perspective, surveillance software is likely to threaten their need for autonomy and negatively impact their intrinsic motivation (Kuhn and Maleki, 2017).

Similarly, this logic can be extended to job characteristics related to internal work motivation and embodied in the design of the platform. For example, in the case of real-time location-based services such as Uber (a low-skill/undifferentiated service that is fulfilled physically and where timing matters), the algorithmic matching of drivers and riders enabled by dynamic pricing is necessary to ensure efficiency. In this context, although drivers have certain autonomy in work-scheduling (e.g. they can decide when and where to turn on/off the app), Uber drivers are penalized for low acceptance and/or cancellation rates, which can effectively reduce a driver’s perceived autonomy (Kuhn and Maleki, 2017). Likewise, the platform’s algorithmic matching-mechanism does not allow drivers to set and/or negotiate their own prices, as this would be inefficient and lead to longer wait times for clients. Consequently, the platform also curtails a worker’s decision-making autonomy with respect to the terms and processes of their service. As shall be discussed, job characteristics that are particularly salient to the gig-context include: task and skill variety; job complexity,
specialization; autonomy in work-scheduling, work-methods and decision-making; and social support and interaction outside the organization.

Taking the view that the architecture of digital labor platforms and the characteristics of jobs mediated through these IT artifacts can impact intrinsic motivation via the satisfaction of workers’ basic needs, Sections 4.1 and 4.2 seek to establish the link between various aspects of a platform’s architecture and workers’ needs support. Following this, Section 4.3 proposes the integration of ESM within these platforms in order to support basic psychological need fulfillment across various types of platforms.

4.1 Intrinsic motivation, needs support and platform work
Intrinsic motivation is a specific form of autonomous motivation wherein individuals engage in an activity with a full sense of willingness, volition and choice; it embodies the most self-determined behavior regulation by inherent interest, enjoyment and satisfaction. According to Deci et al. (2017), employees can be “intrinsically motivated for at least parts of their jobs, if not for all aspects of them” (p. 21). As previously mentioned, the satisfaction of an individual’s basic psychological needs promotes autonomous motivation, intrinsic motivation and psychological well-being. Although the link between need satisfaction and intrinsic motivation are among the most well-established links in SDT research (Deci et al., 2017; Van den Broeck et al., 2010), these phenomena remain underexplored in the novel context of the gig-economy and platform work (Rockmann and Ballinger, 2017). Therefore, while it is expected that the satisfaction of platform workers’ needs will be positively related to intrinsic motivation, the relationship requires further testing in the context of platform work. Therefore, it is proposed that:

P1. The fulfillment of a platform worker’s needs for autonomy, competence and relatedness through their work will be positively related to intrinsic work motivation.

Moreover, since work contexts that enable the satisfaction of one’s psychological needs support intrinsic motivation, the SDT suggests that platforms supporting basic needs will relate positively to intrinsic work motivation through a platform worker’s needs satisfaction (Deci et al., 2017). Given that a platform’s architecture will form the basis of a platform’s work context, it is further proposed that:

P2. Platform architectures that support basic needs will relate positively to intrinsic work motivation through a platform worker’s needs satisfaction.

Considering that when work contexts promote self-determination, workers will trust the context and be more active in satisfying their own needs (Deci et al., 2017), it is important to understand how, and to what extent, a digital platform can support workers’ basic needs.

4.1.1 Autonomy support. Within the research focusing on workplace factors, managerial style, also referred to as interpersonal context, has been shown to play a key role in employees’ perception and fulfillment of basic need support (Deci et al., 2017). Numerous studies have shown that autonomy-supportive work contexts and managerial methods will lead to greater satisfaction across all three psychological needs and intrinsic motivation (Baard et al., 2004; Gagné and Deci, 2005). Autonomy-supportive work contexts are indicated by managers: acknowledging employees’ perspectives and asking for their viewpoints; providing rationale when requesting tasks; offering choices to individuals with regards to how to do aspects of their; empowering decision making; and providing positive and/or meaningful feedback (Deci et al., 2017; Humphrey et al., 2007; Van den Broeck et al., 2010).

In the context of digital labor platform work, the last three facilitating factors can be understood via the platform’s architecture given that the digital labor platform owner’s operational choices will implicitly shape the platform workers’ autonomy (Kuhn and Maleki, 2017). Moreover, although acknowledging employees’ perspectives may be difficult in
a platform context lacking human supervisors, to a certain extent, allowing platform workers to rate clients and to have recourse when they are rated poorly on the platform can be considered an acknowledgment of employees’ perspectives. Drawing on the SDT research, recent surveys of platform workers (e.g., Codagnone et al., 2016; Fabo et al., 2017; Wood, Lehdonvirta and Graham, 2018; Wood, Graham, Lehdonvirta and Hjorth, 2018), as well as Kuhn and Maleki’s (2017) conceptual classification of platform workers, it is proposed that a digital labor platform’s interpersonal context can be either “autonomy supportive” or “non-supportive,” depending on the presence of the facilitating factors elaborated in Table I.

It should be noted that while a platform’s interpersonal context will be determined by the presence of facilitating factors as embodied in the platform’s architecture (mechanisms, processes, functionalities and rules), the two columns in the table represent “extremes.” Considering this, it is proposed that:

**P3.** Digital labor platform architectures that are autonomy supportive (based on the presence of the facilitating factors in Table I) will be positively related to a platform worker’s perceived autonomy.

### Table I. Facilitating factors of autonomy-supportive/ non-supportive contexts in digital labor platforms

<table>
<thead>
<tr>
<th>Platform context: autonomy support</th>
<th>Non-supportive (controlling)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supportive</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Decision-making autonomy</strong></td>
<td></td>
</tr>
<tr>
<td>Platform allows workers to choose or compete for more desirable (best “fit”) tasks or projects</td>
<td>Platform assigns work algorithmically</td>
</tr>
<tr>
<td>Platform allows workers to decide their own compensation or provides the right to accept/reject pay proposed by the client</td>
<td>Platform controls the pay rate. Control can take the form of pay rates for defined tasks or dynamic (market-based) pricing controlled algorithmically</td>
</tr>
<tr>
<td>Platform does not penalize a worker for declining/rejecting a job</td>
<td>Platform penalizes workers for acceptance and/or cancellation rates</td>
</tr>
<tr>
<td><strong>Work-methods autonomy</strong></td>
<td></td>
</tr>
<tr>
<td>Platform leaves workers significant choice in the methods and processes they use to conduct their work</td>
<td>Workers perform standardized tasks as defined (and priced) by the platform. The work process is micromanaged</td>
</tr>
<tr>
<td>Workers are (at least not involuntarily) subjected to surveillance via platform-enabled monitoring mechanisms</td>
<td>Non-proximate monitoring mechanisms are used to monitor work progress and process</td>
</tr>
<tr>
<td><strong>Feedback and acknowledging perspectives</strong></td>
<td></td>
</tr>
<tr>
<td>Platform provides workers with positive feedback (derived from platform-based rating and reputation systems) for good performance</td>
<td>Platform does not provide workers with positive feedback (derived from platform-based rating and reputation systems) for good performance</td>
</tr>
<tr>
<td>When client feedback ratings and/or other sources of evaluation fall below a certain threshold, platform provides constructive feedback on how to address the problem</td>
<td>Platform does not provide workers with constructive feedback on how to address the problem sub-par performance metrics</td>
</tr>
<tr>
<td>Platform allows workers to rate clients (e.g., Uber) and/or offers recourse for perceived unfair ratings/poor treatment by clients</td>
<td>Platform-based rating and reputation systems unilaterally penalize workers when ratings and/or other metrics fall below a certain threshold. Penalties can range from deactivation, loss of access to jobs, etc.</td>
</tr>
<tr>
<td>Platform performance assessment algorithms consider whether a client’s feedback rating was unfair and adjusts the worker’s score accordingly (e.g., Upwork) (Kuhn and Maleki, 2017)</td>
<td>Platform does not allow workers to rate clients (e.g., mTurk) and/or does not provide recourse for perceived unfair ratings/poor treatment by clients</td>
</tr>
</tbody>
</table>

Gig-workers’ motivation
Before proceeding, it should be noted that the work mediated in autonomy-supportive platform contexts is likely to be a type of work characterized by higher task variety, job complexity, and/or specialization such that it cannot be standardized. In this vein, platform contexts providing high decision-making and work-methods autonomy will tend to coincide with medium/high-skill platform work (Figure 1: Quadrants 3 and 4). Conversely, platform work that is standardized, with clearly defined tasks, is more likely to be low-skill work (Figure 1: Quadrants 1 and 2). According to a recent study, platform workers’ skills are innately tied to job quality in the gig-economy (Wood, Lehdonvirta and Graham, 2018). Workers lacking skills tended to experience insecurity and low incomes, while workers with high skills wielded higher bargaining power, allowing them greater decision-making autonomy compared to lower-skilled workers (Wood, Lehdonvirta and Graham, 2018). Considering that such workers may also have low perceived alternatives, platforms mediating low-skilled work may be more likely to be experienced by workers as controlling than platforms mediating high-skilled work (Deci et al., 2017; Kuhn and Maleki, 2017).

4.1.2 Relatedness support. Co-worker support and job social support have been found to be positively linked to intrinsic work motivation, job involvement and satisfaction (Hon, 2012). Having good relationships at work (both with co-workers and superiors) has been found to intrinsically motivate an employee as it facilitates the process of internalization insofar as individuals tend to accept as their own the values and systems of those to whom they feel, or desire to feel, connected to (Gagné and Deci, 2005). Co-worker support has also been found to promote co-workers’ confidence, often through instrumental support (Zhou, 2003), and to provide workers with a degree of security to explore all of the benefits of their work. Thus, in addition to promoting feelings of social-connectedness, caring and supportive co-workers make it more likely that employees will feel autonomous and competent in their work, and consequently experience high levels of autonomous motivation (Ryan et al., 1994).

Research suggests that designing work to “allow interdependence among employees and identification with work groups, as well as being respectful and concerned about each employee” may support internalization and intrinsic motivation (Gagné and Deci, 2005, p. 355). However, in the context of digitally-mediated platform work wherein limited levels of temporal, administrative and physical attachment characterize the worker–organization relationship (Spreitzer et al., 2017), platform workers lack opportunities to be “insiders” and often experience isolation (Wood, Lehdonvirta and Graham, 2018; Wood, Graham, Lehdonvirta and Hjorth, 2018). In this context, Rockmann and Ballinger (2017) suggested that a worker’s need for relatedness might be satisfied through client interactions. While this may be possible, it may not be the case with all platforms as the structural properties of work that shape workers’ opportunities to connect and interact with others varies greatly across digital labor platforms (Grant, 2007). For instance, it is plausible to assume that gig-workers providing physically-fulfilled services (e.g. Uber, TaskRabbit) may be more likely to interact with clients than workers offering virtually-fulfilled services, particularly in the case of microwork (e.g. Upwork, MTurk). Even so, in the context of certain physically-fulfilled services, the “absence of human interaction is considered a selling point for clients – for example, those who wish to have their homes cleaned without the awkwardness of meeting or even talking with the cleaner” (Kuhn and Maleki, 2017, p. 185). Similarly, on Fiverr, workers and clients are connected “anonymously” through the platform and are not supposed to exchange personal contact information – a platform rule designed to ensure that providers and clients do not connect off of the platform.

In general, the duration of work, and thus interaction with a client, also varies substantially across platforms, as do the frequency and rules of contact. In this regard,
a worker’s need for relatedness is best supported through job social support from other organizational members. As evidenced by the collective organization of numerous internet-based communities by online workers, platform workers already seek and employ digital tools (social media chat groups, online forums, etc.) to support each other and share information (Wood, Graham, Lehdonvirta and Hjorth, 2018; Yin et al., 2016). For example, Uber drivers have self-organized various local driver groups on Facebook and make use of Zello (a web-based walkie-talkie app) to communicate with other drivers during their shifts. Similarly, Yin et al. (2016) identified a rich network of worker-initiated communication channels such as forums, threads, and social media group discussions among MTurk workers. Although virtual communities have been shown to play a vital role in platform workers’ experiences (Wood, Graham, Lehdonvirta and Hjorth, 2018), suggesting that platform-hosted forums and chats may be able to support platform workers’ needs for relatedness, many platforms offer minimal worker-side services. Nonetheless, it is proposed that:

P4. Digital labor platforms with social features such as forums and chatting can positively enhance a platform worker’s perceived relatedness.

4.1.3 Competence support. According to the SDT, the more competent an individual perceives themselves in an activity, the more intrinsically motivated they will be at that activity (Deci and Ryan, 1985). Experimental studies conducted across various contexts (e.g. education, health, and work) support that specific interpersonal events (e.g. reward structures, communications, and feedback) can support feelings of competence and thus enhance intrinsic motivation (Deci et al., 2017; Ryan and Deci, 2000). Specifically, it has been found that positive feedback (initially referred to as verbal rewards in the SDT literature) can enhance intrinsic motivation, as individuals will enjoy work when it supports feelings of self-esteem (Ryan and Deci, 2000; Van den Broeck et al., 2010). Yet in the context of the gig-economy, platform workers cannot rely on human supervisors for feedback to support the need for competence. Similarly, much like virtual workers, the existence of a mentor (and other forms of job social support through which feedback can be received) is unlikely (Rockmann and Ballinger, 2017; Wiesenfeld et al., 2001). While workers providing physical, location-based services may receive positive feedback from clients, the relational architecture of jobs varies greatly across platforms, such that receiving client feedback cannot be guaranteed.

Where algocracy (governance by algorithm) is the prevailing mode of organization used to ensure quality control and matching efficiency (Codagnone et al., 2016), platform workers must rely on the platform to generate the information required to form perceptions of their performance. In general, the primary and sometimes sole source of feedback that platform workers receive is limited to a system of electronic ratings. Specifically, all platform workers are continuously evaluated by electronic client feedback systems, some of which may also include other organization-specific metrics (Kuhn and Maleki, 2017).

While these digital feedback mechanisms may provide an avenue for positive feedback, they may also convey negative feedback in the case of under-performing platform workers, thereby undermining perceptions of competence and intrinsic motivation, leaving people amotivated (Deci et al., 1999). Moreover, due to their implementation, they embody aspects of external rewards, competition, and punishments (all of which, on average, have been found to have negative effects on intrinsic motivation) (Deci et al., 1999, 2001). Specifically, within most digital labor platforms, ratings generally dictate the algorithmic assignment of (or right of access to) work (Kuhn and Maleki, 2017; Wood, Lehdonvirta and Graham, 2018). Many platforms provide better access to workers with superior ratings or, at minimum, institute quality filters within their architecture enabling clients to avoid low-performing
workers (e.g. MTurk, Upwork, Wonolo). Similarly, certain platforms overtly penalize workers for poor performance metrics by suspending or removing them from the platform. For instance, Uber drivers may have their accounts deactivated for not maintaining a near-perfect passenger rating (Rosenblat and Stark, 2016).

According to the SDT, the impact of interpersonal events and structures on intrinsic motivation is contingent upon how the event is interpreted (an event’s functional significance) (Deci and Ryan, 2000). Specifically, when events are interpreted as “informational” (e.g. supporting autonomy and promoting competence), they are considered as indicators of competence, thereby satisfying the need for competence and enhancing intrinsic motivation. Conversely, when events are interpreted as “controlling” (e.g. pressuring one to think, feel, or act in particular ways), individuals will feel forced to act accordingly, which frustrates their need for autonomy and undermines intrinsic motivation (Deci et al., 1999, 2001, 2017). Research has shown that an event’s functional significance is largely dependent on the interpersonal context within which they are implemented and an individual’s causality orientations (Deci and Ryan, 1985). Specifically, when rewards are administered in a non-controlling context, they are less likely to undermine intrinsic motivation and, in some cases, can enhance intrinsic motivation.

Considering these factors, current systems of electronic ratings for platform workers are unlikely to provide support for all workers’ needs for competence and to positively enhance intrinsic motivation. Specifically, it can be expected that while positive feedback such as superior ratings may support workers’ needs for competence, negative feedback from poor performance ratings will undermine perceptions of competence and are likely to leave people amotivated (Deci et al., 1999; Ryan and Deci, 2000). Furthermore, given that events can be experienced as either “informational” or “controlling,” even positive feedback from superior ratings can lead to reductions in intrinsic motivation (due to their impact on autonomy) when administered in non-supportive contexts (e.g. tied to a reward such as access to better work assignments) and/or received by control-oriented workers. Therefore, it is proposed that (ceteris paribus):

P5. Positive feedback (e.g. high ratings) from platform ratings systems will be positively related to perceived competence.

P6. Platform rating systems that include algorithmic rewards and/or punishment will be perceived as controlling.

P7. Control-oriented individuals will be more likely to perceive platform ratings systems as controlling than autonomy-oriented individuals.

P8. Platform rating systems perceived as controlling will be negatively related to perceived autonomy.

4.2 ESM enablers of psychological need satisfaction

ESM is defined as an organizational web-based platform that facilitates internally-facing communication, social interaction and collaboration among users within an enterprise through the creation, sharing and indexing of content (Leonardi et al., 2013). In recent years, ESM platforms have increasingly been implemented in organizations as tools to enable self-expression, communication and social interaction among employees, as well as to facilitate the identification of skills and knowledge (Archer-Brown and Kietzmann, 2018; Leonardi et al., 2013). Their ability to promote knowledge sharing, collaboration and efficiency have made them central to many organizations’ digital transformation strategies (Charki et al., 2018). Although most ESM resemble popular social networking sites such as Facebook or LinkedIn with respect to their look and feel, they also
contain a variety of embedded functions not common to external social media platforms such as blogs and wikis as well as features allowing social tagging and document sharing (Leonardi et al., 2013).

As previously elaborated, a digital labor platform’s architecture will impact a worker’s self-motivation through its ability to satisfy a worker’s basic psychological needs. Considering that platform workers lack human interaction with supervisors and colleagues (which may impede the satisfaction of their relatedness and competence needs), the integration of ESM within these platforms is proposed as a means to support these needs and thereby drive workers’ motivation. Specifically, two ESM tools are proposed: social networking and social badging. In the context of a digital labor platform, these functional ESM tools can be seen as plug-ins that can be integrated within the platform architecture (Baldwin and Woodard, 2008).

4.2.1 Social networking. As previously highlighted, the collective organization of numerous internet-based communities by platform workers suggests that the integration of social networking may be able to support platform workers’ needs for relatedness and competence. Social networking tools (or platforms) are those that facilitate the building of a network of contacts in order to exchange various types of content online (Leonardi et al., 2013). Examples of ESM social networking tools include: Yammer, Tibbr and SocialCast. Both Yammer and Tibbr have user interfaces that are very similar to Facebook, including: personal profiles wherein users can list achievements and professional skills; feeds where users can share and receive status updates and content; opinion expression (“Like”) and comment functionalities; and, finally, pages, as well as “follow” capabilities. Similar to Facebook, ESM social networking tools allow users to establish connections with others and to form private and/or public groups (Archer-Brown and Kietzmann, 2018; Leonardi et al., 2013; Treem and Leonardi, 2012).

Based on their features, social networking tools can support users’ psychological needs for both relatedness and competence. Specifically, status updates provide organizational members with efficient, lightweight opportunities to communicate both social and task-related information to each other thereby providing context awareness for users (Gibbs et al., 2013). Social networking use has also been found to support perceptions of belonging to a larger community (Jackson et al., 2007). Similarly, the sharing of private information among co-workers through ESM has been found to allow newcomers, over time, to cultivate a sense of belonging (Leonardi et al., 2013). Finally, social networking has also been found to enhance perceptions of access to new people outside local units, and to promote feelings of similarity and community, even in global teams, across cultures (Archer-Brown and Kietzmann, 2018; Treem and Leonardi, 2012).

Social networks are particularly valuable from a knowledge perspective. Specifically, user profiles make it easier to identify distributed expertise, thereby allowing users to identify sources of instrumental support. Jackson et al. (2007) found that social networking provided users with informational benefits such as obtaining feedback on ideas and assistance on solving problems, even among users with moderate usage levels. Social networks also allow individuals to discover mentors, particularly when they do not know each other personally (Treem and Leonardi, 2012). Generally speaking, social networks are found to facilitate more frequent dialogue, while their ability to capture and codify information for future use make them valuable knowledge resources that can promote perceived competence by providing users with a repository of information to support or confirm their abilities to perform work tasks. Therefore, it is proposed that the integration of social networking within platforms, which are connected to platform workers’ account profiles, can support perceived relatedness and competence, in the absence of physical co-workers and supervisors:

P9. Platform-enabled social networking will be positively related to a platform worker’s perceived relatedness.
Platform-enabled social networking will be positively related to a platform worker’s perceived competence.

Before proceeding, it is important to note two aspects of social networking that may limit their ability to support perceptions of relatedness and competence. First, while social networking has been found to promote feelings of similarity within organizations, they may also strengthen boundaries between groups, making communication, interaction and identification less efficient and effective (Treem and Leonardi, 2012; Pratt et al., 2000; Van Alstyne and Brynjolfsson, 2005). While forum-based networks initiated by distributed platform workers have been found to be fragmented by platform, worker-nationality, worker-seniority and type of task (Lehdonvirta, 2016; Yin et al., 2016), lending credence to this possibility, little consistent evidence has been found for homophily (i.e. the tendency for people to form ties with people who are similar to themselves) along other characteristics, such as worker age, gender or education (Wood, Graham, Lehdonvirta and Hjorth, 2018).

Moreover, recent evidence from a study of micro-workers indicates that the expression of new collective identities among platform workers within online communities tends to be tied to the particular online labor platform that they use (Wood, Graham, Lehdonvirta and Hjorth, 2018). This finding suggests that in the context of limited organizational attachment (particularly the lack of physical presence of co-workers and supervisors), goal group identity via the nature of one’s work and organizational affiliation may be more salient than social referent groups based on a common characteristic of gender, ethnicity or race (Pratt et al., 2000). It further implies that digital labor platforms mediating highly differentiated categories of work should consider creating specific forums along these categories. Similarly, both local and global platforms may benefit by organizing around geographic locations to consider language issues.

Second, although social media can motivate contribution by enhancing visible feedback to posts, the awareness that others can see what one contributes may impede contribution, particularly among those with low perceptions of psychological safety (Treem and Leonardi, 2012). Moreover, the inherent “public” visibility of social networking suggests the possibility for increased surveillance and control by organizations that may also compel people to refrain from communicating as a means to maintain autonomy (Leonardi et al., 2013). Given this issue, the corporate climate within which social networks are implemented is important.

As previously mentioned, autonomy-supportive contexts have been found to promote workers’ trust, thereby allowing them to be more active and successful in satisfying their own needs (Deci et al., 2017). Yet any organization is likely to be comprised of both autonomy-oriented and control-oriented individuals. Research has found that autonomy-orientation is positively related to self-actualization and satisfying interpersonal relationships, while control-orientation is associated with public consciousness and defensive functioning (e.g. inhibition, withdrawal and isolation) (Gagné and Deci, 2005). These findings suggest that autonomy-oriented individuals may be more likely to explore and benefit from social networking tools within work contexts than control-oriented individuals. Therefore, it is proposed that:

P11. The strength of the relationship between platform-enabled social networking and a platform worker’s perceived relatedness is positively moderated by the extent to which the platform is autonomy-supportive.

P12. The relationship between platform-enabled social networking and a platform worker’s perceived relatedness is stronger for autonomy-oriented platform workers than for control-oriented workers.
Given indications that causality orientations and autonomy-supportive climates have additive positive effects on autonomous motivation, and that autonomy-supportive interpersonal contexts have been found to explain substantially more variance in need satisfaction than employees’ autonomous orientation (Baard et al., 2004), P11 and P12 suggest that social networking tools integrated within autonomy-supportive platform contexts are likely to have greater organizational participation than social networking tools integrated within controlling platform contexts by attenuating the moderating effects of control-oriented individuals’ participation (Liu et al., 2011).

4.2.2 Social badging. As previously elaborated, the rating systems common to most digital labor platforms are unlikely to support all workers’ needs for competence due to differences in their perceived functional significance, and the fact that not all workers receive high ratings. In this context, social badging is proposed as a means to support workers’ needs for competence (as well as other basic psychological needs). Badging is a concept that emerges from gamification, a strategy that focuses on the selective incorporation of design elements characteristic of games in non-game contexts (Deterding et al., 2011). “In the context of social media, badges are “virtual goods” – digital artifacts that have some visual representation – [that] are awarded to users who complete specific activities” (Antin and Churchill, 2011, p. 1). Badges offer opportunities to recognize and quantify individuals’ accomplishments, achievements, and acquired skills. In this way, badges can serve as both credential-building tools as well as feedback tools providing individuals with information regarding their performance (Burgers et al., 2015; Deterding et al., 2011; Sailer et al., 2017). Badging is one of the most widely-used strategies in gamification with applications reaching across a wide range of contexts including social networking sites, education, healthcare and HRM (McDaniel and Fanfarelli, 2016).

Research suggests that badges can support intrinsic motivation in organizational and educational contexts by satisfying autonomy, competence and relatedness needs (Aparicio et al., 2012; Seaborn and Fels, 2015; Zichermann and Cunningham, 2011). Specifically, badges communicating appropriately-timed feedback can positively impact an individual’s perception of their work skills and efficacy (perceived competence). Moreover, when used as goal-setting devices, badges can bolster perceived autonomy and intrinsic motivation (Antin and Churchill, 2011; Nicholson, 2012; Seaborn and Fels, 2015). Badges can increase positive group identification (through perceptions of similarity) by communicating a set of shared activities that bind a group of users together around shared experience (Antin and Churchill, 2011; Sailer et al., 2017). Employed within organizational social networks, they can increase cooperation and collaboration by enabling co-workers to easily identify colleagues’ skills and knowledge. Information seeking via organizational social media has also been found to increase perceptions of “social presence” (Wolff et al., 2014).

Gamified systems contain many social components common to ESM including: profiles, connections to social networks, peers and groups, chat and messaging functions. Moreover, such systems also include leaderboards – public displays that rank players according to their relative success against a certain success criterion, thereby promoting motivation via competition (Sailer et al., 2017). Due to their perceived motivational and social benefits, many current ESM have integrated social badging within their systems (Leonardi and Vaast, 2017). For instance, in 2011, Yammer released “Praise,” an app that allows users to reward their colleagues with badges. Through this app, users are able to see all the badges that they, and other co-workers, have earned over time via a recognition tab on their profile pages.

As motivational tools, social badging offers a distinct advantage over the prevailing algorithmic rating systems incorporated within all platforms as a means to ensure trust and
quality for clients. Specifically, unlike platform rating systems that can provide both positive and negative feedback, badges necessarily confirm an individual’s achievements and symbolize merits (Antin and Churchill, 2011; Sailer et al., 2017; Seaborn and Fels, 2015). In other words, whereas negative platform ratings may undermine workers’ competence and autonomy (leaving workers amotivated), badges are not awarded for poor performance. Therefore, it is proposed that:

P13. Badges will be positively related to perceived competence.

In order for badging to be successful at motivating attitudinal and behavioral change, a gamified system must consider the situated motivational affordances of its game elements (Deci and Ryan, 2004; Deterding, 2011; Nicholson, 2012). The concept of situated motivational affordance derives from the field of human–computer interaction, and is used to “describe the opportunities to satisfy motivational needs provided by the relation between the features of an artifact and the abilities of a subject in a given situation, comprising of the situation itself (situational affordances) and the artifact in its situation-specific meaning and use (artifactual affordances)” (Deterding, 2011, p. 3). Together with the SDT, the concept of situated motivational affordances carries several conditions for the use of gamification in organizational contexts, and particularly algocratic organizations such as digital labor platform businesses.

Consistent with the current uses of badging in the gig-economy, this paper begins by theorizing around badges that are awarded to platform workers algorithmically via points generated from client feedback and/or other organizational metrics. For instance, TaskRabbit rewards workers who have met platform-specified criteria with “Elite” badges (Kuhn and Maleki, 2017). Similarly, Wonolo provides workers with performance badges that are awarded to “Wonoloers” upon achievement of a certain number of jobs with high ratings. Although these types of badges can provide workers with feedback regarding their performance, which can positively impact perception of work skills and efficacy, thereby satisfying competence needs (Sailer et al., 2017; Seaborn and Fels, 2015), situated motivational affordances and the SDT hold that the actual impact of such badges on a worker’s needs satisfaction can only be understood when considered in their greater organizational context (Deterding, 2011).

Given that TaskRabbit’s “Elite” badges are displayed on workers’ profiles, these badges offer “Elite” workers a competitive advantage by making them more attractive to prospective clients. Similarly, on the Wonolo platform, badges come with cash bonuses and payment rate increases. Accordingly, even if such badges can support competence needs in well-performing workers, insofar as they are likely to be experienced as “controlling,” they will undermine experienced autonomy and intrinsic motivation (Deci et al., 1999, 2001; Deterding, 2011; Nicholson, 2012; Seaborn and Fels, 2015).

Drawing on the SDT and gamification literature, this paper proposes that badging systems integrated within digital labor platforms can successfully motivate workers under the following conditions. First, unlike platform ratings systems, participating in badging systems can (and should) be voluntary. According to Nicholson (2012), to ensure that badges are not perceived as controlling, participation in a gamified badging system must be positioned as optional for workers (Sailer et al., 2017). Moreover, they should be free of rewards and punishment so as to avoid negative impacts on autonomy (Deci et al., 1999, 2001). Therefore, it is proposed that:

P14. Badges tied to compulsory programs, rewards and/or punishments will be perceived as controlling.

P15. Badges perceived as controlling will be negatively related to perceived autonomy.

Second, insofar as externally imposed goals can negatively impact intrinsic motivation, the badging system should be user-centric (Deci et al., 2001; Nicholson, 2012). Specifically, platform
workers must be free to choose which badges they will pursue; when users are allowed to set, control and achieve specific goals, badges earned will bolster perceived autonomy (Antin and Churchill, 2011; Seaborn and Fels, 2015). In educational or work contexts where there are certain goals to be met, the gamified system can “guide” workers in choosing relevant goals that are both meaningful to the user and that meet the needs of the organization (Nicholson, 2012). For instance, badges may be awarded for completing training and/or performance programs based on client feedback and other performance-related metrics. Thus, user-centric badges and goals will be better able to support platform workers’ competence (including lower-performing workers) and intrinsic motivation by ensuring that set goals present a sufficient challenge, yet remain attainable (Deterding, 2011; Nicholson, 2012). Therefore, it is proposed that:

P16. Badges based on personal goals will be perceived as informational.

P17. Badges perceived as informational will be positively related to perceived autonomy.

Through the development of P9–P17, Section 4.3 has proposed the integration of ESM within the architecture of digital labor platforms as a means to support workers’ basic psychological needs across various types of platforms. As the gig-economy continues to grow, the theoretical development presented in this paper is valuable to both research and practice.

5. Limitations and implications
Prior to discussing the scholarly and practical implications of this paper, two limitations must be addressed. First, beyond recognizing causality orientations, the proposed conceptual model does not consider other distinct characteristics of individuals such as personality and aspirations that are known to affect needs satisfaction and motivation (Deci et al., 2017). Second, for the sake of parsimony, this paper does not incorporate extrinsic motivation (beyond considering external rewards). Again, given recent interpretations of intrinsic and extrinsic motivations as independent factors (with unique antecedents/outcomes), future work exploring motivation within the gig-economy should consider the dynamics between these types of motivation.

5.1 Research contributions
First and foremost, this paper contributes to a small, but growing stream of research on the gig-economy (e.g. Kuhn and Maleki, 2017; Rosenblat and Hwang, 2016; Wood, Lehdonvirta and Graham, 2018; Wood, Graham, Lehdonvirta and Hjorth, 2018) and offers research contributions to various disciplines including: Industrial and Organizational Psychology, Management, and IT. More specifically, through its exploration of self-motivation among detached and distributed gig-workers, this paper answers calls for psychologically-based research exploring the consequences of gig-work (Kuhn and Maleki, 2017). It also answers calls for theorizing on how to motivate workers in non-traditional work contexts (Wheeler and Buckley, 2001), particularly those without a formal “boss or performance review,” as well as the workings of organizational control “outside the realms of traditional organizations” (Spreitzer et al., 2017, p. 486). By integrating aspects of Kuhn and Maleki’s (2017) conceptual classification of platform workers within the theorization, this paper takes steps in building a cumulative tradition in the study of platform workers. More importantly, it furthers the body of knowledge concerning platform workers by theorizing across different types of platform work. To date, the majority of gig- and platform-mediated work research has tended to focus on a particular platform (e.g. Uber, Lyft) (cf. Rosenblat and Stark, 2016) or type of work (e.g. skilled, freelance-type work) (cf. Rockmann and Ballinger, 2017).
Second, this paper also aids in furthering the SDT research agenda. In their recent state-of-the-art appraisal of the SDT, Deci et al. (2017) outlined research examining concrete workplace characteristics and managerial behaviors in relation to motivation and work outcomes as an important avenue for future work. They also called for research studying the impacts of advanced technologies in interaction with work contexts. In exploring how the architecture of a digital labor platform conveys critical socio-contextual information, and proposing the integration of ESM within these platforms (as well as elaborating the concrete ESM functions that form the workplace context), this conceptual paper aids in furthering the SDT research agenda. More specifically, it goes beyond providing conceptual arguments for the integration of ESM by offering tangible examples of existing ESM tools/functionalities that can be used to fulfill workers’ basic psychological needs.

The third theoretical contribution was to theorize around a large set of social-contextual variables operating at different levels of analysis. As per Gagné and Deci (2005), “factors such as rewards, choice, positive feedback, and surveillance can be thought of as being parallel to specific job aspects, [while] the interpersonal climate can be thought of as being parallel to the work climate or organization climate” (p. 350). By combining the SDT, job design, and ESM research, this paper demonstrates how individual-level motivation can be influenced by both task-based and organizational-level factors, in addition to individual-level factors. Thus, the resulting theory underscores the importance of examining social-contextual factors at multiple levels (an approach less common in this stream of work). In doing so, it answers calls for research examining the interaction between job aspects with work climates on intrinsic motivation, and may lay groundwork for emerging motivational research espousing set-theoretic approaches (Gagné and Deci, 2005).

5.2 Practical contributions
Managing workers in alternative work contexts has long been said to require new communication and information systems, as well as organizational culture change (Wiesenfeld et al., 2001). More recently, Sundararajan (2014) suggested that creating an appropriate “platform culture” (i.e. shared norms, values and capabilities among providers) is paramount to the long-term success of gig-organizations as doing so allows these organizations to shape gig-workers’ capabilities and to guide their appropriate behaviors. In exploring the relationship between platform job-type characteristics and the operational nature of the platform, this paper demonstrates how the integration of ESM within digital labor platforms can create an organizational context that supports platform workers’ needs.

As the gig-economy continues to grow, its HRM practices are increasingly coming under public scrutiny, with many dubbing it the “Precariat” (Jabagi et al., 2018). While many gig-organizations tend to adopt HRM strategies involving “control practices” (i.e. practices aimed at bolstering organizational efficiency often through external rewards and/or psychological manipulation), research has shown that when motivation is controlled, the resulting extrinsic focus can reduce the range of employees’ efforts, and have spillover effects that negatively impact subsequent performance and work engagement (Deci et al., 2017). In proposing the use of ESM as a means to support intrinsic motivation, this paper provides practitioners with a concrete, high-commitment HRM strategy that can motivate employees to adopt discretionary behaviors that are aligned with the organization’s mission through the integration of the organization’s goals and values within their core self.

Certainly, as algorithmic controls are increasingly adopted within traditional employment relationships, the propositions in this paper are likely to be increasingly relevant beyond the context of gig- and platform work. Moreover, by demonstrating the pivotal role that the design of an IT artifact can play in supporting workers’ basic
psychological needs, this paper suggests an important opportunity for partnership between an organization’s IT and human resources management functions in the design of platform systems. As demonstrated, the design of a digital platform (including the integration of ESM) has substantial impacts on workers’ experience and must be governed appropriately to ensure the platform’s competitiveness and sustainability. For example, where platform workers may be reluctant to contribute to enterprise social networks, participation badges can be used to indoctrinate new users, sustain contribution, and help diversify the participation of siloed users (Antin and Churchill, 2011; Leonardi and Vaast, 2017). Similarly, although badge systems cannot inherently communicate negative feedback, in a gamified system, social comparison can demotivate low-performing platform workers; thus, to avoid negative impacts on workers’ competence needs, leaderboards should only show close competitors, or be replaced by performance graphs (visual displays that evaluate a user’s own performance over time) (Seaborn and Fels, 2015). Undoubtedly, HRM managers can and must play a crucial role in both the development and cultural implementation of digital labor platforms and ESM (such as social networking and badging) in order to ensure that they support positive experiences for workers (Charki et al., 2018).

6. Conclusion
Accenture (a global consulting company specializing in technology) identified online labor platforms as a key trend that will drastically transform existing organizational forms and management models by 2022 (Jabagi et al., 2018). From a scholarly viewpoint, the arrival of digital labor platforms prompts unique questions about gig-worker/employer relations and presents many opportunities for behaviorally-oriented organizational researchers to build our scholarly understanding of the increasing number of people participating on these platforms (Kuhn and Maleki, 2017). Considering its theoretical importance, future inquiry into the phenomena of gig-work and motivation is essential to support both gig-workers and organizational managers. The authors hope that this paper may further promote and enable such research.

Note
1. Virtual work is defined as any form of work “whereby individuals work from home, ‘on the road,’ or otherwise outside of traditional centralized offices” (Wiesenfeld et al., 2001, p. 213).

References


Further reading


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Conceptualizing human resource management in the gig economy
Toward a platform ecosystem perspective

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Abstract

Purpose – Although it is transforming the meaning of employment for many people, little is known about the implications of the gig economy for human resource management (HRM) theory and practice. The purpose of this paper is to conceptually explore the notion of HRM in the gig economy, where intermediary platform firms design and implement HRM activities while simultaneously trying to avoid the establishment of employment relationships with gig workers.

Design/methodology/approach – To conceptualize HRM in the gig economy, the authors offer a novel ecosystem perspective to develop propositions on the role and implementation of HRM activities in the gig economy.

Findings – The authors show that HRM activities in the gig economy are designed to govern platform ecosystems by aligning the multilateral exchanges of three key gig economy actors: gig workers, requesters and intermediary platform firms, for ensuring value co-creation. The authors argue that the implementation of HRM activities in the gig economy is contingent on the involvement and activities of these gig economy actors. This means that they are not mere recipients of HRM but also actively engaged in, and needed for, the execution of HRM activities.

Originality/value – The study contributes to research by proposing a theoretical framework for studying the design of HRM activities, and their implementation, in the gig economy. From this framework, the authors derive directions for future research on HRM in the gig economy.

Keywords Human resource strategies, Human resource management, Proactivity

Paper type Conceptual paper

Introduction

In this conceptual paper we explore the implications of the gig economy for human resource management (HRM). Although an agreed-upon definition of the gig economy is lacking, the term is generally used to describe the economic system that consists of intermediary platform firms that connect requesters (i.e. organizations or consumers) with on-demand gig workers in industries such as transportation (e.g. Uber), cleaning (e.g. Helpling), household do-it-yourself (e.g. TaskRabbit) and programming (e.g. Clickworker). In so doing, the gig economy signals a growing trend to recast workers as self-employed contractors and their work for a firm or consumer as episodic rather than indeterminate (Aloisi, 2016; Kuhn, 2016; Jansen, 2017; Stanford, 2017). This is relevant for HRM theorists as “the self-employed represent a challenge to prevailing orthodoxies because they fall through regulatory and conceptual gaps created by systems based on the notion of traditional employment” (McKeown, 2016, p. 780).

More specifically, the rise of the gig economy eradicates a key touchstone of HRM research: the standard employment relationship between an employee and employer. Whereas HRM is traditionally conceptualized as the managerial activities for maintaining employment relationships (Tsui et al., 1997; Lepak and Snell, 1999; Nishii and Wright, 2008), in the gig economy an identifiable employer–employee relationship within the confines of an organization is absent. Intermediary platform firms do not employ gig workers per se, a fact
that has sparked legal challenges to the employment status of gig workers around the world. Numerous high-profile court cases in the USA and Europe have elaborated and are working out the implications of this new type of employment, comprising organizations without employees, and workers without employers (see Table AI for examples).

Despite the absence of an identifiable employment relationship, intermediary platform firms nevertheless design and implement a variety of HRM activities including: performance management with requesters appraising gig worker performance (Lee et al., 2015), algorithms causing the deactivation (i.e. “dismissal” in traditional HRM terms) of poor-performing gig workers (Rosenblat and Stark, 2016), and job design when workers are provided with proscribed ways to work and restricted levels of autonomy (Kuhn and Maleki, 2017). This apparent contradiction raises the question: how are we to conceptualize the notion of HRM in cases in which intermediary platform firms install HRM activities, while simultaneously seeking to avoid establishing an employment relationship with gig workers? The objective of this paper is to answer this question and explore the role and nature of HRM in the gig economy.

To realize this objective, we conceptualize HRM in the gig economy from an ecosystem perspective. Such a perspective accommodates the paradoxical nature of HRM without employment relationships because it goes beyond the dyadic employee–employer relationship by putting the focus on the multilateral exchange relationships among intermediary platform firms, gig workers and requesters. By drawing on this perspective, we make three contributions. First, we redefine the role of HRM activities in the gig economy away from upholding employment relationships and toward the governance of platform ecosystems. More specifically, we propose that HRM activities serve to align the multilateral exchange relationships among intermediary platforms, gig workers and requesters, and thus to ensure these actors co-create value. Second, we show that the implementation of HRM in the gig economy is contingent on these very platform ecosystem actors and the multilateral exchanges they engage in. Thus, we propose that gig workers, requesters and intermediary platform firms are simultaneously initiators, implementers and recipients of HRM activities, rather than taking just one of these three roles. Finally, we offer researchers a holistic framework and a set of future research directions for studying HRM activities in the gig economy, as insights on the nature of HRM are urgently needed.

The remainder of this paper is organized as follows. We start with a discussion of platform-enabled gig work as a key economic exchange in the gig economy, which takes place outside the confines of the standard employment relationship. This is followed by a reflection on how the role of intermediary platform firms causes tensions in real-life HRM practice through the simultaneous presence of HRM activities yet absence of employment relationships. We show how this requires a reconceptualization of HRM in the gig economy to accommodate this paradox and discuss relevant practices and their outcomes. To achieve this conceptual switch, we present our platform ecosystem perspective on HRM activities in the gig economy. We discuss the implications of an ecosystem perspective for HRM scholarship and, finally, present directions for future research on HRM in the gig economy and platform ecosystems.

**Platform-enabled gig work**

The key economic exchange that is taking place in the gig economy is platform-enabled gig work. Platform-enabled gig work can generally be referred to as the performance of fixed-term activities by individuals (i.e. gig workers) who perform a service on-demand for a firm or consumer, without actually being employed or having an employment relationship with an organization (Kuhn, 2016; Jansen, 2017; Stanford, 2017). Instead, gig workers are independent and obtain work assignments through intermediary platform firms[1] – such as Uber, Deliveroo or Upwork – which act as matchmakers between gig workers and those that
request their services (Aguinis and Lawal, 2013; Aloisi, 2016; Kuhn, 2016). As an economic system, the gig economy can thus be viewed as consisting of intermediary platform firms, gig workers and requesters, which jointly bring about the request, management and execution of platform-enabled gig work. There are several features that characterize platform-enabled gig work (Stanford, 2017):

1. sourcing and performance of fixed-term tasks (or “gigs”);
2. absence of an employment relationship; and
3. intermediation by an intermediary platform firm.

Sourcing and performance of fixed-term activities (“gigs”) 

The first characteristic of platform-enabled gig work is that it involves the sourcing of tasks by a requester (which can be either a firm or an individual consumer), which are relatively short-lived and performed by independent workers who move from one assignment (or “gig”) to another. Researchers have relied on different concepts to describe the notion of independent workers who execute such outsourced tasks. These concepts include crowdsourcing (Nakatsu et al., 2014), elancing (Aguinis and Lawal, 2013), independent contracting (Kuhn and Maleki, 2017), “work on demand via app” (Aloisi, 2016), and interim/freelance project work (Keegan et al., 2018). For instance, crowdsourcing reflects the idea that tasks, traditionally performed by a designated employee, are outsourced to an undefined group of people (i.e. the crowd) in the form of an open call via an online platform (Nakatsu et al., 2014; Boons et al., 2015). In a similar vein, organizations that make use of elancing rely on an online marketplace (e.g. Amazon Mechanical Turk) where employers look for individuals anywhere in the world who can sign up for some type of short-term task to be done online, such as programming, translating texts or processing data.

Elance gig workers can be distinguished from those involved in “work on demand via app” (Aloisi, 2016) where outsourced tasks in the real rather than the virtual world, involving such activities as driving, delivering food or performing household chores, are done by workers who move on to the next assignment/task once the last one is completed. Whereas elancing and “work on demand via app” may involve the sourcing of micro-tasks that are highly structured (e.g. delivering meals or translating a piece of text), other types of gig work concern short-lived assignments which are less structured and more creative in nature, such as idea generation, idea evaluation or problem-solving activities (Nakatsu et al., 2014; Boons et al., 2015). For example, the platform Crowdskills seeks to match graduates with local businesses in London to complete tasks in areas such as photography and graphic design. Although gig workers often work in isolation from others on micro-tasks (e.g. an Uber taxi driver or an Amazon Mechanical Turk), they may also execute activities that are more long term in nature and in collaboration with other workers (Nakatsu et al., 2014).

Absence of an employment relationship

Second, platform-enabled gig work is conducted and organized in the absence of a standard employment relationship between an employer and employee (Stanford, 2017). Instead, gig workers are freelancers (Jansen, 2017) or independent contractors (Kuhn and Maleki, 2017). As such, they do not have an employment relationship within the confines of an organization. Instead, gig workers are independent and self-employed. This makes them different from other types of flexible labor who are employed by an organization, albeit working on fixed-term assignments. For example, we can thinking of temporary workers hired through temp/employment agencies which supply these workers to a client organization (Lepak and Snell, 1999; Bonet et al., 2013) or workers who are on a temporary contract and therefore employed by an organization for a restricted period of time.
Gig workers, by contrast, are a specific category of contingent worker who are “hired” on demand, meaning that the outsourced tasks they perform are immediately required by a requester (i.e. a firm or individual consumer). There is no guarantee of ongoing engagement with the requester after the finite assignment is completed (Aloisi, 2016; Stanford, 2017). While in reality the parties may work together again in the future, the finite nature of the gig and the absence of a standard employment relationship are key aspects of this type of work. This is also the most controversial aspect of gig work from an HRM perspective, a fact underpinned by the ongoing legal challenges to gig work and platform firms like Deliveroo and Uber in several jurisdictions around the world (see Table AI for some examples).

Intermediation by platform firms
A final and important characteristic of platform-enabled gig work is the notion that the (out) sourcing of gig-based activities is enabled by intermediary platform firms such as Uber, Deliveroo or Amazon Mechanical Turk, which act as brokers between gig workers and requesters. The key purpose of intermediary platform firms is thus to match the supply and demand for labor by connecting gig workers and requesters who are remote from each another, yet wish to transact. Accordingly, and in line with the absence of an employment relationship, gig workers are not employed by the intermediary platform firm that matches them with a requester. Instead, gig workers are treated as customers or end-users of the intermediary platform firm – similar to requesters – with gig workers and/or requesters paying the intermediary a fee for matching labor supply and demand. The sourcing of gig work therefore involves a triadic relationship among gig workers, requesters and intermediary platform firms, with the raison d'être of the last being intermediation between the two former actors.

To enact their role, intermediary platform firms rely on the internet and related technologies to install online platforms on which gig workers and requesters can transact (Moeller et al., 2013). Besides matching labor supply and demand by means of algorithms that assign gig workers to requestors or allow requesters to recruit and select gig workers, these intermediary platform firms also enable a range of other activities. Here, one can think of pay administration where fees are automatically paid and administered (Kuhn and Maleki, 2017), performance management by means of online rating schemes which enable requesters to evaluate gig worker performance (Rosenblat et al., 2017), or coordination and control if gig worker behavior can be remotely monitored (Lee et al., 2015). This makes intermediary platform firms different from other labor market intermediaries that are restricted in the HRM responsibilities they adopt and activities they engage in – albeit bringing together labor supply and demand (see Table I for these differences). For example, so-called “Information Providers” like LinkedIn, online job boards and outplacement agencies, whose involvement ends once those who supply and demand labor get to know about the existence of the other (Bonet et al., 2013). Intermediary platform firms also have more durable involvement than “Matchmakers” (e.g. contingency search firms, placement agencies and retained service firms) which withdraw from the triadic relationship once supply and demand are matched (Aguinis and Lawal, 2013; Bonet et al., 2013). Although intermediary platform firms may look similar to what Bonet et al. (2013) refer to as “Administrators” (e.g. temp agencies and professional employer organizations), both of whom remain part of the triadic relationship throughout the match and install instruments such as evaluation, control and remuneration to manage worker efforts, they nevertheless differ since “Administrators” actually employ workers, whereas intermediary platform firms do not.

Taken together, these characteristics coalesce in describing platform-enabled gig work as:

Fixed-term activities which requesters (i.e. organizations or individual consumers) outsource on-demand to a self-employed gig worker with the help of an intermediary platform firm which installs an online platform that matches and manages gig workers and requestors, yet without actually employing gig workers and instituting an employment relationship with them.
To manage gig worker efforts, intermediary platform firms install a range of HRM activities, including: workforce planning to match labor supply and demand (Chen et al., 2015); performance management with gig workers’ behavior being assessed and thus controlled by means of online rating systems (Rosenblat et al., 2017); compensation and benefits to remunerate gig worker efforts and induce desired behaviors (Lieman, 2018); and job design which provides gig workers with the possibility to work whenever they want (Kuhn, 2016; Stanford, 2017). From an HRM perspective, this is surprising. In the HRM literature, HRM activities are conceptualized as the means to manage and sustain the employment relationship between employee and employer. For instance, by drawing on social exchange theory (Blau, 1964) and the inducements-contributions model (March and Simon, 1958), HRM activities such as compensation and benefits, performance feedback and training are traditionally viewed as inducements provided by the employer in the hope they are reciprocated by employees in terms of displaying desired behaviors and working toward organizational goals (Tsui et al., 1997; Lepak and Snell, 1999). Moreover, following signaling theory, researchers have conceptualized HRM activities as messages on how employees are expected to behave coming from the employer, and thus defining the nature of the employment relationship the latter wishes to establish (Bowen and Ostroff, 2004).

Furthermore, current thinking in HRM research stresses that the process through which HRM activities are implemented to uphold the employment relationship follows a linear path from intended HRM to actual HRM to perceived HRM (Nishii and Wright, 2008; Guest and Bos-Nehles, 2012). The HR triad (Jackson et al., 2009) is central to this thinking and used to denote which actors exercise primary responsibility in each phase: HR professionals who design “intended” HRM practices/messages, line managers who implement “actual” HRM practices/messages and employees who experience “perceived” HRM practices/messages (Nishii and Wright, 2008; Renkema et al., 2017). It is through the actions and experiences of HR professionals, line managers and employees that HRM activities are traditionally viewed as molding and upholding the employment relationship between an employee and employer (Nishii and Wright, 2008).

Applying current thinking on HRM to the context of platform-enabled gig work, it is apparent that the particularities regarding gig work change the conceptual meaning of HRM as intermediary platform firms institute HRM activities, yet without actually
employing gig workers. At the same time, these platform firms have a reputation for withholding HRM inducements (e.g. training, job security, and secondary benefits like paid sick leave and pension planning) as this runs counter to their business model and arms them against legal charges that gig workers do (or should) have an employment relationship (Kessler, 2015; McKeown, 2016). In a report written for Eurofound on Ireland, for example, Dobbins (2009) holds that where workers are classified as self-employed or freelancers, they do not have the same access to protection, employment rights, and social welfare provisions and do not enjoy the same employment status rights as workers classified as employees. This presents a paradox, as intermediary platform firms simultaneously disavow that they are employers of gig workers or responsible for work-related benefits and rights, while they do exercise considerable control over gig workers in terms of time and place of work, pace of work, quality of work and behavior while carrying out work by means of selected HRM instruments. Precisely this tension came to the fore in a number of recent court cases (see Table AI for some examples).

It is because of these legal challenges that intermediary platform firms “outsource” HRM activities to requesters, unions and third-party providers, rather than involving the “traditional” HR triad actors, like HR professionals and line managers. For instance, instead of training poorly performing taxi drivers themselves, Uber delegates this responsibility to a labor union – the Independent Drivers Guild – which charges $70 to individual Uber drivers for this training (Taft, 2018). Furthermore, employees pro-actively instigate new/additional HRM practices themselves as institutionalized HRM practices may be largely absent in the new world of the gig economy (Lee et al., 2015; Rosenblat and Stark, 2016). In moving further away from a standard employment relationship, intermediary platform firms do not hire HR professionals who devise “intended” HR policies for gig workers. Instead, policies for hiring and performance management of gig workers are mainly developed by marketing specialists and computer scientists (Chen et al., 2015; Benoit et al., 2017). Platform firms do not have line managers who supervise and coordinate the efforts of gig workers. Instead, “actual” HRM practices are implemented by customers and through algorithms (Rosenblat, 2018). As an example, the workforce planning of gig workers “on demand work via apps” such as Uber, Deliveroo and TaskRabbit is almost fully automated, with algorithms deciding how many workers are needed, assigning “gigs” to workers, and determining pay rates (Chen et al., 2015; Rosenblat and Stark, 2016; Kuhn and Maleki, 2017).

Taken together, these examples show that HRM in the gig economy is not geared toward maintaining a relationship between an employee and an employer. At the same time, HRM activities do occur in the gig economy, albeit in the absence of this standard employment relationship. These HRM activities are implemented by a range of actors, but not by the HR triad actors who traditionally bear HRM responsibilities such as HR professionals who design “intended” HRM activities and line managers who execute “actual” HRM activities. These apparent contradictions beg the question of how we can conceptualize HRM in the gig economy where forging, and maintaining, an employment relationship is out of the question. In the following section, we answer this question by conceptualizing HRM in the gig economy from an ecosystem perspective.

**Toward an ecosystem perspective on HRM in the gig economy**

An ecosystem perspective is highly relevant for HRM research in the gig economy because it accommodates the paradoxical nature of gig work where gig workers are freelancers, yet controlled by means of HRM activities which are designed, implemented and/or outsourced by intermediary platform firms. An ecosystem refers to a group of interacting, yet semi-autonomous entities that depend on each other’s activities and therefore are somewhat hierarchically controlled (Wareham et al., 2014; Jacobides et al., 2018). This definition of ecosystems has several implications for research into the relatively new platform-enabled
The gig work phenomenon. First, an ecosystem is made up of a set of actors that interact. In line with the triadic relationship that currently characterizes platform-enabled gig work, we argue that these “entities” include at least gig workers, requesters and the intermediary platform firm (Breidbach and Brodie, 2017). That said, the possibility of more actors in platform ecosystems must be considered given developments in mainstream HRM practice associated with multi-actor (Bos-Nehles and Meijerink, 2018) or polyadic (Keegan and Den Hartog, 2019) HRM systems.

Second, the three entities (or actors) make up an ecosystem because they interact through supplying labor (i.e. gig workers), demanding labor (i.e. requesters), or matching labor supply and demand (i.e. intermediary platform firm) – while remaining semi-autonomous entities. This semi-autonomous status materializes as gig work currently takes place outside the confines of an employment relationship, meaning that each entity can opt out whenever it wants as there are limited legal requirements that bind gig workers, requesters and the intermediary platform firm to each other (Stanford, 2017).

Finally, and most importantly, the exchanges among gig workers, requesters and intermediary platform firms are characterized by interdependence and multilaterality, such that value can only be created for each ecosystem actor when all actors continue transacting with one another (Adner, 2017). Put differently, an ecosystem cannot be broken down into an aggregation of bilateral exchanges. All interactions are critical, as the ecosystem malfunctions when one group of actors stops transacting with the other actors. These multilateral interdependencies can be explained by the example of the Uber ecosystem. When Uber drivers withdraw from the Uber ecosystem (i.e. stop using the online platform to provide taxi rides), there is limited value created for passengers as they cannot be transported. The contrary also holds: when passengers stop hailing taxi rides via the Uber platform, Uber drivers will not reap any benefits as there are no earnings to be made. Ultimately, the value to intermediary platform firms also depends on the ongoing contribution of gig workers and requesters: when Uber drivers and passengers move away from the Uber ecosystem, it means there are limited ongoing transactions among these actors from which Uber can seek rents. Therefore, ecosystem actors are said to be complementary: the activities of one ecosystem actor do not function and provide limited value without the actions of the other actors (Wareham et al., 2014; Adner, 2017; Breidbach and Brodie, 2017).

The interdependent nature of the multilateral exchanges among ecosystem actors presents the need to control and coordinate their efforts (Adner, 2017). To make this happen, platform firms need to adopt a “leadership role” to ensure coordination and direction among the ecosystem actors (Gawer and Cusumano, 2002; Breidbach and Brodie, 2017). This makes platform ecosystems semi-regulated marketplaces where semi-autonomous actors either supply or demand labor under the direction of the intermediary platform firm (Wareham et al., 2014). Surprisingly, however, according to Jacobides et al. (2018), very few studies have looked at the instruments used by intermediary platform firms to enact their leadership role and, thus, to control the efforts of all ecosystem actors involved. In our view, HRM activities have an important role to play in platform ecosystems as they are valuable instruments for controlling and coordinating the efforts of human actors (Jackson et al., 2014). As we explain below, selected HRM activities help to control and incentivize the actions of gig workers, requesters and the intermediary platform firm (and thus uphold their multilateral exchanges). We therefore propose that HRM in the gig economy can be understood as the means for managing not just the efforts of workers, but of all ecosystem actors involved (see Figure 1).

**HRM for ensuring ongoing multilateral exchanges and value co-creation in platform ecosystems**

Following the notion of multilateral interdependence, we propose that HRM activities in the gig economy control and uphold the exchanges among gig workers, requesters and
the intermediary platform firm by ensuring multilateral value for all three platform ecosystem actors. Here, multilateral value creation refers to a situation in which all actors within an ecosystem co-create value (Lusch and Nambisan, 2015; Vargo and Lusch, 2004). This means that they both receive value from and provide value to one another, as an important condition for ongoing exchanges (Breidbach and Brodie, 2017). Below we discuss several HRM activities and that all platform ecosystem actors are subject to them to ensure that their needs and interests are served by upholding ongoing multilateral exchanges.

Workforce planning. Although workforce planning is traditionally defined as a process geared toward meeting the firm’s future need for human capital (Lepak and Gowan, 2010), in the gig economy, it reflects the activities to match supply and demand for labor. In fact, workforce planning is their raison d'être for intermediary platform firms, as brokers between gig workers and requesters. Intermediary platform firms aim to scale up and create network effects by increasing the number of both requesters and gig workers that make use of the intermediary services (Gawer and Cusumano, 2002). They do so by a variety of means: surge prices, marketing campaigns, temporary price reductions for requesters and/or higher compensation for gig workers in areas where the intermediary starts operating (Chen et al., 2015; Lee et al., 2015; Lieman, 2018). Seen from an ecosystem perspective, this creates multilateral value benefitting all ecosystem actors involved. Gig workers benefit from the presence of more requesters and thus potentially more gigs leading to a higher income, while requesters benefit from an abundant supply of gig workers and thus better possibilities to outsource work on demand. In the end, this also benefits the intermediary platform as network effects create more exchanges between gig workers and requesters from which the platform can capture value (i.e. a fee) (Gawer and Cusumano, 2002) and which also enable growth and, in some cases, market dominance.

Recruitment and selection. As the creation of network effects is instrumental to intermediary platforms, they seek to recruit as many gig workers and requesters
as possible. Seen from an ecosystem perspective, it is important that the recruitment of both actors runs in parallel to avoid mismatches in the supply and demand of labor. Labor supply-demand mismatches are detrimental to a platform ecosystem as this may cause gig workers or requesters to leave the platform when too little labor demand or too little supply of labor, respectively, is occurring in the platform ecosystem. The need to maximize and match the labor supply and demand does not imply that intermediary platform firms always grant everybody access to the platform ecosystem. Instead, in some cases, a careful selection of gig workers and/or requesters is essential to guarantee that multilateral value is created for all ecosystem actors involved. For instance, the elancing platform Clickworker.com selects gig workers on the basis of their qualifications and offers them more complex tasks once their qualifications increase (Nakatsu et al., 2014). This is different for gig workers of Uber Eats or Deliveroo who are hired without any form of selection and are not granted more challenging tasks (as these are simply not available). At the same time, these food delivery platforms do carefully select requesters to their ecosystem – i.e. the restaurants who seek gig workers to deliver their meals – to ensure they can offer a wide variety of different cuisines to individual consumers. In fact, Deliveroo recently selected several top-star chefs and supported them to open up take-away restaurants to diversify the portfolio of menus and improve the quality of meals provided to its consumers (Lieman, 2018).

Training and development. Empirical research shows that gig worker’s training and development are seen as their own responsibility. Rousseau and Wade-Benzoni (1994) hold that freelancers do not enjoy the same levels of investment in their knowledge and skills as traditional employees. Furthermore, they usually need to fund their own personal development to remain current in terms of skills and knowledge (Peel and Inkson, 2004). Although intermediary platform firms allegedly refrain from offering training and development services to gig workers, this is not necessarily always the case. As an example, Uber drivers are offered instructions on how to improve their passenger ratings and earnings (Rosenblat and Stark, 2016), while online intermediaries may offer pre-employment training to interim project managers (McKeown, 2016). In New York City, Uber does require poor-performing taxi drivers to attend training sessions – which are outsourced to a labor union – to avoid the situation that these gig workers offer poor services to requesters which could stimulate requesters to leave the Uber ecosystem (Taft, 2018). The provision of training should not come as a surprise, as the most likely alternative option – expelling gig workers from the platform – reduces the supply of labor which stifles multilateral exchanges in ecosystems that have a high demand for labor (such as crowded New York City). Besides training gig workers, intermediary platform firms also train and develop requesters. For instance, meal delivery platforms such as Deliveroo and Uber Eats instruct their requesters – the restaurants – on the working of the algorithm to ensure that meals are ready on time so gig workers do not waste time waiting at a restaurant. Seen from an ecosystem perspective, this is important as wasting gig workers’ time destroys value for them, because they have less time to deliver extra meals and thus generate a lower income.

Performance management. In most cases, performance management in the gig economy is achieved by the setting of performance levels and using requester feedback to rate gig worker performance. Uber, Lyft and Deliveroo, for example, use a rating system which involves soliciting feedback from requesters on a star rating scale. Whenever gig workers collaborate with “regular” employees’ (e.g. freelance cooks who find work via the Temper app to take on gigs at restaurants), performance management is based on the client’s perceptions of the performance of gig workers in terms of collaboration with other team members and joint completion of projects (Coe et al., 2010). These performance management activities enable ongoing multilateral exchanges in at least two ways. First, the star ratings
often add up to reflect the gig workers’ online reputation, which locks the gig worker into the ecosystem as gig workers often cannot “take” their online reputation to another platform ecosystem (Lee et al., 2015). Second, performance ratings should ensure that gig workers create value for requesters because these ratings are used to allocate future “gigs” or as a basis for refusal of access to the platform ecosystem (Rosenblat et al., 2017). Refusal of access to the platform could be likened to dismissal in HRM terms, as platforms such as Uber could be seen “as making termination decisions when the requester feedback reveals that drivers are not meeting the performance levels set by the firms” (Aloisi, 2016, p. 674). Gig workers on the other hand also evaluate requesters. In the case of Uber, for example, drivers are asked to share their knowledge of individual requesters’ behaviors via an online app. Uber has recently applied for a patent to use artificial intelligence (AI) technology to assess when a requester has consumed excessive levels of alcohol by detecting the likelihood they are drunk through typos, and how a requester holds their phone (Forbes, 2018). Intermediary platform firms can use this information alongside gig worker evaluations of requester behaviors to expel difficult requesters from the platform, which ultimately benefits gig workers by creating safer working conditions.

Compensation and benefits. In terms of compensation, requesters compensate for the service provided by gig workers and for the effort spent by the intermediary to match supply and demand for labor. The compensation for gig worker performance is indirect, however, since requesters pay a fee to the intermediary platform firm, of which a part is captured by the intermediary, with the remainder being transferred to the gig worker (Breidbach and Brodie, 2017). In most cases, gig worker compensation equates to short-term, economic inducements in return for a specific contribution by the gig worker (Chen et al., 2015). As an example, workers on Amazon Mechanical Turk are sometimes awarded not more than a few cents for performing micro-tasks such as tagging photos or entering data (Kuhn and Maleki, 2017). To ensure that gig workers live up to the requesters’ expectations, intermediary platform firms may grant requesters the possibility to hold back payment from a gig worker when they feel gig worker performance is below par (i.e. so-called escrow services (Pavlou and Gefen, 2004)). At the same time, seen from an ecosystem perspective, it is important that gig workers find the level of compensation beneficial and appropriate, to ensure that both parties remain engaged in the multilateral exchanges in the ecosystem (Breidbach and Brodie, 2017). The platform Upwork therefore offers payment protection for gig workers, providing they meet a set of conditions. Finally, to further commit gig workers to the ecosystem and ensure a steady supply of labor to requesters, intermediary platform firms outsource the provision of secondary benefits to fourth-party providers. This involves, for instance, the possibility for gig workers to outsource their tax and salary administration to specialized companies that do this for them (McKeown, 2016). Intermediary firms may also ask requesters to provide gig workers with secondary benefits. For instance, in the Deliveroo ecosystems, restaurants provide coupons and discounts to gig workers in return for their active contribution to the ecosystem. Finally, algorithmic control is increasingly premised on psychological insights and tactics to incentivize particular behaviors. Uber uses a variety of in-app notifications to encourage drivers in their choice of locations and duration of work. To avoid the appearance of a direct supervisory relationship with their drivers, Uber words these expectations as helpful hints (“Your next rider is going to be awesome”), not orders (Rosenblat, 2018).

Research propositions
As the examples above show, not only are HRM activities present in the gig economy, they are novel in the sense that they are not exclusively aimed at managing and controlling gig worker performance. Instead, all ecosystem actors are subject – to varying degrees – to
HRM activities. These HRM activities aim to ensure that all ecosystem actors provide value to one another, which ultimately creates a viable platform ecosystem where all actors remain involved and continue to engage in multilateral exchanges. Put differently, in the gig economy, HRM activities do not serve to manage workplaces but are designed to govern semi-regulated marketplaces that manifest as platform ecosystems. On this basis, we propose the following:

**P1.** HRM activities in the gig economy are designed to control and, ultimately, uphold the multilateral exchanges among gig workers, requesters and intermediary platform firms, such that all actors are subject to HRM activities.

*The implementation of HRM activities in the gig economy*

If we are to fully understand the role of HRM activities in the gig economy, it is important to understand that their implementation as the outcomes of HRM activities—the ongoing multilateral exchanges essential for platform ecosystems—is not only contingent on their design, but also on the way they are executed (Bowen and Ostroff, 2004; Meijerink, 2014; Van Mierlo et al., in press). While in regular organizations the design and implementation of HRM activities are the primary tasks of HR professionals and line managers, respectively (Guest and Bos-Nehles, 2012; Bos-Nehles and Meijerink, 2018), in the gig economy this responsibility is shared among gig workers, requesters and the intermediary platform firm. As discussed below, we foresee two types of implementation processes by these actors that underpin HRM activities in the gig economy.

First, we expect that if HRM activities are implemented as intended, that is, in line with the aims set by the platform firm, this will mean the practices uphold the platform ecosystem by ensuring that the multilateral exchanges create value for the ecosystem actors involved. For gig workers, this would involve the following key issues: engaging in performance appraisal to ensure that requesters who show inappropriate behavior are expelled from the platform ecosystem; recruiting new gig workers (through referral schemes) to increase labor supply in the ecosystem; training peers to ensure requesters are offered high-quality services; responding in real-time to algorithmic incentives to put in hours and fulfill requests so that people keep using the platform for services.

We expect that requesters, on the other hand, contribute to the implementation of intended HRM activities by: evaluating gig workers to ensure poor-performing ones are identified; reinforcing the workforce planning activities of intermediary platform firms by continuing to demand labor via the online labor platform; compensating gig workers through the mobile application to ensure that the intermediary platform can capture a part of the fee paid by the requester (the latter is not always implied as requesters may seek to bypass the platform by directly accessing a gig worker).

Finally, the intermediary platform firm supports the implementation of intended HRM activities by: providing requesters and gig workers with the means to share concerns they may have about gig worker performance (by developing online ratings schemes); offering incentives (e.g. including the possibility to offer tips/gratuities via the online platform); fostering learning and development by allowing gig workers and requesters to provide developmental feedback to each other via the app.

Second, gig workers and requesters may also implement HRM activities that are counterproductive to the effective functioning of the platform ecosystem. More specifically, we expect that the interactions among platform ecosystem actors also instigate HRM processes and exchanges which give rise to the implementation of HRM instruments (existing or new) that do not add to the creation of multilateral value for all ecosystem actors involved. For example, this may occur when gig workers and requesters are expected to mutually performance-appraise each other, but they do not. Gig workers and requesters may engage in strategic behaviors when such evaluations are (perceived to be) used by the
intermediary platform firm to match supply and demand. For instance, Uber is suspected of matching taxi drivers and passengers who have high performance rating averages, and vice versa (Chen et al., 2015; Lee et al., 2015; Rosenblat et al., 2017). Under such conditions, it is likely that gig workers and requesters will agree to give each other high ratings in the hope they will be matched with “well-performing” gig workers/requesters in the near future. Research has shown that gig workers instruct (or “train” in traditional HRM terms) requesters on the working of the appraisal schemes to solicit evaluations which might not be reflective of their actual performance (Rosenblat and Stark, 2016). Lastly, although the workforce planning and recruitment activities of intermediary platforms may help to uphold them, they might also induce workforce planning/recruitment activities (possibly undesirable ones) on the part of gig workers and/or requesters. For instance, gig workers might use the online platform to recruit requesters to generate side business from which the platform does not capture any value or that risks annoying the requester (e.g. Uber drivers that also offer interpretation/translation services which they seek to sell to passengers in their cars). Requesters may decide – once linked to a gig worker through the workforce management activities of the intermediary – to continue working with a gig worker outside of the ecosystem. This may occur with online platforms where gig workers and requesters transact on a recurring basis. For instance, requesters who make use of the Helpling platform to find a cleaner to clean their house may bypass the intermediary by directly hiring the services of these gig workers.

Taken together, although the actions of, and exchanges among, gig workers and requesters may help intermediary platform firms to have HRM activities implemented as intended, these HRM activities may also give rise to implementation and exchange processes that run counter to the goals of those intended HRM activities. On this basis, we propose the following:

P2. The implementation of HRM activities results from the very multilateral exchanges among platform ecosystem actors they are intended to control, such that effectiveness (or the lack thereof) of HRM activities in governing the platform ecosystem follows from indeterminacy of the actions of gig workers, requesters and the intermediary platform firm who are simultaneously initiators, implementers and recipients of HRM activities.

Questions and directions for future research on HRM in the gig economy
In this final section, we outline a series of directions that can guide future research on HRM in the gig economy based on an ecosystem perspective. In line with our framework and propositions, we propose research on the role of HRM activities in upholding the multilateral exchanges among gig workers, requesters and intermediary platform firms (P1); and the implementation of HRM activities through these multilateral exchanges (P2).

HRM for ensuring ongoing multilateral exchanges in platform ecosystems
In the gig economy, HRM activities help to sustain multilateral exchanges by ensuring that all actors co-create multilateral value for each other. To some degree, however, the creation of value is a zero-sum game when it comes to capturing value from requesters, that is, the money that requesters are willing to pay. Here, both gig workers and online platforms seek to capture value in terms of generating an income vs generating rent, respectively. At the same time, as the man-in-the-middle, the platform firm is in a more powerful position to determine prices, set gig worker compensation, and thus influence how much rent it can capture itself (Chen et al., 2015; Lee et al., 2015). The question therefore arises as to whether and under which conditions HRM activities installed by intermediary platform firms serve the creation of value for all actors vs the creation of
value primarily for the intermediary firm. These firms may capture a disproportionate amount of value, and their activities may disadvantage, or exploit, other ecosystem actors. In our view, this depends on at least three conditions. First, the life cycle stage of the platform ecosystem may help predict the role of HRM in value creation processes. When a platform firm initially establishes the ecosystem, HRM activities are more likely to favor gig workers and requesters in order to create network effects whereby many gig workers and requesters want to join and stay. Anecdotal evidence suggests that creating network effects is very costly, with platform firms initially making big losses to ensure value is created for those offering supply and demand (Lieman, 2018). In later stages, however, when network effects lead to one platform outcompeting rival firms and locking in gig workers and requesters, HRM activities may be directed toward allowing the dominant platform firm to capture disproportionate amounts of value to make up for the initial losses and start making profits. Such trends may explain the changes increasingly reported in the media about the way intermediary platform firms adapt their terms and conditions for paying gig workers (Hatch, 2016; Lieman, 2018).

Second, the design of HRM activities may depend on the availability of gig workers. Here, it is more likely that HRM activities serve the creation of value for gig workers when workers are in limited supply or possess rare/scarc skills (Lepak and Snell, 1999).

Finally, a hybridization of HRM activities can be expected, meaning that some HRM activities are geared toward creating value for gig workers and/or requesters, while other HRM activities enable the platform firm to capture value. For instance, while secondary benefits may benefit gig workers with coupons and discounts being provided for their active contribution to the ecosystem, surge price systems may primarily benefit the platform. The latter happens with Uber’s surge prices, which change too rapidly (sometimes by the second) for gig workers to act upon them to boost their income (Lee et al., 2015), and with Uber capturing a larger portion of the surge prices paid for by requesters (Chen et al., 2015). Such actions may lead gig workers to leave the platform – in particular in its initial stages when network effects are not strong – and start working (more frequently) for a competing (intermediary platform) firm. Accordingly, we see great value in future studies that examine how the HRM activities of an intermediary platform firm are dependent on those of rival platform firms, the life cycle stage the platform ecosystem is in, the size of network effects, gig worker availability, and the need to differentiate HRM activities to benefit different ecosystem actors.

Another fruitful avenue for future research is to explore whether different HRM activities (or bundles thereof) are used to uphold different types of ecosystems. Building on the notion that platform ecosystems are semi-regulated marketplaces, we argue that they differ in whether they are liberal or coordinated markets (Hall and Soskice, 2001). It is likely that some platform ecosystems are more liberal, with the intermediary firm governing the platform ecosystem solely on the basis of economic principles (e.g. surge prices, limited interference of societal stakeholders, arm’s-length relationship with gig workers), while others are more coordinated in the sense that the platform applies more non-market approaches to govern the ecosystem (e.g. allowing gig workers to unionize, investing in generic skills of gig workers, participation of gig workers in decision-making, allowing gig workers more control over the work process). The same intermediary platform firm may set up different types of ecosystems, depending on the country in which it operates. For instance, the Uber ecosystem seems to be more liberal in the USA as there are limited barriers preventing gig workers from entering the platform, making supply and demand less regulated. In the Netherlands, the Uber ecosystem is less liberal as public policies only allow those with a taxi driver’s license to work via the Uber platform. Furthermore, although most of the well-known, so-called “unicorn” intermediary platforms (e.g. Uber, Lyft, Grab, Deliveroo) seek to uphold liberal ecosystems, there are examples of coordinated ecosystems...
such as platform-cooperatives (e.g. Up & Go and Loconomics) where gig workers equally share in the incomes generated, decision-making is more democratic, and a short-term return on investment is not the ultimate goal. Provided that ecosystem actors interact differently and may seek to create different types of value (e.g. economic vs social), it is likely that different HRM activities will be used to manage ecosystems oriented toward different values. On this basis, future studies could explore whether liberal platform ecosystems are controlled by means of HRM activities such as surge prices, escrow services, algorithmic task allocation and investment in platform-specific skills, and whether in coordinated platform ecosystems, HRM activities such as investment in generic gig worker skills, employee ownership plans and gig worker representation occur more frequently.

Finally, it is worthwhile exploring the mechanisms through which HRM activities coordinate the multilateral exchanges among gig workers and requesters. We see at least two ways in which HRM activities of platform firms may affect the functioning of their platform ecosystem: by creating lock-in effects or committing ecosystem actors. Platform firms may install HRM activities to lock-in gig workers and/or requesters to ensure they continue taking part in multilateral exchanges. Examples of HRM activities that have a potential lock-in effect are performance appraisal when gig workers and requesters cannot take their online reputation to another platform (Kuhn and Maleki, 2017) and workforce management when strict algorithmic task allocation requires gig workers to develop, what we call, platform-specific skills needed to learn how to create the most economic value out of joining an online platform.

On the other hand, HRM activities may also foster continued multilateral exchanges by committing gig workers and requesters to the platform ecosystem by seeking durable relationships. HRM activities that likely encourage ecosystem actors to commit include compensation and workforce management when more profitable tasks are allocated to more senior gig workers or more qualified gig workers are referred to requesters who have been with the platform ecosystem for a long time. For future studies, it is worthwhile exploring which HRM activities platform firms use to lock-in and/or commit ecosystem actors, and examine the explanatory power of lock-in and commitment-mediating mechanisms in explaining the relationship between HRM and long-term platform ecosystem effectiveness.

The implementation of HRM activities in the gig economy and platform ecosystems
In the gig economy, various HRM activities are implemented by gig workers and requesters. Since these ecosystem actors’ primary task is to supply or demand labor, they might not see implementing HRM activities as a responsibility that comes naturally to them. This raises the question of under what conditions would requesters, gig workers and intermediary firms be motivated to implement HRM activities? This is particularly interesting when it comes to performance management. Why would requesters be willing to evaluate the performance of gig workers when they only make use of their services for a short period or are assigned different gig workers every time they outsource a gig-based activity? In our view, requesters may still be willing to evaluate gig worker performance. This may be linked to the idea of these activities being seen as a means of reciprocating gig worker efforts; to benefit other requesters by reporting poorly performing gig workers who need to be expelled from the platform; to reciprocate the efforts of the community of requesters that helped to create a safe ecosystem; or to receive a better service when making use of a gig worker’s service in the future. In line with our ecosystem perspective, the desire of requesters to evaluate gig worker performance likely depends on the characteristics of the platform firm (e.g. whether it allows requesters to select a gig worker themselves, allows repeated exchanges between the gig worker and requester, or uses appraisal data to match requesters and gig workers); the characteristics of the gig worker (e.g. the quality of service s/he provides, whether s/he asks the requester to provide feedback, or the scarcity of his/her
skills); or the characteristics of the requesters (i.e. whether it is an individual consumer or organization, his/her tendency to reciprocate others’ efforts, or his/her beliefs of why requester appraisal is requested). We see great value in future studies that explore the various reasons that platform ecosystem actors engage in performance appraisal activities and whether this is impacted by platform, requester, and gig worker characteristics (and the interplay among them).

Furthermore, requesters may decide to implement HRM activities which they are not expected to implement, but nevertheless do so because the intermediary platform firm refrains from doing so. In their desire to avoid establishing an employment relationship, platform firms often do not offer training possibilities to gig workers, withhold selected secondary benefits, and provide limited instructions for work performance. Not only does this raise the question of how intermediary platform firms seek to balance the tension between controlling gig worker efforts while simultaneously refraining from creating the appearance of an employment relationship, it also presents the question of who implements HRM activities which are not implemented by the platform firm? Requesters may decide to compensate for the limited involvement of platform firms in HRM by adopting HRM responsibilities which are traditionally executed by an employer. In fact, research shows that requesters do indeed provide secondary benefits or instructions to develop the knowledge and skills of gig workers (Lieman, 2018). Accordingly, future research may explore under which conditions requesters start to adopt more employer-like HRM responsibilities.

Finally, there are possibilities that gig workers get to collaborate with other workers who do have an employment relationship. It is plausible that firms that did most of their hiring traditionally a decade ago may now be experimenting with hybrid forms of hiring which co-mingle traditional employment systems and the assignment of work to self-employed contractors, freelancers and project workers. We already see these examples being put into practice, with, e.g., restaurants hiring freelance cooks via platforms like Temper, which collaborate with workers employed by those very restaurants. A recent initiative by PwC is another example of traditional workers and gig workers co-mingling in new ways. This intermingling of gig-based and traditional work arrangements raises questions about the role and implementation of HRM activities within the requester’s organization. For instance, what is the impact of such hybrid systems on HRM specialists? What kinds of additional skills and competences do HRM practitioners require to operate in such hybrid employment ecosystems where traditional notions of fairness, obligation and exchange are challenged by combinations of employed and non-employed personnel populating temporary projects? How do “regular” workers react to their possible or actual inclusion in platform ecosystems?

Conclusion
In this paper, we conceptually explored the notion of HRM in the gig economy, as intermediary platform firms are trying to avoid establishing an employment relationship with gig workers, yet at the same time do design and seek to implement a variety of HRM activities. By drawing on the ecosystem concept, we developed propositions which predict that HRM activities in the gig economy are designed to govern platform ecosystems by aligning the multilateral activities of gig workers, requesters and intermediary platform firms, which in turn give rise to the implementation of these very HRM activities. On the basis of our platform ecosystem perspective on HRM in the gig economy, we proposed directions for future research. In doing so, we hope that future research will continue to explore the multilateral exchanges among gig workers, requesters, and intermediary platform firms and how these shape and are shaped by HRM activities in the gig economy.
1. Gig work may also involve assignments (or “gigs”) which are assigned without the help of intermediary (platform) firms. However, due to the proliferation of intermediary platform firms and the HRM activities they design and seek to implement, this paper exclusively focuses on platform-enabled gig work and its implications for human resource management.

References


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Appendix

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<th>Case</th>
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<th>Details</th>
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<td>Aslam v Uber</td>
<td>New Law Journal</td>
<td>Judge held claimants are “workers” and entitled to paid annual leave, sick pay, a maximum 48 h working week, the national minimum wage and the protection of whistleblowing legislation. The claimants sought compensation for failure to pay the minimum wage and failure to provide paid leave. Two claimants complained of detrimental treatment on “whistle-blowing” grounds. The Employment Appeal Tribunal upheld the employment tribunal’s earlier ruling that the drivers are “workers” as defined by the Employment Rights Act 1996, in Uber BV &amp; Ors v Aslam &amp; Ors. Delivering her judgment, Judge Eady QC, sitting alone, concluded: I do not consider it was wrong to hold that a driver would be a worker engaged on working time when in the territory, with the app switched on, and ready and willing to accept trips (“on-duty”, to use Uber’s short-hand)</td>
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<td>Case 2202551/2015</td>
<td>November 4, 2016</td>
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<td>London Central employment</td>
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<td>tribunal, November 2016</td>
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<td>Uber BV &amp; Ors v Aslam &amp; Ors</td>
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<td>(2017) UKEAT 0056_17_1011</td>
<td>November 10, 2017</td>
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<td>Pimlico Plumbers Ltd and another v Smith (Respondent) (2018) UK SC</td>
<td>Supreme Court UK Judgments (<a href="http://www.supremecourt.uk/cases/docs/uksc-2017-0053-judgment.pdf">www.supremecourt.uk/cases/docs/uksc-2017-0053-judgment.pdf</a>)</td>
<td>Supreme court rejected an appeal by Pimlico Plumbers to the finding that Mr Smith, by virtue of the extensive controls over his performance, and requirement for him to provide services in person, had the status of a worker under several pieces of legislation and not as self-employed. A Spanish court has ruled that a Deliveroo rider is an employee rather than a self-employed contractor. As the rider in question was a Deliveroo employee, the court found that his dismissal from the company was inappropriate and ordered him to be either rehired or compensated.</td>
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<td>Intersindical Valenciana vs Deliveroo</td>
<td>Reuters</td>
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<td>June 4, 2018</td>
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Table Al. Examples of legal challenges to the “gig” employment status

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Explaining the decline of tipping norms in the gig economy

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Abstract
Purpose – Advances in information technology have enabled new ways of organizing work and led to a proliferation of what is known as the “gig economy.” While much attention has been paid to how these new organizational designs have upended traditional employee–employer relationships, there has been little consideration of how these changes have impacted the social norms and expectations that govern the relationship between workers and consumers. The purpose of this paper is to consider the social norm of tipping and propose that gig work is associated with a breakdown of tipping norms in part because of workers’ increased autonomy in terms of deciding when and whether to work.

Design/methodology/approach – The authors present four studies to support their hypothesis: a survey vignette experiment with workers on Amazon Mechanical Turk (Study 1), an analysis of New York City taxi data (Study 2), a field experiment with restaurant employee food delivery drivers (Study 3) and a field experiment with gig-worker food delivery drivers (Study 4).

Findings – In Studies 1 and 2, they find that consumers are less likely to tip when workers have autonomy in deciding whether to complete a task. In Study 3, they find that restaurant delivery employees notice upfront tips (or lack thereof) and alter their service as a result. In contrast, in Study 4, they find that gig-workers who agree to complete a delivery for a fixed amount that includes an upfront tip (or lack thereof) are not responsive to tips. Together, these findings suggest that the gig economy has not only transformed employee–employer relationships, but has also altered the norms and expectations of consumers and workers.

Originality/value – The authors present four different studies that consider the social norm of tipping in the context of gig work. Together, they highlight that perceptions of worker autonomy have driven the decline in tipping norms associated with gig work.

Keywords Pay, Social norms, Organizational behaviour, Temporary workers

Paper type Research paper

Introduction

Advances in information technology have decreased the costs of coordination, leading to an overall shift toward proportionately more use of markets – rather than hierarchies – to coordinate economic activity (Malone et al., 1987). In recent years, this shift has been most visible in what is often dubbed the “gig economy.” In the gig economy, consumers can be seamlessly connected to on-demand independent contractor workers, rather than employees of a hierarchical organization. And unlike in traditional salaried jobs in hierarchical organizations, gig economy workers are typically paid not by the year or even by the hour, but by the task (Chen and Horton, 2016; Friedman, 2014).

A growing literature documents how the gig economy has upended the traditional employee–employer relationship and explores the implications for both workers and employers. The gig economy enables many workers to diversify their income streams through side ventures, such as performing freelancing work through websites like Upwork and driving for ridesharing companies like Uber and Lyft. Indeed, while many Americans do not report holding more than one job, more people are filing 1099 tax forms than in past years (Kuhn, 2016). For employers, the fact that these short-term workers do not need to be
staffed year-round allows companies to avoid paying benefits like healthcare, and to better handle work fluctuations throughout the year (Houseman, 2001).

Less attention has been paid to how the growth of the gig economy has altered the social norms and expectations that govern the relationship between workers and consumers. Research in other domains has found that putting a price on a specific task – a common feature of the gig economy – can lead to a breakdown of previously existing social norms. For instance, Ariely (2008) describes the success AARP experienced when asking lawyers for free services for needy retirees vs a discounted rate of $30 – a fee which all the lawyers deemed too small. Zero dollars is rarely more attractive than $30, but “once market norms enter our considerations, the social norms depart” (Ariely, 2008). Similarly, Gneezy and Rustichini (2000) found that when day-care centers imposed a fine for parents who picked their children up late it led to more parents picking their children up late, presumably because the market mechanism of the fine crowded out previously existing social motivations. It stands to reason, then, that because consumers pay gig economy workers by the task, previously existing social motivations that governed the relationship between consumers and workers may deteriorate. Here, we consider one such social norm: tipping.

**Tipping norms in the gig economy**

Tipping is a social phenomenon that generates some $42bn dollars of income annually for workers in the American food industry alone (Azar, 2007, 2010). Some authors argue that tips serve as a pay-for-performance model to motivate worker performance (Lynn et al., 2011; Shen et al., 2014), while other common explanations for tipping are that people first, are altruistically motivated and tip primarily to “help servers” who make a low base wage, second, tip to “reward service,” driven by reciprocity norms and a desire to ensure that exchanges are equitable, and third have internalized tipping norms and tip out of a sense of duty or obligation (Harris, 1995; Lynn, 2015a, b). Broadly, the strongest arguments for tipping combine extrinsic and intrinsic factors through both market transactions and social norms of reciprocity (Azar, 2003; Johnson, 2005). Meanwhile, when people fail to tip, research suggests that they are striving to avoid implied social status differences between themselves and the receiver, or that they simply want to save money (Lynn, 2015b).

With the advent of new mediums such as Uber, Lyft and Grubhub for ridesharing and delivery services, consumer tipping behavior is changing commensurately. Several lines of evidence suggest that the gig economy is associated with a decline in tipping norms, and surveys indicate that young consumers who disproportionately contribute to the gig economy are less motivated by tipping norms than older consumers (e.g. Lynn, 2017). Customary tips for taxi drivers are over 20 percent of the base fare, whereas average tips to Uber drivers are reportedly only approximately 5 percent of the base fare (Wong, 2018).

Why is it that tipping taxi drivers is commonplace, but tipping Uber drivers is not? We propose that gig-workers’ increased autonomy over whether and when to work is a crucial factor. More specifically, because workers can choose when to work and are paid by the task – rather than by the year or the hour – market norms crowd out the internalized social tipping norms that compel some consumers to tip out of a sense of obligation or duty. Some consumers may also feel less motivated by reciprocity or equity norms, since in the gig economy a consumer can rest assured knowing that a worker would not have accepted the task in the first place if it were not worthwhile for them. These forces, in turn, decrease workers’ expectations of tips and tip-based performance motivations. As a result, while many traditional service workers are motivated to “work for tips,” we hypothesize that gig economy workers are relatively motivated simply to complete tasks at the predetermined price they were offered.
We present four studies to support our hypothesis: a survey vignette experiment with workers on Amazon Mechanical Turk (Study 1), an analysis of New York City taxi data (Study 2), a field experiment with restaurant employee food delivery drivers (Study 3) and a field experiment with gig-worker food delivery drivers (Study 4).

**Study 1**
To test our theory that worker autonomy influence consumers’ tipping motivations, we conducted a survey vignette experiment using workers on Amazon Mechanical Turk. We first collected pilot data with 174 participants that supported our hypothesis. We then collected a larger sample as described here to replicate our main result. In order to better understand participants’ thinking, we also included an additional open-ended question that was not in the pilot study.

**Method**
**Participants**
We recruited 392 participants on Amazon Mechanical Turk for payment.

**Materials and procedure**
Upon entering the survey, participants were asked to imagine that they needed groceries to make dinner later than night, but did not have any time to shop. They were then told about “a service, Shop4You, where you can pay for your groceries to be picked up and delivered to your house.”

**Manipulation**
Participants were randomly assigned to one of two conditions: a gig condition, or an employee condition. After reading about the Shop4You service, participants in the gig condition read that “it will take approximately 1 hour to pick up and deliver your groceries, and the worker on Shop4You has agreed to do the job for $10.” In contrast, participants in the employee condition read that “it will take approximately 1 hour to pick up and deliver your groceries, and Shop4You pays their employees $10 per hour.”

**Measures**
Participants were then asked whether they would tip the worker (yes/no), how much they would tip the worker ($0–$10), and why or why not they would tip the worker (free response).

**Results**
As shown in Figure 1, participants in the gig condition said that they would tip $2.53 (SD = 1.91) on average, significantly less than participants in the employee condition who said they would tip $3.06 on average (SD = 2.01), t(390) = 2.64, p < 0.01. Since the grocery delivery cost $10 in both conditions, this is an average tip of 25.3 percent in the gig condition vs 30.6 percent in the employee condition. This difference was driven in part by the fact that more people in the gig condition say they would not tip at all. Whereas only 80 percent of participants said they would tip in the gig condition, 86.5 percent of participants said they would tip in the employee condition, a notable but not statistically significant difference, \( \chi^2 (1) = 2.367, p = 0.124 \). However, participants who said they would tip in the employee condition still said they would tip more ($3.50 on average) than participants who said they would tip in the gig condition ($3.08 on average), t(325) = 2.18, p = 0.030.

Responses to the open-ended question support our hypothesis that worker autonomy is of critical importance. In the gig condition, 38 of 192 participants said they would not tip at all, and 10 of those participants specifically mentioned the word “agree” in their explanation.

Decline of tipping norms
for their choice. For instance, participants who indicated that they would not tip said things like “they agreed to do it for $10 and nothing more,” and “I do not believe this is a service that typically involves tipping. We have already agreed on a set fee amount.” Four other participants did not specifically use the word “agree” but similarly attributed their decision not to tip to driver autonomy. For instance, one participant wrote, “from the information above, I would have ordered online and paid so picking up and delivery for $10 is appropriate if the driver sets his own pricing” [emphasis added]. Notably, these 14 people who specifically touched on worker autonomy represent 7 percent of participants in the gig condition, which is almost exactly the difference of non-tippers between the two conditions (86.5 percent vs 80 percent).

Discussion
Our results support our hypothesis highlighting the role of worker autonomy in explaining the decline of tipping norms in the gig economy. While the survey only considered a hypothetical company, Shop4You, Study 1 shows that consumers’ perceptions of worker autonomy can have a significant impact on consumers’ tipping motivations.

Study 2
In an analysis of NYC taxi data published in Bloomberg, Chemi and Giorgi (2014) found that tip percentages fall sharply for fares ending in 5 or 0. To explain this “mysterious” effect, the authors surveyed a range of leading behavioral experts, including Richard Thaler from the University of Chicago, Dan Ariely from Duke, Andrew Lo from the Massachusetts Institute of Technology and Cass Sunstein from Harvard, but none of the leading experts could offer a satisfying explanation. Despite not being able to explain the finding, Chemi and Giorgi suggested that a “trick for taxi drivers is to not let the fare hit that round number. The average tip at $60 is $8.82, but the average tip at $59 is $10.33. So in fact, going from $59 to $60 resulted in a loss of $1.50 in tip – more than the difference in fare.”

We suspected that there might be something faulty with the conclusions of Chemi and Giorgi and, furthermore, that uncovering that error might reveal other rich insights about tipping behavior. More specifically, we suspected that the round number effect might actually be an artifact of the disproportionately large number of “Negotiated Flat Fare” rides that end in a 0 or 5, which are unmetered fares to locations outside of the city. According to the NYC Taxi and Limousine Commission[1], taxi drivers may choose whether to take such trips, and the fare must be mutually agreed upon by the driver and passenger before the trip may begin. Because drivers have autonomy over whether to
accept an offer for a negotiated fare, we hypothesized that customers would feel less motivated to tip compared to when taking metered fares, where drivers are not able to reject a rider or set their own rate.

Data
Our data come from the NYC Taxi and Limousine Commission data set, which includes data on over a billion taxi rides in the last ten years. To conduct our analysis, we select just one month of data – specifically, June 2013 – comprising over 14m rides. We remove all rides paid for in cash because cash tips are not included in the data set, whereas tips paid for with a credit card are automatically included. We also remove all fare types besides metered fares and negotiated fares, as well as rides with a fare amount of over $100, resulting in a data set of 7,553,909 rides.

Results
Average tip size was $2.37 (SD = 1.95) on metered fare rides (n = 7,525,174), compared to $6.46 (SD = 6.65) on negotiated fare rides (n = 28,735). However, since metered fare rides tend to be shorter and less expensive than negotiated fare rides out of the city, we regressed tip amount on fare type and controlled for fare amount in order to examine the effect of fare type on tipping behavior. Results, as seen in Figure 2, show that there is indeed a substantial difference in tipping behavior on metered rides vs negotiated rides, and no round number effect. As expected, we found a positive effect of fare amount, $b = 0.176, SE = 0.000064, t(7553906) = 2757.7, p < 0.001, and a negative effect of negotiated fare type, $b = -2.32, SE = 0.0086, t(7553906) = 268.5, p < 0.001, indicating that tips to drivers for negotiated fare rides are significantly lower than those for metered fare rides.

![Figure 2.](image)

The impact of fare amount and fare type on average tip size (considering all passengers including non-tippers) to NYC taxi drivers in the month of June 2013
Next, we examined whether lower tips on negotiated fare rides were driven by fewer people tipping, or by people tipping less. We found that while 97.0 percent of people tipped on Metered Fare rides, only 72.4 percent of people tipped on negotiated fare rides. As shown in Figure 3, when non-tippers are excluded from the data set, the difference in tipping behavior between metered fares and negotiated fares shrinks, especially for fares below $50 where there does not appear to be any difference in tip amount based on the fare type.

**Discussion**

While taxi drivers are not typically considered gig-workers, they effectively become so temporarily when they are hired for negotiated fares because they have autonomy over whether or not they complete these trips. This is an advantage of this study because a direct comparison of tips to taxi drivers vs Uber drivers could be confounded by systematic differences in the types of people who choose to become one or the other (e.g. if passengers perceive that Uber drivers are wealthier than taxi drivers and in less need of tips) (Brewster, 2013, 2015). Here, the fact that people tip less, on average, when taking negotiated fare rides is consistent with our theory about the decline of tipping in the gig economy.

**Study 3**

Together, Studies 1 and 2 demonstrate that some consumers are less motivated to tip when workers have increased autonomy of whether and when to complete a task. How might such decreases in tipping norms, in turn, impact workers’ expectations and behavior? To address this question, we ran two experiments in the domain of ordering food delivery. Whereas in the past consumers needed to call a restaurant directly to place an order, consumers can now place their orders on a host of online platforms. While some of these platforms simply take care of the ordering process, there are also many third-party delivery services where gig-workers pick up and deliver food so that the restaurants do not need to staff their
own employees. In Studies 3 and 4, we explore the differences of these two models from the worker’s perspective.

In Study 3, we ran an experiment with one such platform, Foodler, but did not order from any restaurants with third-party delivery drivers. The Foodler platform simply connected us to the restaurants and their employees and did not replace the delivery drivers, so, presumably, the restaurant employee drivers also complete many deliveries ordered the old fashioned way (i.e. over the phone). Therefore we hypothesized that these restaurant-employee delivery drivers would still expect tips, notice whether a tip has been provided upfront, and alter their performance as a result. Specifically, we hypothesized that these delivery drivers would deliver food faster if they had not yet been tipped compared to when they were tipped before delivering the order. Furthermore, we hypothesized that if a driver noticed a relatively large upfront tip, they would be motivated by reciprocity norms to deliver food faster compared to when a small tip is provided upfront.

Method

Participants
Participants were 115 delivery drivers who were tasked with delivering food to an address in the greater Boston area over the course of five years (2012–2017).

Materials and procedure
Sampling procedure was opportunistic: the experimenter and several of his friends collected a new data point each time they decided to order food over a five-year period.

Manipulation
The experimenter manipulated whether the tip for the delivery was provided upfront on the Foodler platform or withheld the tip until the time of delivery.

Measures
The time the delivery took was the measure of interest, which was calculated based on the difference in time of the order confirmation e-mail and the time of delivery. Other variables collected included the genre of the restaurant and the order subtotal.

Results
Orders were delivered in 38.77 min (SD = 13.21 min) when the tip was withheld until the time of delivery, which was significantly faster than the 45.67 (SD = 20.28 min) minutes on average when drivers were tipped up front, \( t(79.8) = 2.22, p = 0.036 \). We also found that when tips were provided upfront, drivers tended to deliver food faster when the tips were larger (see Figure 4), despite seemingly not having any additional incentive to do so besides feelings of goodwill or reciprocity. Indeed, considering only those deliveries where tips were provided up front, regressing delivery time on tip percent yields a significant coefficient for tip percent, \( b = -0.69, SE = 0.30, t(77) = 2.30, p = 0.024 \), when also controlling for the genre of food delivered (Mexican, Pasta, Pizza, Sushi, Thai or Wings).

Discussion
Study 3 shows that even when tasks are organized through an online platform, drivers still expect tips and alter their performance as a result when they are restaurant employees. Thus, Study 3 helps to isolate worker autonomy, rather than the use of third-party services for structuring work, as a driver of declining tipping norms. In other words, it suggests that tipping norms decline in the gig economy not because services are ordered online or over a smartphone app, but because the workers have control over whether they work at that time.
Study 4
While Study 3 shows that restaurant employee delivery drivers are motivated by tips, it does not show anything about how gig-workers in the same role may behave differently. To consider that question, we conducted a similar experiment in another city where Grubhub – another food ordering platform – was dominant. On Grubhub, drivers are usually independent contractors who do not work for the restaurant. As a result, the Grubhub drivers likely complete fewer deliveries ordered over the phone, and they likely complete fewer deliveries where a tip has not been provided upfront compared to the drivers in Study 3. Therefore, we hypothesized that Grubhub drivers have learned to expect fewer tips upon arrival at a customer’s location and, as a result, are relatively less motivated by tips.

Furthermore, when Grubhub drivers accept the task of delivering an order, they see a composite price that incorporates the tip amount and specifies the pick-up location (i.e. the restaurant address) and the drop-off location (i.e. the customer’s location), and they then decide whether to accept or decline the delivery. Therefore, we hypothesized that compared to the drivers in Study 3, the Grubhub drivers would be less likely to even notice tips in the first place, and the size of upfront tips would have little impact driver performance. Of course, this is not to say that the Grubhub drivers would not appreciate the additional income from larger tips. Rather, the difference is that the restaurant employees can only increase their wage by “working for tips,” whereas the gig-workers can best increase their wage by completing as many high-value deliveries as quickly as possible regardless of the relative size of the tip compared to the base fee.

Method
Participants
In sum, 154 food delivery orders were placed using Grubhub by 12 individuals, who were recruited by the experimenter in exchange for $6 per order. Some drivers were interviewed for their experiences.
Materials and procedure
Orders were placed through online applications. Tips were randomly selected to be $0, $2 or $6 given on the app. Each driver received a total of $6, the difference between the randomly selected tips and $6 was made up in cash at the door.

Follow-up interviews were conducted with five Grubhub affiliates over the phone and online communication platforms using the following structured questions:

1. Can you see tips before accepting an order?
2. Do you expect tips when none are listed?
3. Does the size of the tip matter? If yes, please describe the different conditions.
4. When do customers tend to tip you?
5. Do you provide different service based on the tip?

Measures
Participants reported the time elapsed from placing the order until the food arrived at the door. Interviews with drivers provided qualitative data.

Results
The average delivery time across all conditions was 39.93 min (SD = 17.04 min). To determine if our experimental manipulation affected food delivery times, we first considered the average delivery time within each condition. In the $0 at-the-door condition, the average delivery time was 40.30 min; in the $2 at-the-door condition, it was 38.54 min; and in the $6 at-the-door condition, it was 40.98 min. Next, in order to control for factors such as the subtotal of the order, the genre of food and the distance to the restaurant, we regressed the total time of delivery on a dummy variable for the condition (i.e. $0 at-the-door, $2 at-the-door or $6 at-the-door), the order subtotal, the distance (in miles) from the restaurant to the delivery address, and the genre of food. Of these, the only significant effect was the delivery distance (b = 6.12, t = 1.99, p = 0.0025), indicating that each additional mile added, on average, 6 min to the delivery time. As shown in Figure 5, a simple regression of average time on tip percentage up front also found no effect, suggesting not only that the timing of tips did not matter, but also their size.

To further support this quantitative data, we conducted multiple, structured, qualitative interviews with Gruhub drivers and the company itself. We spoke with a Grubhub representative who confirmed that drivers can see the total amount of an order before accepting it. When speaking with the Grubhub drivers, we learned that this information is present, but the additional money they receive is presented as a bundle (delivery fee, mileage reimbursement and tip). Drivers report using a rule of thumb to determine the tip (anything above $5 is tip), and that they do not expect any additional cash at the door for their service.

Drivers expressed value in being able to work at times that fit their schedule and location. The biggest complaint was not with tips given, but how Grubhub only allows workers to take jobs in blocks as opposed to individual deliveries. These blocks are roughly 2-h long and require workers to sometimes take deliveries they otherwise would choose not to accept (for reasons of distance, value of the order compared to compensation, etc.).

Discussion
The findings of Study 4 support our hypothesis that the size of the upfront tip will not impact delivery times when deliveries are made by gig-workers. While it is intriguing that
larger upfront payments did not correlate with faster delivery times indirectly through increasing the total fee for those deliveries, it is perhaps not surprising given the Grubhub drivers are motivated to complete all rides as quickly as possible – regardless of the total fare – so that they can complete more total deliveries. In contrast, restaurant delivery drivers may find it advantageous to prioritize some deliveries over others in order to garner more and larger tips. Furthermore, the Grubhub drivers were reportedly surprised to receive any tips at the door, and often times almost left before the experimenters even had an opportunity to offer the cash tip. Thus, unlike the restaurant deliver drivers, the Grubhub drivers have learned not to expect many tips at the door, and therefore they would have little incentive to prioritize some deliveries over others even if they were completing several orders at once.

General discussion
Study 1 demonstrates that people tip workers more if they perceive them to be employees, rather than gig-workers who agree to complete a task at a set price. Study 2 extends this finding to a real world setting. Studies 3 and 4 provide evidence suggesting that tips have a significant impact on service when restaurant-employed drivers deliver food, but not when gig-workers do. Together, these studies suggest that worker autonomy over when and whether to work erodes customer motivations to tip and that gig-workers are, in turn, relatively less motivated by tips than traditional service employees.

Of course, there are many limitations to these studies. Broadly, one limitation is that the definition of gig work is inherently vague and shifting. For example, many workers fail to list their side jobs – such as driving for Uber – on survey data (Kuhn, 2016). That being said, the gig economy itself is described as “contingent work” by the Bureau of Labor Statistics (2017) and, therefore, the presence of long-term gig workers might be discounted or overlooked by the fact that “contingent work” is often not considered to be a career. Another broad limitation of these studies is that we only study the impact of one social norm in just a
few select contexts. Future work will examine the changes in tipping behavior in other settings, and examine other ways in which gig work models have transformed the relationship between consumers and workers.

More specifically, each of the four studies has limitations as well. In Study 1, perceptions of autonomy were not directly measured. While there are no differences between the two key conditions except for the framing of the workers as having autonomy over whether to complete the task, the results may actually be driven by some other association, such as a belief that gig-workers have access to other income streams and are less in need of tips. Similarly, in Study 2, while all the workers are NYC taxi drivers it is possible that some drivers are more likely to accept Negotiated Fares, and these drivers may have other differences that make them less likely to receive tips. Studies 3 and 4 explore workers’ responses to tips as employees and as gig workers. However, while the results are consistent with the idea that tipping norms have changed as a result of the switch from an employee-driver model to a gig-driver model, there may be other factors explaining the differences observed, such as the fact that the studies were conducted in two different cities.

Despite these limitations, these four studies together paint a consistent picture of how tipping norms are evolving in the gig economy. Importantly, once tipping norms deteriorate, it may be very difficult to re-establish them (e.g., see Gneezy and Rustichini, 2000). When looking at a company like Uber, a large employer of contract workers, consumers have received the same message for years: “There’s no need to tip” (Rosenbloom, 2016). Although it was formerly said that the tip is included, that is no longer the case. For instance, an article titled “Uber’s New Tipping Policy Is a Mistake” (Mohammed, 2016) outlines the changes Uber made to its tipping policy, essentially punctuating a seamless rideshare experience with a murky mix of social norms and market transactions. Signs were often hung explaining that “tips are not included on Uber’s platforms,” but that “riders are free to offer tips and drivers are free to accept them” (Mohammed, 2016).

One implication of these studies is that consumers – and, by extension, managers – may have less ability to control service quality in the gig economy. While the widely used solution of rating systems helps ensure a baseline level of service among gig-workers, both customers and managers still lose a certain amount of control over personalizing service for customers who place a greater value on it.

More broadly, an implication of these studies is that while the marketization of tasks may make things more efficient, it may also have the unforeseen effect of crowding out preexisting social norms and expectations. Whether this is for better or worse depends on the context and one’s perspective. Certainly some social norms may have more costs than benefits and, indeed, tipping norms have many negative consequences like enabling a form of racial wage discrimination (Lynn et al., 2008). But it may also be that by eroding previously existing social norms, the marketization and gigification of tasks increasingly enables both managers and customers to view workers as another means of production, rather than fellow human beings.

Note

References


Further reading

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Platforms as entrepreneurial incubators? How online labor markets shape work identity

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Abstract
Purpose – The purpose of this paper is to explore how the process of work identity construction unfolds for gig workers experiencing unstable working relationships in online labor markets. In particular, it investigates how digital platforms, intended both as providers of technological features and online environments, affect this process.
Design/methodology/approach – The authors conducted an exploratory field study and collected data from 46 interviews with freelancers working on one of the most popular online labor markets and from online documents such as public profiles, job applications and archival data.
Findings – The findings reveal that the online environment constrains the action of workers who are pushed to take advantage of the platform’s technological features to succeed. This interplay leads workers to add new characteristics to their work-self and to and to develop an entrepreneurial an entrepreneurial orientation.
Practical implications – The study offers insights to platform providers interested in improving workers’ experiences in online labor markets, highlighting mechanisms for uncertainty reduction and diversifying a platform’s services according to gig workers’ identities and orientations.
Originality/value – The study expands the authors’ knowledge on work identity construction processes of gig workers, detailing the relationship between work identity and IT, and documents previously unexplored antecedents of entrepreneurial orientation in non-standard working contexts.
Keywords Work identity, Professional identity, Entrepreneurship, Grounded theory, Virtual work, Gig work, Gig economy
Paper type Research paper

Introduction
Individuals strive to define their identity, i.e. a clear sense of “who I am,” in the different contexts of their lives and, in particular, in the workplace (Ashforth and Schinoff, 2016). Extant literature (e.g. Dutton et al., 2010; Gecas, 1982; Ibarra, 1999; Petriglieri et al., 2018; Petriglieri and Petriglieri, 2010; Pratt, 2000; Pratt et al., 2006) has paid significant attention to the processes through which individuals define and build their work identities – i.e. the values, belief, and attributes they use to define themselves in the workplace (Ibarra, 1999) – as work identities are closely related to how individuals behave and perform as workers (Alvesson et al., 2008; Koppman et al., 2016).

Until recently, researchers have studied the “world of work” (Ashford et al., 2018) mainly in terms of stable employment relationships and career transitions within or between organizations, in accordance with the times of job security and economic stability that have characterized many Western Countries for almost half a century. Consistently, existing identity
literature has often explored organizational contexts (e.g. companies, NGOs, public organizations), showing that organizations offer their employees values, tools and resources to support the development of a coherent sense of self (Ashforth and Schinoff, 2016), and to foster organizational-coherent behaviors (Alvesson et al., 2008; Ashforth and Schinoff, 2016; Pratt, 2000). Nonetheless, over the past few decades, given extensive economic and technological changes, career trajectories have become less linear as individuals not only change jobs more frequently, but also engage more in independent or temporary work (Ashford et al., 2007; Connelly and Gallagher, 2004; Hollister, 2011; Stone et al., 2015). Consequently, scholars have started to question the validity and applicability of existing management theories to explain the behavior of workers in the new world of work (Ashford et al., 2018; Cappelli and Keller, 2013; Furnham, 2006; Sparrow, 2000; Spreitzer et al, 2017), where people often experience uncertainty and reside “in between” organizations, occupations and other communities (Carton and Ungureanu, 2018; Ibarra and Obodaru, 2016).

Since the uncertain conditions that workers experience in new labor markets are strongly intertwined with how they define and perceive themselves as professionals (Ibarra and Obodaru, 2016), in this paper, we intend to address scholarly concerns on the applicability of existing identity theories, and understand how individuals from a growing, although underexplored, category of workers – i.e. gig workers – construct their work identity. The working condition of gig workers, who deliver short-term jobs on demand – i.e. “gigs” – makes them more likely to experience feelings of job insecurity (Lam et al., 2015; Spreitzer et al, 2017), as they are neither employed by a single organization, nor experience a classic organizational setting, where the exposure to social relations with colleagues and role expectations help to forge a coherent work identity.

The literature on temporary and contract workers suggests that, even in uncertain conditions, individuals still need a reference environment to nurture identities, like occupations (Barley and Kunda, 2006), personal holding environments (Petriglieri et al., 2018), online communities (Langner and Seidel, 2015) or client organizations (George and Chattopadhyay, 2005). Gig workers are increasingly making use of digital platforms like Freelancer.com, Guru or Upwork which regulate the relation between workers and employers in so-called “online labor markets” (Boudreau and Lakhani, 2013). To give an example, a single digital platform such as Freelancers.com counted more than 13m registered users and more than 15m posted “gigs” in 2018. We argue that the online environment and the technological features offered by platforms may act as references in the process of workers’ work identity construction. Workers need to learn how to navigate the platform’s rules and procedures to get jobs, execute activities and get paid for their work (Kuhn and Maleki, 2017). In addition, platforms increase the level of global distribution and competition that workers face (Boudreau et al., 2015; Spreitzer et al, 2017), further escalating the conditions of uncertainty that any freelancer experiences.

We thus propose that studying identities is relevant to learn gig workers’ behavioral trajectories in online labor markets, with implications both for theoretical development as well as for practical implications. Concerning the latter, acknowledging the impact of technology on these trajectories may help in deriving implications to design appropriate platform’s support mechanisms. We then formulate our research question as follows:

*RQ*. How do technological platforms influence gig workers’ work identity construction and with what consequences?

To address our research question, we draw evidence from interviews and documents collected from workers using a major online labor market platform. We build a grounded model showing how work identity is empowered in response to a constraining online environment, by strategically using platform technological features. Specifically, we show how such processes lead individuals to build a new work identity characterized by an
entrepreneurial orientation. Our study contributes to the current scholarly conversation on the relation between technology and identity construction and the antecedents of entrepreneurial orientation in online labor markets.

Theoretical background

Work identity and gig workers

In this study, we are interested in that part of an individual identity concerning the enactment of a work-related role, that is, work identity (Ibarra, 1999). The identity literature has both developed rich theory and provided examples of individuals elaborating on their work identity during significant role transitions – i.e. newcomers in organizations or people taking up new positions after promotions (Ashforth and Schinoff, 2016; Ibarra, 1999) – or in particularly demanding circumstances – e.g. when people perceive that what they do does not match with who they are (Mattarelli and Tagliaventi, 2015; Pratt et al., 2006). In these cases, people experience uncertain conditions and existing identities are under threat, either because they need to adapt to new roles, or because they need to be socialized in a new organizational context (Pratt et al., 2006). For instance, Ibarra (1999) shows that individuals adapt to new organizational roles by trying temporary solutions – i.e. provisional selves – to deal with the lack of alignment between their identity and expectations about a new organizational role. Other studies show that when individuals enter new organizations, organizations manage their identity through circles of sense-breaking – i.e. creating a sense of liminality and motivating individuals to search for new meanings – and sense giving – i.e. attempts to influence the new meanings according to organizational preferences (Alvesson et al., 2008; Ashforth and Schinoff, 2016; Pratt, 2000). Even in virtual contexts, research has shown that organizations take advantage of technological tools to support identity processes for virtual workers and, therefore, increase their level of commitment, and preserve control over their work (Thatcher and Zhu, 2006; Wiesenfeld et al., 1999, 2001). Organizations and professional communities have been then described as fundamental in the process of individual identity construction (Alvesson et al., 2008; Ashforth and Schinoff, 2016; Ibarra, 1999; Mattarelli and Tagliaventi, 2015; Pratt, 2000; Pratt et al., 2006), as they provide values, meanings and examples that individuals can use to build their work identities.

Differently from these studies, gig workers operate in a distributed context and are only temporarily hired by organizations or individual clients, therefore lacking the social environment they can use to derive ideal images of a possible or desirable self at work (Ibarra, 1999). In particular, in distributed contexts, individuals face more difficulties in deriving cues to foster their work identities. However, how non-traditional workers, such as contract workers, temporary workers, and gig workers answer the question “Who am I?” has received limited attention (Barley et al., 2017; Barley and Kunda, 2006; George and Chattopadhyay, 2005; Petriglieri et al., 2018). In their ethnographic study of technical contractors in a contingent labor market, Barley and Kunda (2006) define contractors as “itinerant professionals” (Barley and Kunda, 2006, p. 50) who mainly draw from personal skills to categorize themselves, making contracting a new form of professionalism. Thus, compared to workers in institutionalized occupations, the authors highlight the predominant role of agency in contract workers’ experience. More recently, Petriglieri et al. (2018) emphasized the importance of agency through their study of independent workers in precarious working conditions. In particular, these authors argue that workers lacking a stable physical and social environment – e.g. organizations – tend to develop physical, social and psychological spaces, i.e. personal “holding environments,” to sustain meaning and routines, and to deal with feelings of anxiety and fear (Petriglieri et al., 2018). George and Chattopadhyay (2005) investigated the process of identification of contract workers employed by their work organization, but actually working inside their client organization. Results indicate that workers identify with their employer and their client, thereby developing a dual identification.
Although this research has generated theory and descriptions of what happens when individuals lack stable affiliations, it does not incorporate the complexities derived from the distribution of work and mediation of technology that gig workers experience. Gig workers in online labor markets work in technology-intensive contexts – i.e. the platform they subscribe to – which, we argue, may offer support to identity construction. For instance, platforms may provide access to online communities to foster workers’ socialization, or they may provide narratives about best workers to influence individual images, ultimately influencing identity construction processes. Gig workers may therefore operate in a “hybrid” workspace, where, on the one hand, they are alone and fully take risks associated with their job, and, on the other, they are influenced by the rules imposed by the platform.

Although previous studies on contract or independent work have not specifically addressed and explored technology-intensive contexts, especially the relation between technology and identity, research in the domain of information technology (IT) and information systems has more deeply addressed this relation (e.g. Carter and Grover, 2015; Lamb and Davidson, 2005; Stein et al., 2013). We therefore take a closer look at it to further inform our research question.

Identity and platforms

In the last decade, there has been increasing attention toward the relation between identity and IT in the information systems literature (see Carter and Grover, 2015, for a review). Among studies expanding theory at the individual level of analysis, some have focused on how features of a newly-introduced technology induced changes in work practices and affected professional identity construction or recovery (Van Akkeren and Rowlands, 2007; Boudreau et al., 2014; Lamb and Davidson, 2005; Stein et al., 2013). Van Akkeren and Rowlands (2007) showed that the introduction of a healthcare information system in a team of radiologists provoked anxiety and struggles to assimilate the new features of the technology into work practices, leading to a redefinition of role identities. Similarly, Lamb and Davidson (2005) found evidence that technology impacted the practices for data collection and results dissemination of marine biologists, who took advantage of new technological features to improve their job and strengthen their work identity by creating new areas of expertise. In this case, technology features led to the empowerment of already existing professional identities. Other studies have shown that technology can foster the enactment of different selves instead of fueling existing identities. For instance, in the study by Stein et al. (2013) the material features of technology affect employees’ identity enactment so that these features become part of a professional narrative of the self. The study also showed that technology may help workers to try out different preferred selves before allowing the enactment of a single preferred identity. Similarly, Boudreau et al. (2014) showed how technology was used to experiment with multiple provisional identities during the introduction of a new information system in a library. Siles (2012) showed how technological artifacts, i.e. websites and blogs, sustain the emergence of a new identity anchored to the technological artifact itself, and, recently, IT has been theorized as an integral part of the individual’s sense of self (i.e. IT identity; Carter and Grover, 2015). Carter and Grover (2015) introduced IT identity by arguing that through the experience of technological features, individuals are likely to develop a closer than previously theorized relation with IT, which ultimately influences their technology use behavior. Their theorization suggests that technology is the “endurance support” to identity construction, maintenance and change.

These different findings interpret technology as an enabler for new work identities or look at specific features that lead to adaptation of existing identities. We argue that none of these perspectives alone can help us to fully understand the processes of identity construction for gig workers using online platforms. In the gig economy, online platforms may provide access to new work opportunities and new tools to freelancers to interact with their clients, but they may also be considered vehicles for completely new working arrangements, as gig workers need to learn the rules of the game they are playing (e.g. rating systems, payment methods). As new working
environments, platforms may provide the ground for people to experiment with multiple (Boudreau et al., 2014), existing (Lamb and Davidson, 2005) or unforeseen work identities (Siles, 2012), supplanting and/or complementing the role played by organizations and professions.

Some authors suggest that an online environment creates identity struggles, since it is assumed that individuals need to show the same identity both online and offline (Lamb and Davidson, 2005). There has also been evidence that interactions in an online environment lead to the construction of a new type of identity associated with how individuals see and present themselves online – i.e. virtual identity (Moon et al., 2006). Thus, we argue that interpreting platforms not only as tools composed of a set of features, but also as new working environments, requires us to think in new ways about the relationship between IT and identity construction processes. Although Carter and Grover’s (2015) IT identity theorization goes in this direction, it still considers technology as a tool composed by features, and not as an environment that might constrain individual action. Consistently, the authors talk about a positive influence of technology on identity that manifests in enduring feelings of emotional attachment to the technology, i.e. emotional energy; reliance upon the technology, i.e. dependence; and feelings of connectedness with the technology, i.e. relatedness (Carter and Grover, 2015, p. 945). Moreover, their theorization does not explain what happens when this IT-self interacts with the work-self. New insights are therefore needed to understand the relation between platforms and gig workers, as platforms are at the same time carriers of specific technological features and enablers of online work environments.

Methodology

Research setting

The lack of knowledge and studies encapsulating platforms as online environments and as a set of features, and the questions about the applicability of existing identity theories in online labor markets, call for a research design that allows to develop theoretical depth and detailed understanding of new, unexplored phenomena. We then decided to conduct an exploratory field study on one of the most popular online labor markets (OLM) platforms, following the grounded theory approach described by Strauss and Corbin (1998), which represents a suitable methodology for developing new theories grounded in the context and in the words of informants.

The OLM platform we studied matches buyers and sellers of services. Here, clients (i.e. individuals or entire organizations) delegate single projects or small jobs to geographically distributed individuals connected via the internet. In particular, at the time of the study, the platform had over 13m registered users in more than 100 countries. Clients can hire contractors to deliver complex, high-skilled jobs, from graphic design to virtual assistance, from software and mobile development to translations. Platforms offer a digital environment where organizations can post their requests and contractors can find jobs fitting their specific skills. Each worker has his/her online profile where he/she can provide both personal and work-related information. The profile also tracks freelancers’ working history (e.g. total number of worked hours) and performance details (e.g. success rate). Once a client has found his/her freelancer, they sign a contract and start a working relationship. Interactions take place at a distance and are mediated by technological tools, either provided by the platform or decided by the parties. At the end of the contract, both parties access the feedback system and rate their working experience, that is, clients provide a blind feedback to workers and vice-versa. Jobs can be rewarded on an hourly basis or through fixed contracts.

Data sources

We rely on semi-structured interviews, archival documents downloaded from the platform, and the personal online profiles of our informants to support our theory building process.

Semi-structured interviews. We conducted, recorded and transcribed 46 semi-structured interviews of about 75 minutes each, with freelancers subscribed to the platform. The first
author subscribed to the platform and posted different requests for interviews, offering a fixed monetary reward, usually between $8 and $12. A similar approach was used by other studies, which administered online surveys through OLM platforms for investigating digital labor dynamics (e.g. Deng et al., 2016; see Behrend et al., 2011 and Steelman et al., 2014 for methodological issues in using M Turk for surveys). Consistently with Kapelner and Chandler (2010), who showed that monetary compensation is not a primary motivation to participate in online studies, our informants decided to participate because of their interest in the results, their willingness to be part of a research project, or the desire to share and voice their experience. This is why many informants suggested a lower reward or refused to be paid.

We chose respondents following theoretical sampling techniques. For instance, European IT developers guessed about different strategies that Asian developers used to manage competition and build job applications, as they talked about Asian IT developers as their main competitors. Therefore, we decided to contact Asian IT developers to further confirm or refine our categories associated with the strategic use of technological features. Similarly, we decided to extend our sample to designers to include a different job category and verify the solidity of our findings. Table I provides more information about our sample.

During interviews, we first asked informants general questions about their working history and the motivations to join the platform. Then, we moved to identity-related issues and feelings about the job, drawing inspiration for questions from the work of Petriglieri et al. (2018). Examples of questions include: How do you organize your working day? Could you describe me the kind of work that you do on the platform? Could you please describe a positive experience that you had on the platform, and why you considered it as positive? Finally, we asked questions about their interpretation and use of the platform. After the first ten interviews, we realized that informants often mentioned how their experience on the platform stirred a desire to open their own business and be engaged in entrepreneurial activities. Given the centrality of this theme for identity construction, we then modified our protocol and explored such issues in all subsequent interviews.

Our interviews continued until we realized that new data were not adding new pieces of information and were not helping us further refine or develop our model – i.e. theoretical saturation (Glaser and Strauss, 1967). For instance, we ended our data collection once we

<table>
<thead>
<tr>
<th>General information about informants</th>
<th>46</th>
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<tbody>
<tr>
<td>Total number of informants (and number of interviews)</td>
<td>46</td>
</tr>
<tr>
<td>Average years of engagement in online work</td>
<td>2.5 years</td>
</tr>
<tr>
<td>Average age</td>
<td>27 years</td>
</tr>
<tr>
<td>Number of top performers (labeled as top performers by the platform)</td>
<td>23</td>
</tr>
<tr>
<td>Number of informants working exclusively on the platform</td>
<td>22</td>
</tr>
<tr>
<td>Informants performing offline activities related to online activities</td>
<td>17 (5 are students)</td>
</tr>
<tr>
<td>Informants performing offline activities not related to online activities</td>
<td>7 (1 is a student)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Informants by location and online job</th>
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<tbody>
<tr>
<td>24 IT developers</td>
<td>15 informants from Europe (Italy, Spain, Portugal, UK, France, Russia)</td>
</tr>
<tr>
<td>6 virtual assistants and translators</td>
<td>9 informants from Asia (India, Pakistan, Bangladesh)</td>
</tr>
<tr>
<td>16 graphic designers</td>
<td>3 informants from Europe (Norway, Romania)</td>
</tr>
<tr>
<td></td>
<td>3 informants from Asia (Pakistan, Indonesia)</td>
</tr>
<tr>
<td></td>
<td>7 informants from USA</td>
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realized that new data were not helping us refining our categories related to the construction of work identity (e.g. the aggregate dimension, development of an entrepreneurial orientation).

*Online profiles, job applications and archival data.* We also analyzed our informants’ public online profiles to grasp additional information about their working experiences and their identity, how they present themselves online and their status on the platform. We started this examination immediately before the interviews in order to address specific questions on the information provided in their profile. Through this approach, we could understand how respondents strategically used their profiles in the online environment. To grasp additional information on these issues, we also asked informants to share examples of past job applications, collecting 37 proposals. Finally, we reviewed some articles and reports posted on the platform’s blog to further develop an enriched understanding of the context. These documents mainly reported information about the platform itself and offered tips to freelancers.

**Analysis**

We built an integrated database with interviews, profiles, job applications and documents. Data analysis followed the framework proposed by Strauss and Corbin (1998) for grounded theory development and the three-steps coding process inspired by the so-called “Gioia methodology” (Gioia et al., 2013). Under these frameworks, data analysis went hand in hand with the data collection stage (Strauss and Corbin, 1998). We adopted an iterative approach of constant comparison among the literature, emerging interpretation of data, and new data from the field. We first open-coded to search for recurrent first-order concepts. We then grouped them to create categories, and finally aggregated theoretical dimensions. As last step of this procedure, we identified relationships between categories. For example, we ran a first step searching for regularities and patterns among data and found that freelancers mainly described job applications as useful tools to fit job calls, and profiles as useful to provide clients tangible proof of their abilities. We then recognized these behaviors as strategies to “sell” individual skills and decided to group them together. Then, while going back and forth between theory and data, we interpreted them as technological features offered by the platform. Finally, we searched for relations between categories and further examined our data to identify which characteristics are associated with the online environment and strategic use of technological features triggered work identity construction. We used the software NVivo to support the entire process. The final output of this procedure was the data structure and the grounded model provided in Figures 1 and 2.

**Findings**

Our grounded model (see Figure 2) shows how constraints and features of the platform lead individuals to add new meanings to their work identity and, ultimately, how this new work identity was associated with an entrepreneurial orientation. The model starts with the motives pushing individuals toward online labor markets.

**Motives**

Our informants shared their motives to join online labor markets. In particular, they explained how online work helped them to fulfill needs related to monetary compensation, fun, work flexibility, learning and stagnant local labor markets. For instance, many informants described online jobs as second sources of income and as a way to make use of their spare time, as in the following excerpt:

You can just tell that I am here for relaxation, because when I work here is a different thing, different people, and also I can make some money. My personal opinion is that if I am capable to do a lot of work, then I should do it. I don’t waste time, if I have the opportunity I should work as much as possible. (Theodor, IT developer)
Some freelancers expressed the need to work from home for family or location reasons and referred to flexibility as one of the biggest advantages. Others desired to escape from the “boring” activities of their offline jobs. Finding ways to keep in touch with the latest technology developments, and “remaining in the learning cycle” was also mentioned as one
of the motives. We also talked with students joining the platform to test their knowledge and then sell their competencies in the traditional job market as professionals with an extensive portfolio, despite being recent graduates without “traditional” working experience. Finally, some informants lamented difficulties in finding jobs suitable to their skills in their countries and, therefore, joined global online labor markets for lack of local alternatives.

To fulfill these needs, individuals needed to make immediate sense of the platform’s mechanisms and identify ways to succeed. Through experience, they acquired knowledge about the online environment and learned to use a given platform’s features to circumvent perceived constraints. We proceed in the following pages by describing how individuals matched specific online constraints to specific uses of features of the platform. We then discuss the consequences of such matching processes for identity construction.

Global competition, acquiring knowledge of the market, and becoming a unique online worker

Global competition. Competition on the platform was often labeled as “hard” and perceived as a constraint to individual success. Whoever owns an internet connection can sell individual skills on the platform; thus, workers face a global competition and deal with different working conditions and prices. For instance, freelancers from developed countries complained about the differences between living costs that allow freelancers
from developing countries to offer lower prices. Similarly, freelancers from developing countries disliked clients expecting to pay only a few dollars for their services. Moreover, workers described the need to be “always online” checking for updates and trying to catch the best job opportunities. In this regard, given the number of applications received by clients, many freelancers told us they had to continuously write new proposals for clients and reply swiftly to their questions, being locked in a continuous commitment to the platform, as shown in the following excerpt:

You have to keep applying for the jobs as soon as they are posted, so you have to check constantly posts and job opportunities. You have to stay online, and, once you are online, you need to ensure that you are there for a long time. That is why we just work for four days in a week. You burn-out faster. (Brian, IT developer)

Acquiring knowledge of the market. Contrary to what happens in offline contexts, the online platform provides public information on the main actors of the market. We found that this platform’s feature was positively valued by freelancers. Many informants strategically used this public information to acquire knowledge on both job demands and their competitors’ behaviors. Many respondents told us that, especially at the beginning of their presence on the platform, they surfed other freelancers’ public profiles and studied the characteristics of the offered services, the typical price for that service and general competitors’ strategies. This practice was useful to learn about prototypical services and skills sold on the platform.

Becoming a unique online worker. We found that dealing with competition by comparing oneself with other people on the platform was useful to align to market’s requests. Many informants declared, indeed, that surviving on the platform would have been much harder without a clear understanding of how other people behaved on the platform. For instance, knowing competitors’ strategies was useful to guess about clients’ expectations and start to think about how to meet those expectations. However, in order to obtain jobs, individuals also needed to think and understand what made them different from other freelancers. The need to distinguish oneself from others made freelancers think deeply about the distinctive skills and traits that characterized themselves as professionals. For instance, in the following excerpt, one respondent from a developed country shared how he tried to distinguish himself from gig workers from emergent countries:

There is really heavy competition from people from India, Philippines, Mexico, mostly these. And they work for really low prices, it is hard to compete with them. So I needed to think: what can I do that these guys cannot do? My first job was in translating between Portuguese and English, which is something I do well and they cannot do. (Sean, IT developer)

Short-term contracts, trying to sell skills and becoming your own sponsor

Short-term contracts. Gig workers needed to deal with the intrinsic uncertainty in their work related to the short-term nature of working relationships. For instance, translators and website developers complained about the difficulty of establishing long-term relations with clients, and perceived this as a constraint. For instance, they explained that usually clients posted jobs to be delivered on a daily basis, making relations difficult to build. Thus, a crucial aspect was the need to constantly search for new jobs. Informants working exclusively online needed to allocate time to both the monitoring of new offers on the platform and the hiring process itself, which usually included one or more job interviews. Therefore, they needed to be “constantly prepared to answer clients’ questions,” as hiring procedures were constantly ongoing. Informants usually reported frustration and feelings of job insecurity and needed to rationalize uncertainty as an inherent characteristic of their job.
The following excerpt shows one of our informants recognizing uncertainty in her job, and explaining that reducing uncertainty was her main goal on the platform:

My job is completely uncertain. The main objective is to get you into a point where is not uncertain anymore. I think it is right now my main goal. Because you get one job, and then you get different jobs, and you get one job again, you need to deal with the fact that you will need to get them. (Heather, IT developer)

**Trying to sell skills.** To manage the fast-paced hiring process, the platform provides technological features that can be used to present workers to clients, i.e., personal profiles and job proposals. Personal profiles can be filled with information on employment history, educational background, working history on the platform and brief personal descriptions. Job proposals are letters sent to clients and usually represent the first interaction between freelancers and clients. When asked to detail the strategies to win a job, respondents provided us with a description of job proposals and personal profiles, describing them as fundamental tools to sell their skills. In particular, we found profiles to be used to provide references, and job proposals to fit job calls. In the following excerpt, one informant described how clients looked at profiles and how having good reviews was essential at the beginning of his career:

I think that when clients look at your profile, they first see your grade, they don’t really check anything else. And if they see that your grade is good, then they check your portfolio. So basically it’s a few step thing, if you don’t have good grade they will not even look at your portfolio. (Brad, Designer)

As exemplified in the quote, profiles were perceived as digital signals of reputation (grades) and digital proofs of experiences (portfolio). In addition, freelancers used proposals to show the fit between their portfolio and job calls, in order to convince clients about their capability to fulfill job requests. The following quote exemplifies this strategy and shows another recurrent best practice: when presenting one’s skills, freelancers should try to sell also additional skills:

I try, in my proposal, to make it short enough as not to bore the person, and I try to answer the questions that the person is asking. By doing that, the person knows that I have read the offer. […] After reading the job offer, I explain how I can address his concerns. This gives who is hiring some extra pieces of mine and a bit of extra to what he asks. (Sean, IT developer)

**Becoming your own sponsor.** We found that dealing with the fast-paced hiring process and selling individual skills were capabilities that freelancers needed to learn. For instance, especially when first joining the platform, building a strong portfolio and a strong reputation were essential to getting jobs and surviving on the platform, as one of our informants described in the following excerpt:

At the beginning, I really wanted to get as much reviews as possible to be able to bid some other jobs that I couldn’t get without reviews, so at first it wasn’t really about the money, it was about catching the reviews. (Brad, Designer)

Freelancers described that they needed to experiment with different job proposals before finding the right strategy, and this usually entailed acquiring additional knowledge on how to deal with clients and promote their own individual skills. Some freelancers started to think about themselves as professionals who should also successfully promote their work, not just search for gigs.

Many freelancers described how they started to focus more and more on empowering their communication and negotiating skills in addition to their technical skills. This, in turn, led them to think about themselves as good communicators or good negotiators, as shown by the quote below:

I found out that clients were interested not only in my professional skills as a designer, but also on my negotiating and communicating capabilities, on who I am as a negotiator and communicator. (Adam, Designer)
Lack of support, experimenting with different opportunities and becoming your own boss.

Lack of support. We asked freelancers about the role played by the platform in supporting their daily activities. Answers revealed that they considered the platform as a third party, a service they used exclusively for finding jobs, delivering their work and being paid. In the perspective of our informants, the platform environment did not provide the direct guidance or mentorship that is typical of traditional organizational contexts. We analyzed archival documents to assess the design of the platform environment with a special focus on the features intended to provide support to gig workers. We learned that the platform sends tips and advice to freelancers through reports or blog articles describing the experience or the strategies to become a successful online freelancer. However, during interviews we found that only a few respondents read and tried to follow those tips. Many respondents replied that they lacked the time to read newsletters, while others admitted to searching for tips on other websites, or looking for advice from friends. One respondent even judged negatively the perceived lack of targeted advice and expressed the willingness to distinguish himself from those following the platform’s general tips. We thus labeled the perception of the platform’s guidance as superficial. The following excerpts exemplify these recurrent perceptions:

Apart from the platform itself they [the platform staff] do not offer any kind of training or tools, or something like that. […] there is no any tutorial that will help freelancer succeed. (Scott, database administrator)

[…] they already have help pages, support pages and all that […] but, who reads that?! Like, who reads that?! I don’t, because what they have done is very short, not very descriptive. (Nancy, IT developer)

Experimenting with different opportunities. If, on the one hand, freelancers lacked clear guidance, on the other hand the platform offered them a variety of job opportunities. Many freelancers subscribed to the platform for the purpose of reaching out to clients from other countries and finding more jobs related to their skills. For instance, a game developer lamented difficulties in finding game development-related jobs in the “traditional” job market. In addition, many Asian IT developers experienced difficulties in selling their specific knowledge in the local market, both for the lack of opportunities and the low payments. Thus, we noticed how freelancers were using the platform to sustain their learning experience and how some of them also started to use their profile to convey not only skill-related information, but also information on plans for the future and on the next jobs they would like to deliver. The following excerpt is drawn from one IT developer’s profile description and illustrates the described behavior:

I now seek ongoing jobs that will help me shift from front-end to back-end, and from [programming language 1] to [programming language 2]. (Sean, IT developer, personal profile)

Moreover, informants explained that the huge number of job calls posted on the platform left them room for trial and error. In fact, thanks to plenty of opportunities, they could try to apply for different jobs while at the same time trying out different strategies to get a job, even strategies that later became unsuccessful. As they knew other desirable job opportunities would soon materialize, they felt they had the time to try to deal with clients and learn how to obtain jobs without the fear of making errors and missing desirable job opportunities.

Becoming your own boss. The lack of a boss deciding on their work and the availability of variegated opportunities gave gig workers, especially once they obtained a good reputation, the freedom to choose the jobs to be delivered. As shown in the following excerpt, IT developers strategically chose jobs to keep on learning, avoid getting bored by doing the same activities over and over, and stay updated with the latest technology:

I’m actually getting even greater experience, because in firms you do not get to deal with the client himself, obviously the boss deal with them. Here, I’m my own boss […] So, in the firm your boss
sells the company, the products, and everything, you are just involved in the development of the product, you are not actually on the field, you are not actually dealing with the client, you are not actually knowing the client’s requirements from the client. So, in here I get to talk to the client, I get to understand the requirements of the client. (Nancy, IT developer)

Our informants talked more often about the managerial skills they needed to learn to deal with the platform environment, negotiate payments and organize their working day, rather than the technical skills required to deliver clients’ jobs. They explained how they unexpectedly found themselves occupied in managing their business, as described in the following excerpt:

I like having my own office, I am my own boss. It is better than working for someone else, you can organize finances, you can discuss about payments with your clients directly, there’s no one in-between. (Trevor, IT developer)

Development of an entrepreneurial orientation

We found that freelancers’ experiences on the platform ultimately influenced their way of thinking about themselves in the workplace. After some time spent on the platform, respondents generally described themselves as more conscious about what was needed to be successful online freelancers. The following excerpts report a respondent’s feelings:

You go there with your skills, with what you are doing, and the platform gives you the opportunity to sell them. But I realized that, in the end, it is your own responsibility, you have the responsibility of how to do that [selling the skills]. I feel like I have built a real job there. (Kate, Designer)

As shown in the quote, we found that online behaviors ultimately influenced an individual’s job-related sense of self, desires for the future, and perceptions regarding the platform itself. More generally, we found that the process of work identity construction, influenced by the constraints of the environment and the strategic use of technological features, led individuals to distance themselves from both traditional organizations and online labor markets. We noticed then that respondents were talking about their online experience as an evolution that led many of them to the development of an entrepreneurial orientation, i.e. to develop practices, processes and decision-making behaviors aimed at building a new entrepreneurial “entity” (e.g. a new group or a new organization; Lumpkin and Dess, 1996). This evolution is well shown by an informant’s job applications, provided in Figure 3. Kate, one of our informants, shared with us three different job applications written at different stages of her experience on the platform. As is shown in the figure, in job application 1, she only describes her distinctive characteristics, then, in job application 2, she adds details to sponsor her work, like her personal website, and in job application 3, she finally describes herself as the head of a team.

We linked emergent freelancers’ behaviors to three of the five entrepreneurial orientations’ dimensions identified by Lumpkin and Dess (1996). In particular, we recognized the dimensions of competitive aggressiveness, autonomy and proactiveness in the way freelancers positioned themselves in the market, distanced themselves from the platform and created their own businesses.

Aggressively competing to position oneself on the market. As the competition becomes global, freelancers need to find their own way to stand out and convince clients they can fit their needs. If, on the one hand, the availability of information on the platform was useful to align to market requests, at the same time, it helped freelancers to set their own services and their own prices on the market, according to what they thought were their distinctive traits.
This not only allowed freelancers to set their competitive strategy, but also to try to catch the attention of a particular subset of clients interested in some services rather than others, in some standards of quality rather than others. In other words, freelancers worked hard to win a particular segment of the online labor market. For instance, in the quote below,
Harry describes his willingness to be perceived as a valuable worker, and the decision to set higher prices on the market to communicate this information to clients:

I am not cheap, I am sorry. I am a valuable worker, I am a valuable freelancer. I am not like many other freelancers that decide to work at low prices. (Harry, designer)

**Strengthening the importance of autonomy.** We found that managing themselves on the platform strengthened freelancers’ attitudes toward autonomy. Those searching for more freedom in their job valued autonomy as a positive and essential element in their work. However, surprisingly, we noticed that even freelancers who initially thought about the platform as a playground to test their skills, strengthen their curriculum, and then go back to traditional work, struggled to think about themselves as merely employees within a company. In particular, they positively valued the opportunity to learn and choose exciting jobs for themselves, opportunities they could barely see when employed in a company. Freelancers who joined the platform to gain extra money showed similar feelings. We thus noticed a tendency to value and retain autonomy from the online experience and then to change the perceptions of traditional working environments. As shown in the following excerpt, informants rarely told us they would prefer to go back to a traditional job after their experience on the platform:

Right now, I wouldn’t really want to go back to a traditional job, you know? Because I would very much prefer other things and build things myself. (Denise, IT developer)

We noticed that being independent from a traditional organization gradually grew into the idea of becoming independent from the platform also. Informants described the platform as an “intermediate land” useful to acquire competencies, experiment and test skills, and quickly get in touch with multiple clients and job opportunities. However, many freelancers did not describe it as the place to be for a long time. On the contrary, they seemed to interpret their time on the platform as a transitional period in their career. In other words, instead of identifying with the platform, they rather seemed to feel disaffected from it over time. Interestingly, one of our informants described the platform as an “incubator,” thus as an entity accelerating the growth process of a nascent company:

I don’t anticipate staying on [name of platform] forever, [name of the platform] is kind of an incubator where I am gaining competencies, I am dealing with people, and building up my portfolio. (Grace, designer)

**Proactively creating one’s own business.** After some time spent on the platform, instead of thinking about themselves just as freelancers, many informants expressed their desire to build their own company or a new business within or outside of the online environment. Their objective was to leverage their experience on the platform for building a local team and starting to work with local clients. For instance, in the following excerpt, one informant explained how being successful on the platform led him to switch to an entrepreneurial role:

I took the option of the freelancer, and I am happy with this decision and it is going well. During the last six months of my career in 2010, I ended up deciding my role. I could have been an entrepreneur instead of only a single freelancer. So, I have decided and I took the option of creating a local team. Then, I created a team profile on [platform], whose name is ‘The Helper’, that is also the nature of our job. [...] I have constructed myself a successful freelancer, that is why I have created a team, I have worked on that for years. Those things made me a successful freelancer entrepreneur. (Alec, virtual assistant)

Similarly, other informants described their willingness to shift into managerial roles, and their willingness to possibly hire either local or online employees:

We are a group of friends who were also freelancers and we are actually sharing our resources to create a small start-up, so you can say we are moving to a managerial part and then hiring developers locally who will handle the work for us, and we will be mostly the managers. (Jamey, IT developer)
I am a contractor now, but I want to become a client next year. I am trying to turn myself a client, this means more personal satisfaction and more income. I would like to be an entrepreneur in the next 3 or 4 years, I see myself as an entrepreneur. (Ken, Translator)

Finally, others reported their desire to leverage their experience on the platform to build companies, either related to online work or not:

Even though we just communicate with clients through online platforms, it really helps us grow more, even though we are at home. […] Actually, my goal is to start a company for helping other companies to implement online work, because I think this is going to be a really great opportunity in the next 5 years. (Rachel, virtual assistant)

Discussion

The purpose of this study was to explore the experience of gig workers in technology-mediated working domains – i.e. online labor markets – to shed light on how technology is related to their work identity. Our model shows how workers’ work identity underwent a process of construction in response to a constraining online environment, by strategically using platform resources. Freelancers joined online labor markets to fulfill different needs, from the necessity to work remotely to the desire to gain extra money. Once on the platform, they needed to face the difficulties of working online (i.e. global competition, short-term contracts, lack of guidance) and thus learn how to leverage technological resources offered by the platform (i.e. public information on competitors’ actions, profiles and job proposals, multiple job opportunities). We showed that each constraint of the platform environment, overcome by a strategic use of technological features, led freelancers to work on their own skills and on their individual work identity. In particular, they needed to focus on their unique personal characteristics to become distinctive and stand out as online workers. They also had to learn how to sell their skills and competencies to clients, thus thinking about themselves as sponsors of their own work. Finally, they had to shift to a managerial mindset and self-envision as boss of themselves, that is, they needed to switch from considering themselves as freelancers or contractors (e.g. Barley and Kunda, 2006) to seeing themselves as the head of their own business. This led to the development of an entrepreneurial orientation, characterized by competitive aggressiveness, autonomy, and proactivity. This shift can be illustrated by their decision to offer new services, by their desire to be independent both from the platform and from traditional labor markets, and by their willingness to create and supervise teams, to open “agency profiles” on the platform or to envision a future outside the platform as start-ups.

Technology and work identity expansion

Our research was motivated by an interest in the process of work identity construction for gig workers. While traditionally organizations and professions contribute to work identity construction, people working in uncertain conditions are likely to search for different sources of stability influencing identity construction (Petriglieri et al., 2018). The paper theorizes about the fundamental role of technology in such a process. In particular, we noticed that the technology, i.e. the platform, triggered an experiential process of work identity construction instead of breaking meanings and influencing subsequent new definitions (Alvesson et al., 2008; Ashforth and Schinoff, 2016; Pratt, 2000). Through experimenting with the platform, freelancers develop an entrepreneurial mindset by integrating into their work identities pieces of self as unique workers, sponsors, and bosses. This process differs substantially from the current understanding we have about how freelancers or contractors work on their identities. While current studies (e.g. George and Chattopadhyay, 2005; Petriglieri et al., 2018) suggest that these workers will look for substitutes for organizational environments by developing other types of holding environments that sustain current meaning and identities, our research
underlines that in a technology-mediated context that provides sharp constraints but also some resources, workers may end up developing new components of the self that they did not envision when they first joined the online environment. This idea is supported by the efforts put in place by freelancers in developing meanings of themselves not as professionals in a technical domain (i.e. reinforcing their identity as designers or IT developers), but as professionals who also need to sponsor their work, communicate with clients, and run their business, therefore acting as entrepreneurs.

Thus, we propose to expand the sources available for crafting work identity by including online work environments, such as platforms for online labor markets. Given the increasing prevalence of online resources, communities and collaborative technologies that professionals use, it is important to consider the different technological environments individuals experience at work if we want to fully comprehend their individual work identity and, consequently, how they may behave in online, as well traditional, workplaces.

In addition, we extend the current scholarly conversation on the relation between identity and technology that until now has primarily looked at technology (in our study online platform) as a set of features that impact work identity (e.g. Van Akkeren and Rowlands, 2007; Boudreau et al., 2014; Stein et al., 2013) and only secondarily as an enabler of different contexts embedding an online component (e.g. Moon et al., 2006), which means new rules of the game for people who participate (here online labor markets). We combined, then, the perspective of technology as a set of features and technology as an online environment, and showed that the platform constrained individuals in an uncertain online environment, but also offered technological features to manage and rationalize uncertainty. We thus support the idea of a closer relation between technology and identity where, in the presence of technology, the self is expanded to include capabilities afforded by the IT (Carter and Grover, 2015). In particular, we see high levels of dependence and relatedness (Carter and Grover, 2015), especially in the first periods of engagement with the platform. However, differently from Carter and Grover’s (2015) perspective, we do not see enduring feelings of attachment toward the technology, as, in our case, the technology-triggered work identity seems to lead individuals away from the technology itself. Indeed, our findings show that freelancers tend to distance instead of commit to the platform after some time spent there, as the development of an entrepreneurial orientation may take them back to more traditional and local labor markets. Building on the notion of IT identity (Carter and Grover, 2015), we thus propose that a definition of self as dependent from technology might be temporal. As suggested by the metaphor of platforms as incubators provided by one of our informants, we propose technology as essential for growth and self-expansion, but whose benefits might be limited to workers’ early stages of career or first periods of engagement with the technology itself.

**Emergent entrepreneurial orientation**

As an emergent contribution, we think our findings are consistent with a few recent studies showing accidental pathways toward entrepreneurial activities (Demetry, 2017; Garcia-Lorenzo et al., 2018). Our model shows what initially motivated our informants to engage in online work. Specifically, these motives are related to monetary compensation, fun, work flexibility, learning, and stagnant local labor markets. These reasons have little to do with the desire to start up a company or become an entrepreneur. Indeed, none of our informants seemed to be initially focused on developing entrepreneurial skills, neither expressing the desire to build their own company, or even simply imagining themselves as entrepreneurs in the future. However, after experiencing and learning how to navigate the platform, we found that many of our freelancers developed entrepreneurial orientations.

According to Lumpkin and Dess (1996), entrepreneurial orientation “refers to the processes, practices, and decision-making activities that lead to new entry” (Lumpkin and
Dess, 1996, p. 136) and “it involves the intentions and actions of key players functioning in a dynamic generative process aimed at new-venture creation” (Lumpkin and Dess, 1996, pp. 136-137). Entrepreneurial orientation consists of five dimensions: competitive aggressiveness, risk taking, innovativeness, autonomy and proactiveness. Our evidence shows that, in the context of online labor markets, gig workers developed an entrepreneurial orientation as they started to define new services to capture a new market segment (competitive aggressiveness), valued their independence from any labor market (autonomy) and created agency profiles, local teams or start-ups (proactiveness). Consistent with the model proposed by Lumpkin and Dess (1996), which emphasizes that dimensions can vary independently in different contexts, we show that the platform triggers three out of the five dimensions of entrepreneurial orientation through the interplay between a constraining online environment and the freelancers’ strategic use of technological features. Therefore, our theory extends that model by proposing that technology use should be considered within the set of drivers influencing entrepreneurial orientations and by identifying the online labor platform as a specific context that creates the conditions for entrepreneurial orientation to emerge. These reflections are also consistent with the study by Autio et al. (2013), who examined how the exposure to multiple information and interactions with peers on an online community supported the reduction of uncertainty embedded in the process of business creation and helped individuals to both discover new business opportunities and also to take entrepreneurial actions.

We further argue that our informants developed an entrepreneurial orientation in reaction to their experience and emerging behaviors on the platform, rather than as result of a pre-defined plan (e.g. Krueger, 1993; Krueger et al., 2000). Our findings are coherent with the idea of entrepreneurship as an emergent process (Demetry, 2017) and business creation as the result of a series of actions, rather than a onetime act (Demetry, 2017; Ruef, 2010). Rather than intentional, pathways to entrepreneurship might be accidental (Demetry, 2017). Necessity and liminal conditions may trigger the emergence of entrepreneurship (Garcia-Lorenzo et al., 2018).

To this regard, our findings build on and extend the work of Farmer et al. (2011), who described the emergence of entrepreneurial behaviors as influenced by entrepreneur identity aspiration. In accordance with their work, our data suggest that work identity can influence subsequent behaviors. For instance, many of our informants opened agencies or started to manage teams on online labor markers. In addition, our evidence also shows that these actions can influence cognitions, as we found that the development of the entrepreneurial orientation was the result of entrepreneurial oriented behaviors practiced on the platform instead of a planned behavior. In other words, we argue that the work identity extended through the experience on the platform influences subsequent behaviors, and that these behaviors are ultimately associated with a more entrepreneurial mindset.

Implications for practice
Our study contributes to a better understanding of how gig workers enact the working environment provided by a platform and, in particular, how this environment influences individual self-perceptions and identity. First, as we found that freelancers need to become unique online workers and position on the market, we suggest that platform providers could act as labor advisors by periodically sharing information on the new skills required on the market, as for example building analytics for IT developers. This practice would allow freelancers to easily understand what are the main skills required by the market, and help them target and conquer their market share, either by strengthening existing or developing new skills.

Second, as we found that freelancers need to become sponsors of their work, we encourage platform providers to develop feedback mechanisms for evaluating not only the quality of delivered work, but also the way freelancers present to clients and sponsor their work. This could be done, for instance, by asking the client to rate the job applications they
receive or the profile of freelancers they are interested in hiring. Such information could allow freelancers to gather more knowledge about clients’ expectations and help them lower the number of job applications’ rejections, especially when they are new to the platform.

Finally, as freelancers become their own bosses, we suggest that platform providers begin to develop mechanisms for assisting in a new job search or for filtering the requests received by freelancers. For instance, platforms could create filters and criteria for helping them to automatically withdraw job requests they are not interested in. Similarly, we would encourage the creation of automated filters and mechanisms for suggesting freelancers job calls that respond to their specific needs, in order to lower the time spent in job searches and, eventually, replying more quickly to clients and increasing the likelihood of being hired, especially for newcomers. In addition, platforms could also build a freelancer’s dashboard to help monitor their performance on the platform, such as jobs where they were particularly successful or not and why. This could allow them to focus and improve those dimensions in which they had been less successful, adjusting their behaviors according to client’s needs.

By taking these (and perhaps other) actions, we believe the platform could improve the quality of workers’ experiences on the platform, therefore incentivizing more workers to actually stay on the platform, especially those who might feel safer working in a helpful environment instead of being on their own or taking the risk associated with a company. Indeed, as we acknowledge the emergence of an entrepreneurial orientation, freelancers could also exploit it through the platform, for instance, by starting to hire themselves contractors on the platform and collaborate with them to make their business grow. On the other hand, we also suggest that platform providers could extend their services to those willing to expand their business, for instance by creating networking systems that allow freelancers interested in working in a team or launching a start-up to meet people with different, complementary skills and put in place mechanisms to help them collaborate at a distance. In this regard, platforms could offer their workers online front-end spaces for networking and back-end collaboration spaces to foster the emergence of teams (and perhaps companies). This would allow nascent entrepreneurs to collaborate in an international environment, instead of only locally through personal networks. Furthermore, platforms could create customized fees for those who had worked on the platform for a long period of time and who finally decide to open an agency profile and continue to catch clients on the platform. This would allow the platform to act more as an incubator and, at the same time, support nascent entrepreneurs without completely losing earnings derived from fees. If these actions were taken, the platform itself could diversify the services offered to different types of workers, and workers could more easily choose what their relation with the platform should be.

Limitations and future research directions
Our study is not of course without limitations. To explore how individuals build their identity, we sampled individuals who succeeded on the platform and did not address those who did not adapt well to the platform’s mechanisms. In addition, we only sampled people from some professions and some nationalities. Therefore, to have a complete picture of gig workers’ experiences, one should also include unsuccessful examples and understand if individuals in different professions may experience different identity work patterns.

Furthermore, we drew evidence from a single online platform, so our results may suffer from the influence of that platform’s specific mechanisms. We thus encourage further investigation of different platform mechanisms to acknowledge whether they trigger similar or different identity processes.

Finally, we encourage future studies to develop a deeper understanding of how the unique context of online labor market platforms moderates the relationships between entrepreneurial intentions and behaviors. Specifically, with regard to proactiveness and the creation of a new business, our findings reveal that the online platforms triggers different
behaviors, starting from expressing the desire to build a new company or build a local team, 
to building an actual local team, hiring other freelancers online to deliver subsets of jobs, or 
creating a business. This suggests that the platform enables entrepreneurial actions, but 
this emergent issue has not been explored in detail in this study. A valuable extension of our 
research, which testifies how entrepreneurial orientation is reflected in a set of behaviors, 
could detail which contextual factors of the online labor markets or personal motives guide 
individuals toward the enactment of these different behaviors and why, contributing to the 
current debate on the role of social and contextual factors in translating entrepreneurial 
intentions into actions (e.g. Fini et al., 2012; Meoli et al., 2017). We also suggest that 
researchers interested in these topics should continue to follow the activities of emergent 
entrepreneurs to acknowledge whether the context of online labor markets triggers 
successful or unsuccessful entrepreneurial activities.

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Further reading

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“We’re not uber:” control, autonomy, and entrepreneurship in the gig economy

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Abstract

Purpose – Unlike the effect of management styles on employee attitudes, little is known about the effect of managerial assumptions on workers within the gig economy. The purpose of this paper is to utilize McGregor’s Theory X and Theory Y as a framework to discuss two gig economy platforms and how their differing management assumptions affect worker perceptions of themselves as entrepreneurs.

Design/methodology/approach – The author utilized qualitative interviews and demographic surveys with 41 contract workers from TaskRabbit, a personal assistant platform, and Kitchensurfing, a “rent-a-chef” service, to examine the impact of differing management assumptions on independent contractor perceptions of themselves as entrepreneurs.

Findings – The Theory X management assumptions and correlated behaviors directly contradict the entrepreneurial ethos marketed by the platforms, resulting in a psychological contract violation for workers and negative responses to the platform. In comparison, Theory Y managerial assumptions and correlated behaviors can be utilized to encourage worker innovation, creativity and sense of self as an entrepreneur.

Practical implications – As the gig economy continues to grow, algorithms are likely to take on increased importance as a management tool. Although some have suggested that such algorithms may reduce the impact of a capricious manager, the fact remains that algorithms are created by management. If the gig economy intends to encourage entrepreneurship, additional attention must be paid to how differing management assumptions, and their resulting behaviors and algorithms, affect worker attitudes and experience.

Originality/value – This study represents one of the initial academic investigations into how the Theory X and Theory Y management assumptions and correlated perspectives may be applied to independent contractors within the gig economy. Additionally, this study is among the first to examine how gig worker attitudes toward platform firms, and views of themselves as entrepreneurs, are affected by algorithm-implemented management policies.

Keywords Attitudes, Motivation, Qualitative research, Entrepreneurship, Job satisfaction, Communication, Psychological contracts, Management attitudes

No boss. No shifts. No limits. (Uber)

Find jobs you love. At rates you choose. Make a schedule that fits your life. (TaskRabbit)

Mimic a restaurant experience [...] without all of the chaos and uncertainty. (Kitchensurfing)

Introduction

The gig economy markets entrepreneurship by promising workers that a flexible schedule, a self-directed workplace and limitless earnings can be at their fingertips through app-enabled work. Nearly a quarter of workers earned money by working in the gig economy in 2015 (Smith, 2016). The sharing economy may soon grow to exceed the US restaurant industry (Cannon and Summers, 2014). Intriguingly, while the platforms market entrepreneurship, a number of workers view themselves as part-time employees, rather than entrepreneurs.
Management attitudes and styles can affect worker satisfaction (Ayres, 2014; Edmans, 2012; Lim, 2010), yet, as noted by Kuhn (2016), little is known about “platform service providers’ attitudes toward platform firms and their work” (p. 159).

This special edition on the gig economy focuses on the role of management constructs and concepts in the platform-based economy and the implications for recruiting and motivating workers. As a result, this paper has two primary research questions:

RQ1. How – if at all – are gig economy workers affected by differing management assumptions?

RQ2. How do management behaviors affect worker perceptions of themselves as entrepreneurs or part-time employees in the gig economy?

While risk and autonomy are commonly associated with entrepreneurship, and are often found in gig work, platform-based workers may find themselves facing restrictive workplace policies that appear to be at odds with the workplace autonomy inherent in entrepreneurship. A secondary goal of this paper is to utilize worker experiences to provide practical suggestions on how the gig economy could encourage entrepreneurship to increase worker motivation and retention.

McGregor’s (1960) Theory X and Theory Y are best described as two differing sets of cognitions or beliefs about human nature in the workplace. Utilizing interviews with gig workers as a data source, this paper uses Theory X and Theory Y, and the behaviors that result from such mindsets, as a framework to argue that the Theory X belief system, with its focus on worker control and coercion, negatively affects worker perceptions of themselves as entrepreneurs by removing a sense of autonomy and replacing it with coercion. This reduction in entrepreneurial freedom, which contradicts platform marketing of the entrepreneurial ethos (Ravenelle, 2017) leads to psychological contract violation (Morrison and Robinson, 1997) for workers, and has a negative effect on worker attitudes and behaviors (Zhao et al., 2007). The subsequent sections will provide a brief overview of the gig economy and entrepreneurship and a review of the literature related to McGregor’s Theory X and Theory Y before discussing the research methodology.

### Background on entrepreneurship and gig work

As noted by Bennett and Dann (2000), the term entrepreneurship has been used inconsistently, at various times indicating small business ownership, self-employment through freelance work, the use of innovative approaches to approach market opportunities (Schumpeter, 1934) or the creation of a new organization (Drucker, 1985). Linking back to its French root, *entreprendre*, meaning “to undertake,” this paper utilizes Cantillon’s (1755/1931) original definition of an entrepreneur as an individual who is engaged in self-employment and assumes the risk of a business venture.

The literature on the traits of entrepreneurs is equally varied, with contradictory findings as to the relationship between various characteristics and entrepreneurial leanings or success (Decker et al., 2012). Vecchio (2003) noted a “Big Five” of traits and concept dimensions that seem to be commonly associated with entrepreneurship: a propensity for risk taking, needs for autonomy and achievement, self-efficacy and a locus of control, although results are not uniformly supportive for the prevalence of such attributes among entrepreneurs.

The autonomy, achievement, self-efficacy and locus of control that are commonly identified with entrepreneurs is also integral to the concept of an independent contractor, an individual who works for a company, but is not considered to be an employee. The majority of American gig economy services consider their workers to be independent contractors or 1099 workers, named for the end-of-year tax document they receive that details their income. In addition to freeing companies from the obligation to pay into unemployment insurance funds or to make
an employer’s contribution to Social Security and Medicare (7.65 percent of the employee’s salary), classifying workers as independent contractors allows companies to save on workers’ compensation premiums and avoid workplace injury and disability-related disputes. Independent contractors in the USA do not receive unemployment benefits, paid vacation or sick leave, retirement, overtime, disability accommodations, family leave protections, protection from discrimination or sexual harassment, or the right to form unions. As a result, classifying a worker as an independent contractor can save an employer roughly 20–40 percent on labor costs (Belman and Block, 2008).

Under the independent contractor model, a worker’s method for completing a job, the tools they utilize and their schedule are not supposed to be dictated by the business. A company that hires an accountant as an independent contractor cannot require that the accountant work between set hours or that they use a particular calculator. However, gig services, like traditional workplaces, still need to balance the supply of workers with expected demand. If all Uber drivers want to drive between 10 a.m. and 4 p.m., but the demand for drivers is during peak commuting hours, the model quickly collapses. As a result, platforms utilize algorithms and gamification techniques in order to encourage workers to work. In the case of Uber, for instance, which is notorious for having an adversarial relationship with workers (Shahani, 2017; Willis, 2017), the platform has opted for “psychological inducements” such as “game techniques, graphics and noncash rewards of little value that can prod drivers into working longer and harder” (Scheiber, 2017). While Uber may be an extreme case, this limited control over workers leads to carrot and stick strategies that highlight management’s assumptions about workers’ essential nature.

While Theory X and Theory Y are more commonly applied to research on the direct interactions between managers and workers, most gig economy platforms are designed to allow for minimal human interaction between the platform and worker. However, platform operating algorithms are not created in a vacuum, but are designed within a particular management mindset. Workers are either viewed by management as potential entrepreneurs or as recalcitrant workers who need to be cajoled into working, and these perspectives affect platform decisions regarding workplace flexibility and the implementation of policies that are intended to punish or reward workers for their behavior. In the following section, I will provide a more complete overview of the Theory X and Theory Y mindset.

**Literature on Theory X and Theory Y**

Douglas McGregor’s *The Human Side of Enterprise*, which focuses on the impact of managerial mindsets on worker behavior, has been described as one of the most influential management books ever written (Bedeian and Wren, 2002). McGregor’s theory can be summed up as follows: managers operate under assumptions about human behavior that can be grouped into two categories of Theory X and Theory Y. Theory X managers operate under three primary assumptions:

1. people dislike work and will avoid it if possible;
2. most workers need to be “coerced, controlled, directed and threatened with punishment” in order to get them to work (McGregor, 1960, pp. 33-34); and
3. The average worker wishes to avoid responsibility preferring to be directed, and has little ambition, although they do desire security.

According to McGregor (1960), as part of Theory X, management has little trust or confidence in workers, and communication flows down from management, not up from workers. Furthermore, managers with a Theory X mindset will tend to be more controlling and focused on directives and will engage in close monitoring of workers (McGregor, 1960).
By comparison, Theory Y managers operate under the assumption that workers are committed to work and are capable of innovating to find solutions to problems. Under Theory Y, the work environment is structured so that “employee goals coincide with organizational goals, resulting presumably in greater creativity and productivity” (Bobic and Davis, 2003, p. 245). Theory Y presumes that workers are motivated by “recognition and acknowledgement” and that they are “self motivated and require little supervision” (Noland, 2014, p. 146). Managers hewing to a Theory Y mindset believe workers to be inherently hardworking, industrious, able and interested in contributing to the organization (Prottas and Nummelin, 2018).

McGregor’s work was highly influential in leading to the emergence of organizational development as a field, and continues to be a mainstay of management education in business schools (Volkema, 2010). As a result, the theory is a widely known framework with intuitive appeal that also provides a useful framework for studying differences in managerial assumptions and how they play out. While it is true that Theory X and Theory Y are simply mindsets or cognition systems – as opposed to particular management styles – there is a relationship between beliefs about an object and attitude toward an object (Fishbein, 1968). Additionally, a meta-analysis of 88 attitude-behavior studies by Kraus (1995) finds that that attitudes appear to significantly and substantially predict future behavior. As a result, Theory X and Theory Y beliefs are correlated, or associated, with particular ways of communicating or behaving with workers, which – in turn – impacts worker outcomes. The sequence of causal flow can best be illustrated as Theory X/Y beliefs lead to correlated behaviors, which lead to worker outcomes.

Work by Larsson et al. (2008) found that leaders who favored Theory X assumptions tended to have lower results in regards to employee views of their leadership. Research examining downward maintenance communication (from superior to subordinate) also found that a Theory X perspective was a significant negative predictor of downward confirmation, while a Theory Y perspective was a significant positive predictor of downward confirmation and downward civility (Sager, 2015). As a result “these [Theory X] assumptions lead managers to deny employees control over their work environment and use methods of influence that are direct and harsh […] [they] emphasize the chain of command, reward-or-punishment motivational techniques, and close supervision of subordinate behavior along rigidly defined behavioral parameters” (Bobic and Davis, 2003, p. 244). Additionally, managers are often unaware of the self-fulfilling nature of their assumptions: a manager with a Theory X mindset may inspire a low level of employee motivation and indeed be the source of their complaint that, “it’s hard to find a good worker” (Kopelman et al., 2012). In effect, the behaviors associated with Theory X and Theory Y beliefs are the causes of worker responses.

As a result, this paper has two major research questions:

RQ1. How – if at all – are gig economy workers affected by differing management assumptions?

RQ2. How do management behaviors affect worker perceptions of themselves as entrepreneurs or part-time employees in the gig economy?

The following section addresses research methodology and provides a brief overview of each platform. The discussion then moves to how the Theory X and Theory Y assumptions led to differing management techniques within two platforms, and affected worker perceptions of themselves as entrepreneurs.

Methodology
The data for this paper are drawn from qualitative interviews with 22 TaskRabbit workers and 19 Kitchensurfing chefs. Participant recruitment into this study was conducted via the
apps, allowing for the use of platform algorithms in order to increase the likelihood of sample randomness. Workers were hired through the services between March and November 2015 and then told about the project in a face-to-face conversation after rapport had been developed. Phone numbers and email addresses were requested, and interviews were solicited and scheduled at a later time in order to reduce potential pressure to participate. Three TaskRabbit participants were recruited through snowball sampling, and one tasker was recruited through contacts at local colleges.

All interviews (except for one interview with a tasker) were conducted face-to-face in public locations in New York City such as local cafes and parks. Interviews averaged more than 2 h in length and included open-ended questions about how the worker became involved with the sharing economy; their most memorable experiences; how they handled gig scheduling and access to bathrooms and breaks; the work involved in managing their online profile; the experience of getting reviews; and if they identified as an entrepreneur. The demographic survey asked participants about their age, sex, race/ethnicity, income, educational level, occupation, home ownership, marital status, number of children, political affiliation, sharing economy income and expenses (by service platform) and to describe what attracted the worker to the sharing economy in three words or less.

All interviews were audio-recorded, transcribed and coded into thematic fields. Survey data were entered into an online spreadsheet and analyzed by calculating means. Thematic qualitative data, such as perceptions regarding one’s identity as an entrepreneur and the decision making involved in accepting gig requests, were sorted into broad topical categories, coded inductively under grounded theory and analyzed by examining patterns. To preserve confidentiality, all respondents were assigned pseudonyms based on the Social Security Administration’s list of popular birth names.

Study participants were generally diverse, with 50 percent identifying as white, while approximately 12.5 percent identified as hispanic and 25 percent described themselves as black/African-American. The remainder identified as Asian, multi-racial, declined to answer, or gave an ethnic or religious affiliation instead. The majority of respondents were male (65 percent). Worker ages ranged from 20 to 60, with 40 percent falling between 20 and 35 years old. Their education levels were especially high: 35 percent had a Bachelor’s degree and 22.5 percent had a Graduate degree. Nearly 40 percent (37.5 percent) of respondents listed their educational level as some college or below, including several who were currently enrolled in a local college. Nearly 8 percent described their household income as more than $100,000 and 10 percent listed incomes between $75,000 and $99,999, while 32.5 percent categorized their income as below $35,000.

**Kitchensurfing**

Kitchensurfing was started in 2012 as a way to hire professional chefs for home dinner parties. The platform was originally a marketplace; chefs were recruited through online advertisements and vetted by passing a sample meal “audition” within the company’s test kitchen. Approved chefs could post a profile and sample menus (ranging from an intimate dinner to a cocktail party for more than 100) and related food images. In addition to providing marketing and advertising, Kitchensurfing processed client payments and served as an escrow service in exchange for a 10 percent commission.

In 2015, the service added an on-demand alternative through its Kitchensurfing Tonight service. Clients picked one of three daily meal options and a chef arrived at a pre-set hour, with all of the ingredients and tools necessary to cook and serve the meal. The cost, which started at $25 per person, included ingredients, disposable plates, tax, clean-up, and covered worker transportation, labor and tip. The portions were generous, with a main dish and side, and often included a salad and small after-dinner treat. The entire process – from the time the chef arrived to when he or she left – usually took about 30 min. Workers were paid $60 for a 4-h shift, even if the shift started late or ended early, and those who worked at least...
four shifts per week were also given a weekly unlimited MetroCard, worth $31. Workers were also eligible for the Secret Diner program, which allowed workers to earn a $200 bonus for meeting service expectations. Eventually, the platform discontinued the marketplace feature and focused entirely on Kitchensurfing Tonight; in April 2016, the service closed its doors due to insufficient customer demand.

TaskRabbit
TaskRabbit was started in 2008 and originated as a bid-focused marketplace. Clients posted tasks ranging from taking headshots, to assembling Ikea furniture, to cleaning, and the workers bid on the work, giving short marketing spiels about why they were the best choice. In the Summer of 2014, TaskRabbit “pivoted” from an open-bidding market to more of a temp agency format with workers providing availability in pre-set 4-h increments, roughly equal to morning, afternoon and early evening. Potential employers chose a job category and time window, provided a task overview and were prompted to hire from an algorithm-selected listing of up to 15 potential workers.

Under the new system, workers experienced heightened levels of algorithmic control including a requirement to respond to tasks within 30 min or less and to accept at least 85 percent of their offered tasks. Workers who fell short of these expectations could be required to complete online tutorials regarding the requirements. Workers were also required to remain active on the platform, going too long without completing a task could result in platform deactivation. The following summer, TaskRabbit increased their service fees from 20 to 30 percent, tacked on an additional 5 percent trust and safety fee to be paid by the consumer, and offered a reduced 15 percent fee for any repeat business from the same client. Tasks that had previously cost the client $100 and netted the worker $80 now cost the client $105, and the tasker received $70. According to TaskRabbit, the change was intended to “incentivize entrepreneurship” so that workers would obtain repeat clients. In 2017, the trust and safety fee was converted to a Trust and Support Fee and increased from 5 to 7.5 percent; later that year, Ikea purchased the platform.

The TaskRabbit marketplace, with its bidding model, was seen as an entrepreneurial opportunity, but after the changes, workers regularly complained that their sense of independence and being their own boss had dissipated, and they instead thought of themselves as employees, workers or even “indentured servants” (Garling, 2014).

The rest of this paper will discuss how these two management perspectives were illustrated by the tactics undertaken by each platform in an effort to motivate workers. Worker responses to these tactics and how such activities affected their perceptions of themselves as entrepreneurs or employees will also be addressed.

Results
Under Theory X, workers are believed to dislike work and avoid it if possible. As a result, companies must coerce workers and threaten punishment in order to get workers to work. After the 2014 pivot, TaskRabbit began enforcing strict responsiveness requirements and requiring workers to accept 85 percent of their tasks. Workers who previously had the luxury of bidding on interesting tasks found that their autonomy and ability to choose work was adversely affected and those who did not hew to the new expectations were punished with lower ratings and less desirable tasks.

While gig work is often described as being “on-demand,” workers regularly noted that their ability to get work was not just linked to their willingness to accept all potential tasks, but also keeping their app on and their availability open. For instance, Natasha, 28, explained that if her app was off for several days and then she turned it back on, there was an inevitable delay unless she started accepting same-day tasks, at which point,
“the algorithms pick up that I’m active and then it starts swarming me with jobs so I’m just really overwhelmed [...]” (Ravenelle, 2019, p. 85).

As an authoritarian belief system, Theory X’s focus on productivity is illustrated in the push to get workers to quickly accept the vast majority of offered work, leading to the perception that workers could no longer choose to work, and felt “afraid to say no.” Such tactics are similar to those explored by Neuliep (1987) in finding that anti-social compliance-gaining strategies such as threats, deceit and aversive stimulation were more positively correlated with the presence of a Theory X mindset among managers. Additionally, under the Theory X perspective that workers sought security, the punishment for violating expectations was twofold: workers had even fewer work choices, further increasing the need to “accept every single thing,” and increasing the likelihood that they might go without work entirely. Workers were aware that their lack of work was a punishment for their reluctance to accept earlier tasks or past unavailability. As Jamal, 25, explains, “[…] because I haven’t done anything it rarely goes off. Even if I leave my [availability] on it rarely goes off because I don’t show up in searches much anymore.”

The 30-min responsiveness requirement was also a source of consternation for many workers. Internet access in the city’s subway system is limited at best and cell coverage can be spotty in certain neighborhoods or apartments:

Now they want me to answer within 30 minutes, otherwise you lose the job completely, which is asinine […]. Whatever that concept is, we’re not Uber […]. (Victor, 31)

Additionally, for active taskers, such as Victor, it was not unusual to receive requests while they were on another job. Victor often accepted handyman tasks that involved working with electricity or heavy objects. However, he was still expected to respond to a potential task within 30 min, even if he was working for another TaskRabbit client. Concerned about the lack of professionalism of negotiating with a client while he was on the clock for another client, Victor reached out to TaskRabbit. “The response that I got from TaskRabbit […] was ‘well, just set your availability to off.’ My response to that is ‘no, then I won’t get hired. You’re taking away my stream of income. My availability is there for them to hire me.’”

While workers were held to the 30-min requirement, clients were not, leading to communication asymmetry. Workers often held time slots, only to find themselves lacking crucial task information such as location. In some cases, after several hours without a response from the client, workers would contact TaskRabbit to complain and to have the task deleted. Taskers were often reluctant to personally delete a task because it could negatively affect their task acceptance metrics.

In addition to facing reduced work opportunities in the future, taskers who did not accept a sufficient percentage of tasks or who fell below the responsiveness metrics were punished with warnings and temporary deactivation. These increased work and responsiveness requirements point to a Theory X mindset where workers must be controlled and coerced “into putting in effort with threats of punishment” (Heery and Noon, 2017):

So if any of those [metrics] slip, you’re on thin ice and you’ll get a warning. If it slips again they’ll rudely disconnect you and make you do a quiz. They basically go through “should I do any type of task or not, why or why not?” It’s very condescending. (Marcus, 34)

What they’ll do now is they’ll pause your account if they see that you have bad things happen or whatever, you don’t respond in time and then you have to go through like grade school, like write an essay as to why you think you’ll be a good TaskRabbit or why you’ll never do this again. (Victor, 31)

As noted by Ashforth (1994), Theory X mindsets are associated with subordinate perceptions of “petty tyranny,” defined as an individual who “acts in an arbitrary and self-aggrandizing manner, belittles subordinates, evidences lack of consideration, forces conflict resolution,
discourages initiative, and utilizes non-contingent punishment” (p. 772). Worker descriptions of the experience as “insulting,” or a return to “grade school,” demonstrate a recognition of the warning and quiz as a form of punishment and belittlement. In some cases, the workers questioned the alleged violation, noting that the app countdown was even less than 30 min or that alerts were not appearing in time, further heightening the sense of arbitrariness and a lack of consideration for workers.

Clients had the option of allowing for a task to be released to all taskers (referred to as an “emergency” or “same-day” task) but in order to find and accept such tasks workers needed to be essentially “on-call,” by constantly checking the app for new work, further increasing the sense of “petty tyranny.” Michael, 49, found himself constantly clicking “refresh” on his TaskRabbit app, a process he described as “click, crossword, crossword, crossword, click, crossword, crossword, crossword, click” (Ravenelle, 2019, p. 84).

In an added measure of dystopia, those who neglected to work for a period of time or who violated guidelines found themselves “deactivated” or “removed from the community.” For instance, Sarah, 29, found herself without any tasks for more than two months. When TaskRabbit notified her that she was in jeopardy of being deactivated, she reached out to the platform to indicate that she was trying to get work and had listed two weeks of availability, but the platform administrators were unsympathetic.

Meanwhile, Emma, 26, neglected to forfeit a task, which would have reduced her metrics. TaskRabbit staff reached out to inform her that failing to forfeit a task – which forwarded the task to another worker instead of removing it from the system – could result in her being “kicked out of the TaskRabbit community.’ I was like ‘wow, it’s that easy!’ It was like a warning you know and it was such a small technical thing which obviously I won’t do it again […]. I didn’t realize how easy it was to get kicked out.”

The sense of capriciousness was further heightened by how the changes were implemented. In line with Russ’s (2011) research on how Theory X managerial assumptions result in a reluctance to engage in participative decision making, workers reported that they were left out of the platform’s 2015 decision to change its pay structure. The platform changes were a significant driver of worker frustration, but the loss of autonomy – especially as platform executives argued that such changes were intended to “incentivize entrepreneurship” – contributed to workers’ sense of a psychological contract violation. While more commonly applied to employees, a psychological contract is a worker’s “beliefs about the reciprocal obligations between them and their organization” (Morrison and Robinson, 1997). More specifically, such contracts include beliefs about what individuals are obligated to give and entitled to receive in exchange for another party’s contributions (Levinson et al., 1962). However, as noted by Lucero and Allen (1994) and Rousseau (1989), and as illustrated in the quotes below, while psychological contracts are expectations held by an individual, such expectations may not be shared by employers or gig platforms:

And I think if you pay someone money, don’t […] what do they owe you? […] they don’t feel they owe me anything or they don’t see themselves as owing me anything or they don’t feel as if they’re responsible to owe me any explanation whatsoever. (Will, 38)

Brandon, 30-something, reported a “sour, bitter feeling that more benefit is going to them, TaskRabbit HQ and investors, than to me.” Other workers discussed a sense of betrayal upon realizing that the platform did not feel any responsibility to workers, even in light of their commission payments to the site. Emma, 26, explains that there was a perception among workers that, the platform would be “making more money off of us, taking what I think is rightfully our money.” As noted by Rousseau (1989), the worker’s intense reactions can be attributed to “unmet expectations of specific rewards or benefits, but also to more general beliefs about respect for persons, codes of conduct, and other patterns of behavior associated with relationships” (p. 129).
The perceived intentionality of the violation further intensified worker feelings of violation (Bell and Tetlock, 1989; Heider, 1958). For instance, Richard, 50, had completed a sufficient number of tasks on the platform that he received a phone call notifying him of the change instead of the mass email received by other workers. He described the speech as a “dog and pony show” before explaining to the caller that the platform had increased their cut by 50 percent (from 20 to 30 percent) by taking it out of his pocket. More than a year after the pivot, he still described the situation as bothering him.

Workers often reported that under the bidding system, they viewed themselves as having a high level of freedom as they bid on tasks and worked to market themselves:

> It was great because it felt entrepreneurial. You’re bidding. “This is what I think I’m worth for this particular project,” and if I get it, I get it; and if I don’t, I don’t. So it was great. (Brandon, 30-something)

As a result of this psychological contract violation, and the policies created by managers operating under a Theory X mindset, many TaskRabbit workers stopped thinking of themselves as entrepreneurs, and began to view themselves as employees. Such findings are in agreement with Kuhn and Maleki’s (2017) assertion that “workers who are more actively managed by a platform firm often perceive themselves as employees” (p. 193):

> Whenever you punish people by saying – “Well, you haven’t completed a task in a month, you’re out.” That’s being treated as an employee […] Or being suspended for not responding because sometimes I would have my phone off for something and then I would turn it on and all of a sudden all these things would come up and I’d try responding and they were like – “Well, that task is no longer available.” (Jose, 60)

In the USA, where health insurance, retirement and disability coverage are all linked with employment status, there are many advantages to being categorized as an employee. However, while these workers began thinking of themselves as employees, this did not translate into receiving additional workplace benefits such as health insurance or workplace protections. Instead, much like Robinson and Rousseau (1994) found with employees who had experienced a psychological contract violation, TaskRabbit workers often expressed dissatisfaction with the work and an intention to leave (Table I).

### Y: trusting workers to work

Within the Theory Y perspective, workers are assumed to be interested in work, “to be self-directing and to seek responsibility […] [and] to be creative in solving business problems” (Morse and Lorsch, 1970). Within the Theory Y assumptions, work is a source of achievement and respect, a view that seemed to be highlighted by Kitchensurfing’s policies regarding a chef’s response time to prospective work. Gig offers that were sent via the marketplace did not automatically deactivate until a relatively generous 48 h had passed. When the request was deactivated, an email sent to the requestor included the chef’s first and last name. Marketplace requestors could also include their contact information in their emails to chefs without it being redacted by the platform, suggesting that chefs were trustworthy enough to not go off-platform.

For the on-demand Kitchensurfing Tonight service, rather than the “stick” tactics that were commonly used by TaskRabbit, workers were rewarded for their performance. Workers who arrived to the nightly commissary on time at 4 p.m. each weekday afternoon were eligible for cash bonuses, and chefs who committed to working at least four shifts a week were given a free weekly MetroCard, worth $31. Instead of the possibility of a penalty, workers had the opportunity of a reward.

During the hour-long commissary meeting, which was used by chefs to pack their coolers with the evening’s ingredients (all previously prepped by the company’s staff), workers
were usually fed a complimentary evening meal, and often given a cooking presentation or other reminders. Chefs were also asked to share their experiences on the front-line in people’s kitchens, a supportive communication style that is more common within Theory Y orientations (Sager, 2008, 2015):

On Monday, they’ll do this dish, they ask us our feedback: “you guys have done this, what do you think about this? So what problems are you running into?” (Ian, 31)
Unlike with TaskRabbit, the “tests” given to Kitchensurfing Tonight chefs were not seen by chefs as a form of punishment, but a data-gathering effort by the platform’s staff:

They’ve started doing a thing where they randomly test us on our cooking skills. This is the first actual metric that I can tell that they’re gathering about us. And so they sometimes will give us a tray with, like, a piece of a chicken and a cup of wine and a cup of salt or something and you have to cook it. And then the next week, four ingredients and a steak […]. (Joe, 26)

Additionally, because Kitchensurfing chefs were actively solicited for feedback – and were given bonuses for good reviews – they also spoke of soliciting reviews from their clients that could be utilized by the platform. After cooking a Kitchensurfing meal, Roxanne, 27, asked clients to complete the nightly dinner survey:

[...] if you want to just write how much you enjoy the service, anything you saw or feel that could be approved upon [that would] be very helpful, because again it is a start-up so we’re still working out [details].

The Kitchensurfing marketplace also served to support entrepreneurship. Unlike TaskRabbit, where workers were coerced into accepting gigs, Kitchensurfing chefs were able to specify the style of food they wanted to cook and free to reject any and all requests without penalty. This freedom enabled chefs to shape the experience into one that was useful for their own goals. For instance, Ashaki, 35, used her time as a Kitchensurfing marketplace chef to test recipes for an ethnic restaurant she planned to open in the future, and also gave her an opportunity to meet and market to prospective diners.

Kitchensurfing was not a perfect situation. While the service encouraged entrepreneurship, as independent contractors, workers were vulnerable to sexual harassment and on-the-job injuries for which there was no redress (Ravenelle, 2019). Some of the company’s policies – such as the Secret Diner program – meant cash bonuses for chefs, but if that one meal did not go well, chefs lost out on their opportunity for a $200 bonus. Later changes included the closing of the chef marketplace service and a reclassification of Tonight chefs as employees, rather than independent contractors. Finally, and perhaps the most obvious, Kitchensurfing closed in April 2016. While the closure was explained as a lack of demand, as opposed to linked to management assumptions and behaviors, the fact remains that Kitchensurfing, if it remained open, might have eventually embraced Theory X beliefs. Even with these challenges, Kitchensurfing’s focus on chefs as capable of exercising “self-direction and self-control in the achievement of organizational objectives” remains one of the better examples of Theory Y assumptions and related management behaviors in the gig economy (McGregor, 1960, p. 326).

Discussion and conclusion

The gig economy promises to bring entrepreneurship to the masses, yet little is known of the role of management constructs and concepts in the platform-based economy or the impact on recruiting and/or motivating workers. Given the growth to date of the gig economy – with nearly a quarter of American workers earning money through the gig economy in 2015 (Smith, 2016) – partnered with unemployment at historic lows, studying the issue of worker recruitment and motivation is of special importance. Additionally, this study represents one of the first academic investigations into how the Theory X and Theory Y management perspectives may be applied to independent contractors within the gig economy, and to examine how gig worker attitudes toward distinct platforms – and views of themselves as entrepreneurs – are affected by algorithm-implemented management policies.

The purpose of this paper was to utilize McGregor’s Theory X and Theory Y as a framework to discuss two gig economy platforms and how their differing management
assumptions affected worker perceptions of themselves as entrepreneurs. As a result, this paper has two major research questions:

RQ1. How – if at all – are gig economy workers affected by differing management assumptions?

RQ2. How do management behaviors affect worker perceptions of themselves as entrepreneurs or part-time employees in the gig economy?

This study utilized qualitative interviews and demographic surveys with 41 contract workers from TaskRabbit and Kitchensurfing. The unstructured interview format allowed for a respondent-led interaction and contributed to building rapport with respondents. This methodology is especially useful in detailing how people approach risk and challenges in the workplace (Kasinitz and Rosenberg, 1996; Rivera, 2015) and in collecting detailed and theoretically rich data about an unbounded population.

Theory X managerial assumptions include a belief that workers dislike work and will avoid it if possible, and must be coerced into working through the threat of punishment. These assumptions are correlated with management having little trust or confidence in workers and downward communication flows that rely on directives and close monitoring. On the TaskRabbit platform, these managerial assumptions were correlated with deactivation of workers who did not meet work expectations regarding availability, responsiveness or policy adherence. Workers were pushed to accept the majority of offered work, an anti-social compliance strategy that has been correlated with a Theory X mindset (Neuliep, 1987).

Illustrative of the lack of participative decision making among managers with a Theory X mindset (Russ, 2011), workers reported a lack of notice regarding the platforms service pivots and changes to its pay structure, resulting in workers experiencing a psychological contract violation and developing negative responses to the platform. As a result, workers viewed themselves to be employees as opposed to entrepreneurs, and expressed dissatisfaction with the platform and a desire to leave.

By comparison, a Theory Y perspective was exhibited by managers at Kitchensurfing. Rather than threatening workers with deactivation, chefs were rewarded with cash bonuses for meeting or exceeding expectations, and those who worked at least four shifts a week were given the “bonus” of a weekly, unlimited MetroCard. A supportive communication style, which is correlated with a Theory Y orientation (Sager, 2015, 2008), involved active solicitation of chef opinions and experiences, and led to chefs actively seeking feedback to assist the platform and viewing themselves as entrepreneurs.

This paper has theoretical implications for both gig economy workers and managers. This research suggests that the implications of Theory X assumptions on manager behavior, and on worker attitudes, may be especially disastrous in terms of worker retention and success when workers are classified as independent contractors. Theory X assumptions that workers do not want to work, and must be compelled to work under threat of punishment, contradicted worker expectations of this new economic movement and perception of themselves as entrepreneurs. As a practical implication, before joining a platform, gig workers may be well served to learn about the assumptions held by management rather than assuming that work as an independent contractor will be inherently independent.

This paper also supports work by Fishbein (1968) on the relationship between beliefs about an object and attitude toward an object, and research by Ajzen and Fishbein (2005) on how attitudes influence behavior. In addition to contributing to work on managerial X/Y attitudes and managerial X/Y behaviors (Lawter et al., 2015), these findings further imply that Theory X and Theory Y assumptions can be a source of variation in the behavior of management in the gig economy and can affect algorithm-implemented management policies.

This paper also contributes to the literature on worker motivation and job conditions by supporting Evans’ (1986) work on how leadership and job design affect worker motivation and
worker behavior. This paper further adds to the recommendation that workers be empowered to take responsibility for their own motivation, rather than utilizing punishments or threats to motivate workers as illustrated by TaskRabbit. Effective managers should seek to understand what workers need and what motivates them, and to engage workers in the problem-solving process (Nicholson, 2003). In the case of gig work, for instance, this could take the form of a worker-led advisory board or active solicitation of suggestions from contract workers. This paper further contributes to research on the importance of promoting high performance and playing to workers’ strengths (Buckingham, 2005) and spending organization funds on true rewards for specific performance (Atchison, 2003).

One obvious limitation of qualitative work is that it does not easily lend itself to industry-wide generalizations or statistical analysis. However, the gig economy is still less than a decade old and research on this field remains highly exploratory in nature, and, as a result, qualitative work is necessary to identify future areas for quantitative inquiry. Furthermore, gig workers remain a fairly unbounded population, making statistical analysis challenging[2]. An additional limitation is that interviews were not conducted with middle or upper managers for TaskRabbit or Kitchensurfing. Although workers identify differing behaviors that appear to be correlated with differing management assumptions, it would require a separate and different paper to address managers’ perspectives on the evolution of such assumptions and correlated behaviors. For instance, it is not known if TaskRabbit management originally embraced a Theory Y mindset and only turned to Theory X later, or if the management was unaware of the correlation between assumptions and behavior. A fascinating future source of inquiry would be to conduct an ethnography of management at a start-up gig economy platform. Such a project could provide an intriguing window into how managerial assumptions are correlated with management behaviors and how such assumptions may change as part of the evolution of a gig economy platform or be correlated with platform service pivots.

This research also has practical implications for how platforms can motivate workers and encourage entrepreneurship. One simple recommendation for platforms is to refrain from massive service pivots that lead to Theory X assumptions informing policies and punishments. Platforms that promise workers opportunities for entrepreneurship should avoid implementing draconian policies that reduce worker autonomy and flexibility. Violating the psychological contract with independent workers is unlikely to contribute to the trust necessary for such workers to risk building their business on a gig platform, especially given the already prevalent distrust of algorithms (Yeomans et al., 2019). While Kitchensurfing is just one case of Theory Y assumptions, and one that is not without flaws, the fall-out from the TaskRabbit pivot clearly shows the negative impact that Theory X assumptions and correlated management behaviors can have on “independent” workers.

Additionally, platforms may be able to contribute to worker entrepreneurship by offering workers the protections of employment such as access to benefits and workplace protections. For instance, Kitchensurfing chefs who worked a 4-h shift were guaranteed the full amount of pay, even if the shift started late or ended early – a helpful income safety net. Research shows that poverty reduces cognitive performance, possibly because poverty-related concerns consume mental resources (Mani et al., 2013). Poverty also appears to limit entrepreneurs’ ability to profit from the creativity they bring to the marketplace (Doering, 2015). Gig workers who identify as entrepreneurs are more likely to have the financial capital to support entrepreneurial dreams (Ravenelle, 2019). Access to a safety net can increase rates of entrepreneurship, for instance, the existence of food stamps and awareness that they are an available option in the event of a failure increases entrepreneurship (Olds, 2015). Likewise, changes to the French unemployment system that allowed workers to remain eligible for benefits while they started a business also led to a growth in entrepreneurship (Sraer et al., 2014).

Organizations and relationships that further trust, reputation, mutual interdependence and reciprocity can also produce supportive entrepreneurial structures (Larson, 1992). As noted by
Echols and Neck (1998, p. 38), “enabling employees to detect, facilitate and pursue opportunities while fostering an organic, organizational structure with shared vision and values” can strengthen a firm and increase worker loyalty. On-demand platforms that pay their workers as W-2 employees – such as MyClean, Hello Alfred and Munchery – have low worker churn rates, high client ratings and continue to grow, suggesting that they offer supportive entrepreneurial structures (Ravenelle, 2019). However, more research is needed to learn how front-line workers may experience gig-based corporate entrepreneurship.

This study represents one of the initial academic investigations into how the Theory X and Theory Y assumptions and correlated behaviors may be applied to independent contractors within the gig economy. This paper suggests that such cognitive frameworks can be applied to algorithm-managed gig-based work, even though such work offers minimal interaction with workplace managers. If gig economy platforms intend to encourage entrepreneurship, additional attention must be paid to how differing management perspectives and behaviors and their impact on the development of workplace algorithms affect worker attitudes and experience.

Notes
1. Airbnb, for instance, automatically redacts all contact info for host or potential guest, including phone, email and address, until payment is received through the app.
2. In one oft-cited study by Hall and Krueger (2015) based on an Uber-funded survey of Uber drivers, workers were defined as active if they gave a ride within the past six months – a broad definition that would be laughable in any other industry.

References


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Mechanical Turk and the gig economy: exploring differences between gig workers

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Abstract

Purpose – The purpose of this paper is to provide an investigation of how different types of gig workers engage in the gig economy. Specifically, the authors distinguish between workers who view gig work as primary income (or not) and those workers who view it as a job (or not).

Design/methodology/approach – In total, 1,190 Mechanical Turk (MTurk) workers completed surveys across two studies examining whether types of workers differ based on demographic characteristics, utilization of MTurk, why they participate in the gig economy on MTurk (i.e. push and pull factors) and how this impacts life satisfaction.

Findings – Workers relying on MTurk as a primary income had lower incomes and spent more time completing large numbers of work units. This group of workers also reported fewer pull factors (e.g. enjoyment) as a reason for working in the gig economy and had lower levels of self-reported current and predicted future life satisfaction. Individuals who view MTurk as a job were more likely to treat MTurk like a job – engaging in online communities and having a regular work schedule. These workers were more likely to report pull factors (e.g. enjoyment and challenge) and did not differ on life satisfaction.

Originality/value – The current research contributes to our understanding of MTurk, one of the largest online platforms for gig work, as part of the diverse gig economy and highlights potential areas for future research.

Keywords Employment, Well-being, Labour, Temporary workers

Paper type Research paper

Just as life is constantly in flux (Heraclitus, c. 500 BC), so is the nature of work. Currently, much of the labor market is rapidly transforming as technology and automation eliminates or fundamentally changes many jobs (Arntz et al., 2016; Cascio and Montalegre, 2016). At the same time, for jobs that require creativity, a personal touch, empathy or critical thinking, new jobs are being created (Smith and Anderson, 2014). In particular, the recent rise of the “gig economy” has created a number of opportunities for workers to be hired on demand to complete short-term projects known as “gigs.”

In a recent review, Spreitzer et al. (2017) noted that “virtually no research has been published on gig workers to date” (p. 480), and we should not expect gig work to be experienced as other contract work (see also Aguinis and Lawal, 2013; Kuhn and Maleki, 2017). Organizational research has tended to focus on traditional work settings, whereby individuals are employed by a single employer, working in a particular location and for a particular number of hours per day (Ashford et al., 2007; Kuhn, 2016). Though a small sector of the labor force (~0.5 percent), the gig economy is also the fastest growing segment of alternative work arrangements (Katz and Krueger, 2016; Murray and Ball, 2016).
Additionally, many have argued that workers may not perceive gig work as a job resulting in underreported participation in the gig economy (Brainard, 2016; Kuhn, 2016). Indeed, a recent estimate from the Survey of Household Economics and Decisionmaking reported that 31 percent of the 12,246 adults surveyed engaged in gig work during the month prior to taking the survey (Federal Reserve, 2018). Regardless of the exact labor force participation, remaining relevant in a changing economy requires organizational researchers to contribute to the conversation surrounding the gig economy (Brawley, 2017).

Past research has argued that theory and research surrounding the gig economy may need to distinguish between “serious” vs “part-time” gig workers (Brawley, 2017). We agree that distinguishing between types of workers may be meaningful, but do not believe serious and part-time are helpful categorizations. Legally, most gig workers are likely to be part-time rather than full-time because such workers are not working more than 35 hours per week for a single employer. Moreover, the part-time/full-time distinction is an objective categorization, whereas how seriously individuals take their work may be more subjective. Finally, the two categories are not mutually exclusive, as part-time gig workers may also consider their work in the gig economy as serious.

Instead, we investigate two distinctions that may be helpful when studying workers in the gig economy: viewing gig work as one’s primary income (or not) and viewing gig work as a job (or not). Such distinctions highlight the heterogeneous nature of the gig economy and may help guide future theory and research on the gig economy. For example, job satisfaction may be a less relevant construct to study if the gig worker does not consider gig work as a job. To illustrate possible implications of these distinctions we examine one domain of the gig economy, namely, crowdsourcing websites. In particular, we examine whether these groups of workers differ in terms of demographic characteristics, engagement on or utilization of the gig economy, motivations for participating in the gig economy (i.e. push and pull factors) and life satisfaction.

**Mechanical Turk and the gig economy**

Amazon originally launched Mechanical Turk (MTurk) in 2005 for internal work that required human intelligence, namely, labeling tasks. Since then, MTurk has grown immensely and is open to anyone who registers for an Amazon account. Individuals may utilize MTurk as a “worker” (an individual who participates in human intelligence tasks or “HITs”) or a “requestor” (an employer or individual who posts the HITs). The organizational sciences and social sciences often view MTurk as a source of quick and affordable data collection (Keith et al., 2017). As a result, the majority of work examining the MTurk platform examines how data collected on MTurk influences our research in the academy (e.g. Behrend et al., 2011; Cheung et al., 2017; Keith and Harms, 2016; Woo et al., 2015). The current research, however, focuses on these individuals as workers within the gig economy rather than participants in a research study. Importantly, MTurk’s original intention and its primary purpose is providing companies with an on-demand service by completing tasks requiring human intelligence (i.e. HITs) – e.g. transcription, categorizing or rating tasks (Schmidt, 2015). For this reason, it is important for organizational researchers to recognize that in addition to being participants, these individuals are workers within the gig economy.

**Types of workers**

We investigate two distinctions that may be helpful when studying workers in the gig economy: viewing gig work as one’s primary income (or not) and viewing gig work as a job (or not). These distinctions highlight two ways in which work in the gig economy differs from traditional work or even other alternative work arrangements. To begin, workers in the gig economy may have another job (even a full-time job), but complete “gigs” or “side hustles” in addition to their other job(s). Thus, while some may view their work on MTurk or other gig platforms as a primary
source of income, many may not. Past research has also suggested that not all gig workers perceive what they do as a job (Brainard, 2016; Kuhn, 2016). Importantly, viewing one’s work as a job in the context of the gig economy may not be synonymous with viewing the job as one’s primary income. That is, workers who view their participation in the gig economy as a job may view the income earned as either primary or secondary income.

Previous research examining characteristics and motivations of MTurk workers has tended to be descriptive and examine these workers as monolithic (Berinsky et al., 2012; Goodman et al., 2012; Ipeirotis, 2010). We argue, however, that there may be meaningful differences between groups of workers and such differences have implications for how we study work in the gig economy. Specifically, different types of workers may have different demographic characteristics, use gig platforms in different ways, have different motivations for engaging in the gig economy (i.e. push and pull factors) and have different levels of life satisfaction. We draw from past research examining similar work arrangements such as contract or temporary work (e.g. Krausz et al., 1995; Morganson et al., 2010; Virick et al., 2010; von Hippel et al., 1997; Wilkin, 2013) to make predictions about how workers within the gig economy may experience work differently.

Demographic characteristics
There is a large body of research on the demographic characteristics of MTurk workers (e.g. Behrend et al., 2011; Berinsky et al., 2012; Goodman et al., 2012; Ipeirotis, 2010; Johnson and Borden, 2012; Paolacci et al., 2010; Roulin, 2015; Steelman et al., 2014). Such research has highlighted the relative diversity of these workers relative to college students. Most relevant to the current investigation, workers on MTurk generally have a lower personal income compared to the general population and often lack traditional employment (i.e. are unemployed; Keith et al., 2017).

Past research, however, has not examined whether different types of workers differ on these characteristics. Although different groups of workers may differ on a number of demographic characteristics, we focus on demographic variables that may indicate a precarious work situation (Kalleberg, 2009) – unemployment and income. We argue that individuals who view MTurk as their primary source of income are more likely to be unemployed and thus have low personal incomes due to the low pay and insecure nature of the work. While workers who view MTurk as a job may or may not be unemployed, these workers are also likely to report low personal income given that such workers may be less likely to view MTurk as a hobby or simply a way to pass time:

H1. Workers who rely on MTurk as their primary source of income are more likely to be unemployed than workers who do not rely on MTurk as their primary source of income.

H2. Workers who rely on MTurk as their primary source of income will report lower personal incomes than workers who do not rely on MTurk as their primary source of income.

H3. Workers who view MTurk as a job will report lower personal incomes than workers who do not view MTurk as a job.

MTurk utilization
Next, workers may differ in terms of how they engage with platforms within the gig economy. Workers in the gig economy have a great deal of flexibility surrounding what work is completed, when work is completed and where work is completed. Different workers use this flexibility to engage with the platform in different ways depending on the type of worker. Workers who rely on MTurk as their primary source of income are likely
to spend a great deal of time on the platform and, as a result, complete more HITs. Additionally, workers who view MTurk as a job will likely treat the platform as a job by spending more time on the platform, completing more HITs per week, having a regular schedule for completing HITs and engaging in online communities dedicated to the MTurk platform:

\( H4. \) Workers who rely on MTurk as their primary source of income will report spending more time on the platform and complete more HITs per week than workers who do not rely on MTurk as their primary source of income.

\( H5. \) Workers who view MTurk as a job will report spending more time on the platform and complete more HITs per week than workers who do not view MTurk as a job.

\( H6. \) Workers who view MTurk as a job will be more likely to report having a regular work schedule for completing HITs compared to workers who do not view MTurk as a job.

\( H7. \) Workers who view MTurk as a job will be more likely to engage in online communities compared to workers who do not view MTurk as a job.

**Push and pull motivations**

Previous research on contract and temporary work arrangements has distinguished between workers who may be pulled into temporary work voluntarily desiring flexibility and autonomy and workers who are pushed into temporary work due to involuntary economic circumstances or the inability to find permanent employment (Feldman, 1990; Krausz et al., 1995; McKeown, 2005). This past research often finds that more skilled workers with higher levels of social capital are able to leverage their skills to create voluntary and desirable work arrangements (Spreitzer et al., 2017). Alternatively, low skilled workers are often pushed into temporary work arrangements by economic circumstances or the inability to find a full-time job. We view this framework as useful for understanding motivations to engage in the gig economy as well.

To better understand why individuals might complete work on the MTurk platform we focus on two broad categories of motivations: push and pull factors. Push factors are (often negative) external factors that influence one’s actions. In the context of the gig economy, push factors may refer to a lack of income or opportunities for employment in the traditional job market. Pull factors are (often positive) internally driven choices that influence one’s actions. In the context of the gig economy, such factors may include enjoyment or a desire for a flexible work schedule.

Different types of workers in the gig economy may have different reasons for completing work. We suspect that lacking income is a strong push factor for completing HITs on MTurk making it less likely that such individuals complete HITs as a hobby or for enjoyment purposes. Conversely, individuals who view MTurk as a job may be pushed into completing HITs to make an income but may also complete the HITs for pull reasons such as enjoyment or for the flexible work schedule:

\( H8. \) Individuals reporting MTurk as their primary source of income will be more likely to report push factors and less likely to report pull factors than individuals who do not report MTurk as their primary source of income.

\( H9. \) Individuals who view MTurk as a job will report both push and pull factors.

**Life satisfaction**

Past research on alternative work arrangements often examines the relationship between such work on job and life satisfaction outcomes (e.g. Krausz et al., 1995; Morganson et al., 2010;
Virick et al., 2010; von Hippel et al., 1997; Wilkin, 2013). Empirical findings generally suggest that alternative work arrangements result in more job and life satisfaction among workers with higher skill levels who voluntarily leverage their social capital to craft flexible work arrangements (Spreitzer et al., 2017). In the current investigation, we focus on life satisfaction as opposed to job satisfaction for two reasons. First, not all gig workers will perceive the work they do in the gig economy as a job. Therefore, even general measures of job satisfaction may be less relevant to certain groups of workers within the gig economy. Second, job satisfaction scales are often ill-suited to alternative work arrangements. For example, items asking about supervisors, coworkers, promotion and benefits are not relevant to many types of alternative work arrangements. This is especially true for gig workers who (typically) do not have contact with supervisors or coworkers at all and do not have benefits or promotion opportunities.

In a review of past research on alternative work arrangements, Spreitzer et al. (2017) identified two worlds of work characterized by either voluntary alternative work arrangements with high degrees of flexibility or less voluntary alternative work arrangements resulting in precarious work. Spreitzer and colleagues (2017) noted, however, that much of this research has been conducted on full-time employees and research is lacking on certain types of alternative work arrangements such as gig work. We suggest that gig work is more likely to fall under the category of precarious work situations. Unlike contract or temporary work, gig workers often have limited, temporary contact with employers, eliminating the possibility of promotions or full-time work by the employer. More importantly, gig work (typically) includes low-skill tasks that could be completed by a wide variety of individuals reducing worker leverage. While this may not be the case for all sectors of the gig economy, the power imbalance and large supply of labor on technology-mediated platforms increase the likelihood of exploitation.

While these factors make it more likely that individuals working in the gig economy will have lower levels of life satisfaction, this may not be true of all gig workers. Past research on temporary and contract work has suggested that pull factors result in voluntary participation in alternative work arrangements and higher levels of satisfaction (e.g. Krausz et al., 1995). In other words, motivations such as enjoyment, growth and flexibility should be positively related to life satisfaction:

**H10.** There will be a positive relationship between pull factors (e.g. enjoyment, growth and flexibility) and life satisfaction.

Given that workers viewing MTurk as a primary income are more likely to experience push factors compared to pull factors for completing HITs, we also predict that these workers will have lower levels of life satisfaction than workers who do not rely on MTurk as a primary source of income. Conversely, workers viewing MTurk as a job may experience both push and pull reasons for completing HITs, suggesting these workers will not have lower levels of life satisfaction than workers who do not view MTurk as a job:

**H11.** Individuals reporting MTurk as their primary source of income will have lower levels of life satisfaction than individuals who do not report MTurk as their primary source of income.

**Overview of studies**

Across two studies, we examined how different types of workers utilize the MTurk platform and whether there are differences between these two groups in terms of demographic characteristics, MTurk utilization (i.e. how workers engage with the platform), push and pull motivations and life satisfaction. Study 1 is intended to answer questions surrounding how MTurk workers more broadly utilize the platform, as well as, whether distinguishing
between workers based on primary income is meaningful. To do so, we collected a large sample from MTurk to examine demographic characteristics (e.g. age, gender, income and employment status), MTurk utilization (e.g. time spent on MTurk, when hits are completed and message board use) and push and pull motivations (e.g. enjoyment, money and help researchers). We compared workers who view MTurk as a primary income to those who do not, based on these variables.

Study 2 extends Study 1 by further examining the possibility that workers who rely upon MTurk as a primary source of income may complete HITs for reasons of financial insecurity, as well as, for other reasons (e.g. pull factors such as flexibility). In addition to examining individuals who view MTurk as their primary source of income, we differentiate between workers who view MTurk as a job and those who do not in Study 2. Furthermore, we investigate how these distinctions among types of workers relate to perceptions of current, past and future life satisfaction.

Study 1 method
Sample
In total, 960 workers completed the survey; however, 10.6 percent (n = 105) workers had to be excluded from the final analyses due to incomplete data (failure to complete the survey).

Procedure
Workers were recruited through Amazon MTurk and directed to a Qualtrics survey link. We used MTurk qualifications to limit the survey to workers who were located in the USA and had a 95 percent approval rating (see recommendation by Peer et al., 2014). Workers were told that the survey would take approximately 30 min (actual Mtime = 29.50) and the responses would be anonymous. All workers completed the measures of MTurk utilization and demographic variables. Additional measures were collected as part of a larger study. All workers (even those who did not complete the survey) received $2.50 for their participation.

Measures
Primary income. To distinguish between workers who view MTurk as their primary source of income and those who do not, workers were asked if MTurk is their primary source of income (yes or no).

Demographics. All workers responded to items inquiring about work status (i.e. full time, part time, temporary worker and unemployed), age, gender, race/ethnicity, education level, personal income and household income.

MTurk utilization. To gain insight about how individuals utilize MTurk, we asked workers about the nature of their participation on the website. These questions included items pertaining to how long they have been completing HITs (less than 1 week, less than 1 month, less than 1 year or more than 1 year), how many HITs were completed per week, how many hours were spent on the platform per week, how much money (in US dollars) they made completing HITs per week, whether the worker had a regular schedule for completing HITs on MTurk (yes or no), whether they use MTurk message boards (yes or no), how often workers read MTurk message boards and how often workers post on MTurk message boards (both scaled 1 = never to 7 = frequently), whether they work on one HIT at a time (yes or no), whether they had completed a single HIT multiple times (yes or no), how important it is to be accurate in responses and how important it is to complete responses quickly (both scaled 1 = not at all important to 7 = very important) and whether they read instructions when completing HITs (yes or no).
Push and pull motivations. Workers were asked about their motivations behind completing HITs on MTurk (check all that apply: enjoyment, to make extra money, as a hobby, to help researchers, as a challenge, to kill time, to gain self-knowledge and other).

Study 1 results and discussion

Demographic characteristics

Comparisons between workers can be found in Table I. Our hypotheses surrounding demographic characteristics predicted that workers who view MTurk as a primary source of income would report higher levels of unemployment and lower personal incomes than workers who did not view MTurk as their primary source of income (H1 and H2). Consistent with past research indicating lower personal incomes than the general population, workers in this sample most frequently indicated a personal income of less than $20,000 (42.7 percent). Household incomes were more evenly distributed, but still skewed toward lower incomes. It is possible that low personal and household incomes are a push factor for individuals to complete HITs on MTurk. Among individuals reporting that MTurk is their primary source of income, the frequency was much higher with 76.7 percent reporting a personal income of less than $20,000 and 35.4 percent reporting a household income of less than $20,000. In contrast, 28.5 percent of individuals who do not report MTurk as their primary source of income reported a personal income of less than $20,000 and 12 percent reported a household income of less than $20,000. These findings suggest that individuals relying on MTurk as their primary source of income are likely in an economically precarious situation.

The low personal incomes may also reflect higher unemployment rates. In total, 49.4 percent of the sample were full-time employed, 17.9 percent were part-time employed, 27 percent were temporary workers and 30 percent were unemployed. As predicted (H1), individuals who rely on MTurk as their primary income were more likely to report being unemployed (65.4 vs 16 percent) and less likely to report being employed full time (15 vs 62.8 percent) compared to MTurk workers who did not rely on MTurk as their primary source of income.

Although not hypothesized, it is worth noting that workers relying on MTurk as their primary source of income did not differ significantly based on gender, ethnicity or education level. Workers in this sample who relied on MTurk as a primary source of income were slightly younger on average than those who did not rely on MTurk as their primary source of income ($M_{age}$ = 31.9 vs 35.5), $t(838) = 4.18$ and $p < 0.001$. The primary differences between the groups of workers identified, however, appear to be employment status and income.

MTurk utilization

As a whole, 41.8 percent of our sample reported being on MTurk for more than 1 year. This departs from past research findings where only approximately 4–16 percent of the sample reported being on MTurk for more than 1 year (e.g. Behrend et al., 2011; Ross et al., 2010). We suspect this difference may be due to the growing popularity and visibility of MTurk since 2010. Along these lines, Ross et al. (2010) reported weekly earnings on MTurk being $1–5 per week on average with workers typically spending 1–5 h on MTurk per week. We compare this to our sample reporting spending an average of 20.47 h (SD = 16.83) per week on MTurk and completing an average of 483.25 HITs (SD = 1,221.234). Additionally, self-reports of weekly earnings in dollars on MTurk are much higher in our sample ($M = 104.16, SD = 104.22$). Taken together, our findings suggest a shift toward a more enduring workforce that completes HITs to earn extra money and even a primary income.

$H4$ predicted that workers who rely on MTurk as their primary source of income would spend more time on the platform and complete more HITs compared to workers who do not rely on MTurk as their primary source of income. In support of these predictions, those that complete HITs on MTurk as a primary source of income reported completing significantly more HITs per week ($M = 974.55$ vs $293.77$, $t(255.63) = 5.15$ and $p < 0.001$), spending significantly more hours...
Is MTurk your primary income?

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<tr>
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</tr>
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<tbody>
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<td></td>
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Table I. Worker characteristics: Study 1 (continued)
completing HITs ($M = 31.35$ vs $16.39$, $t(350.50) = 11.23$ and $p < 0.001$) and making more money per week ($M = 149.07$ vs $86.45$, $t(312.95) = 6.71$ and $p < 0.001$) compared to workers who did not view MTurk as a primary source of income.

A major source of MTurk culture and relationships can be found in the message boards (e.g. reddit, mturkgrind and turkernation) utilized by workers to voice complaints, socialize, share information about good HITs/employers, etc. In our sample, 70.9 percent reported utilizing message boards. Workers were also moderately likely to read the posts ($M = 4.51$), but less likely to post on the boards ($M = 2.65$)[1]. Individuals who viewed MTurk as their primary income were more likely to report using message boards than those who did not view MTurk as their primary income (83.3 vs 66 percent). They were also significantly more likely to read message boards ($M = 5.28$ vs $4.24$, $t(472.08) = 6.08$ and $p < 0.001$) and post on message boards ($M = 3.14$ vs $2.46$, $t(374.38) = 4.18$ and $p < 0.001$) than MTurk workers with a different primary income.

Workers also appear to take their work seriously. In total, 59.4 percent of the overall sample reported having a regular schedule for completing HITs. Of those reporting MTurk as their primary income, 52.9 percent reported having a regular schedule compared to 35.6 percent of workers who did not view MTurk as their primary income ($n = 240$, $M = 2.92$ vs $3.62$, $t(472.08) = 6.08$ and $p < 0.001$).

Table I.

<table>
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<tr>
<th></th>
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<td>Is MTurk your primary income?</td>
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<td>$n = 848$</td>
</tr>
<tr>
<td></td>
<td>$M$</td>
<td>%</td>
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<td>How often do you read MTurk message boards? ($1 = never to 7 = frequently$)</td>
<td>5.28</td>
<td>4.24</td>
</tr>
<tr>
<td>How often do you post on MTurk message boards? ($1 = never to 7 = frequently$)</td>
<td>3.14</td>
<td>2.46</td>
</tr>
<tr>
<td>Do you work on more than one HIT at a time?</td>
<td>Yes</td>
<td>40</td>
</tr>
<tr>
<td>No</td>
<td>60</td>
<td>78.3</td>
</tr>
<tr>
<td>Have you ever completed a single HIT multiple times?</td>
<td>Yes</td>
<td>33.3</td>
</tr>
<tr>
<td>No</td>
<td>66.7</td>
<td>73.7</td>
</tr>
<tr>
<td>How important is it for you to be accurate in your response? ($1 = not at all important to 7 = very important$)</td>
<td>6.67</td>
<td>6.75</td>
</tr>
<tr>
<td>How important is it for you to respond quickly? ($1 = not at all important to 7 = very important$)</td>
<td>5.96</td>
<td>5.82</td>
</tr>
<tr>
<td>Do you typically read instructions for HITs?</td>
<td>Yes</td>
<td>96.3</td>
</tr>
<tr>
<td>No</td>
<td>3.8</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Push and pull motivations

Motivation behind completing HITs (check all that apply)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyment</td>
<td>27.5</td>
<td>30.9</td>
</tr>
<tr>
<td>To make extra money</td>
<td>79.6</td>
<td>96.7</td>
</tr>
<tr>
<td>As a hobby</td>
<td>11.7</td>
<td>21.4</td>
</tr>
<tr>
<td>To help researchers</td>
<td>28.3</td>
<td>32.7</td>
</tr>
<tr>
<td>As a challenge</td>
<td>17.1</td>
<td>18.1</td>
</tr>
<tr>
<td>To kill time</td>
<td>21.3</td>
<td>31.1</td>
</tr>
<tr>
<td>To gain self-knowledge</td>
<td>17.5</td>
<td>20.4</td>
</tr>
<tr>
<td>Other</td>
<td>4.6</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Note: Due to missing data, percentages may not add up to 100 percent

completing HITs ($M = 31.35$ vs $16.39$, $t(350.50) = 11.23$ and $p < 0.001$) and making more money per week ($M = 149.07$ vs $86.45$, $t(312.95) = 6.71$ and $p < 0.001$) compared to workers who did not view MTurk as a primary source of income.

A major source of MTurk culture and relationships can be found in the message boards (e.g. reddit, mturkgrind and turkernation) utilized by workers to voice complaints, socialize, share information about good HITs/employers, etc. In our sample, 70.9 percent reported utilizing message boards. Workers were also moderately likely to read the posts ($M = 4.51$), but less likely to post on the boards ($M = 2.65$)[1]. Individuals who viewed MTurk as their primary income were more likely to report using message boards than those who did not view MTurk as their primary income (83.3 vs 66 percent). They were also significantly more likely to read message boards ($M = 5.28$ vs $4.24$, $t(472.08) = 6.08$ and $p < 0.001$) and post on message boards ($M = 3.14$ vs $2.46$, $t(374.38) = 4.18$ and $p < 0.001$) than MTurk workers with a different primary income.

Workers also appear to take their work seriously. In total, 59.4 percent of the overall sample reported having a regular schedule for completing HITs. Of those reporting MTurk as their primary income, 52.9 percent reported having a regular schedule compared to
35.6 percent of the workers who did not rely upon MTurk as their primary income. MTurk workers who view MTurk as their primary income were more likely to report completing a HIT more than once and were more likely to work on multiple HITs at a time compared to workers who do not view MTurk as their primary income (33.3 vs 26.2 percent and 40 vs 21.5 percent). We note that completing a HIT more than once may sometimes be permitted by employers when the job is piece work – when this is the case, workers may try to complete as many of the same HITs as possible. Addressing the (self-reported) quality of the data, workers indicated that while responding quickly is important to them \((M = 5.86)\), being accurate is also important \((M = 6.72)\). Additionally, 97 percent of respondents reported reading instructions when completing HITs. We found no differences in these variables when comparing workers in terms of primary income source.

Taken together, MTurk workers appear to utilize the platform differently depending on whether MTurk is their primary source of income. In support of \(H_4\), these workers are likely to spend more time on the platform thereby completing more HITs and making more money. Our findings suggest that they also spend more time interacting on message boards. Such workers are likely to represent (at least to some degree) what some refer to as “Super Turkers” or MTurk workers who complete an outsized proportion of the work on MTurk. While concerns have been raised about Super Turkers, we did not find evidence in this study that workers who view MTurk as their primary source of income submit lower quality work than workers who have another primary income source.

**Push and pull motivations**

Next, we investigated both push (i.e. money) and pull (i.e. enjoyment, hobby and help researchers) motivations for completing HITs. Consistent with past research, 91.8 percent of the sample cited making extra money as a motivation behind completing HITs on MTurk. We predicted that workers utilizing MTurk as their primary source of income would be more likely to report earning extra money (a pull factor) as a reason for completing HITs on MTurk (\(H_8\)). Contrary to this expectation, workers were less likely to report extra money as a reason for completing HITs if MTurk was their primary source of income (79.6 vs 96.7 percent). We speculate that “extra” money implies that the income would be supplementary. Workers also reported “killing time” (28.2 percent), “helping researchers” (31.5 percent) and “enjoyment” (29.9 percent) as reasons for completing HITs. Supporting our hypothesis (\(H_8\)), individuals were somewhat less likely to report “hobby” (11.7 vs 21.4 percent) and “killing time” (21.3 vs 31.1 percent) as a reason for completing HITs if MTurk is their primary income.

We also examined the open-ended reasons individuals gave for completing HITs on MTurk. Individuals who view MTurk as their primary income gave reasons such as “because I'm currently unemployed,” “to eat,” and “If I could work a real job, I wouldn't be here, at all, ever. I'm disabled.” These reasons strongly suggest that MTurk for some is an economic necessity. Workers who do not rely on MTurk as a primary source of income were much more likely to report other reasons such as, “Although me and my husband have no issue with money at all and can afford to go on vacation, we like the idea of using MTurk money to essentially have ‘free’ vacations every year,” “keep my mind sharp,” “sometimes learn new things doing HITs or exposed to issues I didn’t know about before,” or “Stay at home mom. MTurk allows me to make money in the small windows of free time I have at home.” With that said, workers relying on MTurk as their primary income were not less likely to endorse enjoyment as a reason for completing HITs on MTurk suggesting that there may be both push and pull factors. For example, one worker noted that “[…] there is not much work in my area which allows flexibility, so I like being able to produce income from home.” Thus, an additional pull factor may be the flexibility afforded by MTurk.

To summarize, Study 1 examined whether distinguishing between workers who view MTurk as their primary source of income was meaningful in terms of demographic
characteristics, MTurk utilization and push and pull motivations for completing HITs on MTurk. Overall, we confirmed our hypotheses that workers using MTurk as their primary source of income are more likely to be unemployed, have lower personal incomes, spend more time on the platform and report fewer pull factors. Study 2 attempts to extend this investigation by also distinguishing between workers who view their work on MTurk as a job and those who do not. We also include additional push and pull motivations for engaging in the gig economy. Finally, Study 2 also investigates whether different types of gig workers on MTurk report different levels of past, present and future life satisfaction.

Study 2 method

Sample
In total, 335 workers ($M_{age} = 37.52$; 54.6 percent male; and 74.6 percent Caucasian) were recruited in two batches targeting either employed or unemployed workers through TurkPrime panels (Litman et al., 2016). No workers were excluded from our analyses. Of these, 217 were employed and 118 were unemployed. Given that individuals relying upon MTurk as a primary source of income were more likely to be unemployed in the first study, we attempted to recruit more similar numbers of employed and unemployed workers.

Procedure
Workers were recruited through Amazon MTurk and directed to a Qualtrics survey link. Only workers who were located in the USA and had a 95 percent approval rating were able to participate in the survey (see recommendation by Peer et al., 2014). TurkPrime was used to verify IP addresses. Workers were told that the survey would take approximately 15 min (actual $M_{time} = 10.88$) and responses would be anonymous. TurkPrime panels were used to target workers who had previously identified as employed and unemployed; however, we also asked workers to self-report their employment status. All workers completed measures of demographic characteristic, MTurk utilization, push and pull motivations and life satisfaction. All workers received $2.00 for participation.

Measures
Primary income. Workers were asked if MTurk is their primary source of income (yes or no).

Job. Workers were asked whether they considered MTurk a job (yes or no) and asked to explain why or why not.

Demographics. These items were the same as in Study 1.

MTurk utilization. These items were the same as in Study 1.

Push and pull motivations. Three additional motivations for completing HITs were included in the second study: As a primary source of income, as a secondary source of income and flexible work schedule. We also included an item asking whether they would complete HITs on MTurk if they had a job that paid enough money (yes, maybe or no).

Life satisfaction. Life satisfaction was measured using Cantril’s (1965) ladder, which asks individuals to imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. The workers then rated how they feel their life is at the present time, five years ago and five years in the future on a scale of 0 to 10 (with 10 indicating higher life satisfaction).

Study 2 results and discussion
In total, 222 workers (66.3 percent) reported that they considered MTurk to be a job. When asked “Do you consider MTurk a job, why or why not?” the workers offered a range of responses. For those who do consider MTurk a job, most expressed that MTurk is a job because they spend time doing the work and getting paid for it. For those who did not consider MTurk a job they often reported that they do not make enough money for it to be
considered a job, it is more of a hobby/something to do in their free time or work on MTurk does not involve formal employment, structure or obligation. Additionally, 106 workers (31 percent) reported that MTurk was their primary source of income. These two variables were significantly correlated, but not strongly ($r = 0.20, p < 0.01$). We include a contingency table (Table II) to better understand the relationship between these two worker distinctions. Comparisons between worker groups can be found in Table III.

Demographic characteristics

$H1$ and $H2$ predicted that individuals who relied on MTurk as their primary income were more likely to be unemployed and have lower incomes, respectively. Similar to Study 1, individuals who relied upon MTurk as their primary income were more likely to report being unemployed than those who had a different primary income (83 vs 13.1 percent) and were much less likely to have full-time employment (8.5 vs 65.9 percent). Relying on MTurk as one's primary income is also related to lower income with 81.1 percent of individuals reporting making less than $20,000 in personal income per year. The trend toward unemployment and lower incomes was not true when comparing individuals who view MTurk as a job and those who do not. Individuals who viewed MTurk as a job reported only slightly higher unemployment than those who did not (38.3 vs 29.2 percent). Inconsistent with predictions made in $H3$, the two groups also had comparable levels of reported income, though both groups were skewed toward lower incomes. Taken together, individuals who use MTurk as their primary source of income have lower personal incomes and are more likely to be unemployed compared to individuals who have another source of primary income. We did not find meaningful differences between those who view MTurk as a job and those who do not in terms of employment status or income.

MTurk utilization

$H4$ and $H5$ predicted that MTurk workers who view MTurk as a primary income or a job would spend more time on the platform and complete more HITs per week. We also predicted that workers who view MTurk as a job would be more likely to have a regular schedule for completing HITs ($H6$) and would engage more with online communities for MTurk workers ($H7$). In general, our findings suggest that MTurk workers who view MTurk as a job tend to treat MTurk work more like a job. For example, individuals who view MTurk as a job were more likely to report having a schedule for completing HITs (50 vs 24.8 percent) and spent more hours per week completing HITs. MTurk workers who view MTurk as a job also completed significantly more HITs per week than individuals who did not view MTurk as a job ($M = 475.85$ vs $122$, $t(265.36) = 4.21$ and $p < 0.001$). While those who view MTurk as their primary income did spend more hours on MTurk per week ($M = 573.25$ vs $256.16$, $t(118.25) = 2.05$ and $p < 0.05$), they were not more likely to have a schedule for completing HITs than individuals who did not view MTurk as their primary source of income. Workers who report MTurk as their primary source of income were significantly more likely to report reading message boards ($M = 3.94$ vs $3.36$, $t(332) = 2.29$.

<table>
<thead>
<tr>
<th>Primary income</th>
<th>MTurk a job</th>
<th>MTurk a job</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>85</td>
<td>21</td>
<td>106</td>
</tr>
<tr>
<td>No</td>
<td>137</td>
<td>92</td>
<td>229</td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
<td>113</td>
<td>335</td>
</tr>
</tbody>
</table>

**Notes:** Primary income = is MTurk your primary source of income?; MTurk a job = do you consider MTurk a job?
### Demographic characteristics

<table>
<thead>
<tr>
<th>Work status</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>43.2%</td>
<td>56.6%</td>
<td>8.5%</td>
<td>65.9%</td>
</tr>
<tr>
<td>Part time</td>
<td>17.6%</td>
<td>12.4%</td>
<td>6.6%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Temporary worker</td>
<td>0.9%</td>
<td>1.8%</td>
<td>1.9%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>38.3%</td>
<td>29.2%</td>
<td>83.0%</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personal income</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20,000</td>
<td>43.2%</td>
<td>36.3%</td>
<td>81.1%</td>
<td>22.3%</td>
</tr>
<tr>
<td>20,000–39,999</td>
<td>31.5%</td>
<td>15.0%</td>
<td>12.3%</td>
<td>32.3%</td>
</tr>
<tr>
<td>40,000–59,999</td>
<td>14.0%</td>
<td>26.5%</td>
<td>3.8%</td>
<td>24.9%</td>
</tr>
<tr>
<td>60,000–79,999</td>
<td>7.7%</td>
<td>11.5%</td>
<td>2.8%</td>
<td>11.8%</td>
</tr>
<tr>
<td>80,000–99,999</td>
<td>2.3%</td>
<td>3.5%</td>
<td>0</td>
<td>3.9%</td>
</tr>
<tr>
<td>100,000–149,000</td>
<td>1.4%</td>
<td>4.4%</td>
<td>0</td>
<td>3.5%</td>
</tr>
<tr>
<td>150,000 or more</td>
<td>0.9%</td>
<td>2.7%</td>
<td>0</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household income</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20,000</td>
<td>19.5%</td>
<td>15.9%</td>
<td>38.7%</td>
<td>8.8%</td>
</tr>
<tr>
<td>20,000–39,999</td>
<td>32.6%</td>
<td>15.9%</td>
<td>26.4%</td>
<td>27.2%</td>
</tr>
<tr>
<td>40,000–59,999</td>
<td>15.8%</td>
<td>26.5%</td>
<td>17.9%</td>
<td>20.2%</td>
</tr>
<tr>
<td>60,000–79,999</td>
<td>15.4%</td>
<td>15.0%</td>
<td>9.4%</td>
<td>17.9%</td>
</tr>
<tr>
<td>80,000–99,999</td>
<td>8.6%</td>
<td>5.3%</td>
<td>4.7%</td>
<td>8.7%</td>
</tr>
<tr>
<td>100,000–149,000</td>
<td>7.2%</td>
<td>16.8%</td>
<td>2.8%</td>
<td>14.0%</td>
</tr>
<tr>
<td>150,000 or more</td>
<td>0.9%</td>
<td>4.4%</td>
<td>0</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

### MTurk utilization

<table>
<thead>
<tr>
<th>Question</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a regular schedule for completing HITs?</td>
<td>Yes</td>
<td>50.0%</td>
<td>24.8%</td>
<td>57.5%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>50.0%</td>
<td>75.2%</td>
<td>42.5%</td>
</tr>
<tr>
<td>How many hours do you spend on MTurk per week?</td>
<td>0–10</td>
<td>23.0%</td>
<td>56.7%</td>
<td>21.7%</td>
</tr>
<tr>
<td></td>
<td>10–20</td>
<td>36.5%</td>
<td>32.7%</td>
<td>28.3%</td>
</tr>
<tr>
<td></td>
<td>20–30</td>
<td>23.9%</td>
<td>8.0%</td>
<td>19.8%</td>
</tr>
<tr>
<td></td>
<td>30–40</td>
<td>7.2%</td>
<td>0.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td></td>
<td>More than 40</td>
<td>9.5%</td>
<td>1.8%</td>
<td>18.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How many HITs do you typically complete per week?</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>M = 475.9</td>
<td>M = 122</td>
<td>M = 573.3</td>
<td>M = 256.2</td>
<td></td>
</tr>
</tbody>
</table>

| Do you use MTurk message boards?                                         | Yes     | 58.1%   | 44.2%   | 56.6%   | 52.2%   |
|                                                                           | No      | 41.4%   | 55.8%   | 43.4%   | 47.8%   |
| How often do you read MTurk message boards?                              | (1 = never to 7 = frequently) | M = 3.84 | M = 2.96 | M = 3.94 | M = 3.36 |
| How often do you post on MTurk message boards?                           | (1 = never to 7 = frequently) | M = 2.20 | M = 1.73 | M = 2.09 | M = 2.01 |
| Do you typically read instructions when completing HITs?                 | Yes     | 93.7%   | 92.0%   | 93.3%   | 93.0%   |
|                                                                           | Sometimes | 6.3% | 7.1% | 6.7% | 6.6% |
|                                                                           | No       | 0       | 0.9%    | 0.0%    | 0.4%    |
| How important is it for you to be accurate in your response?             | (1 = not at all important to 7 = very important) | M = 6.79 | M = 6.64 | M = 6.73 | M = 6.74 |
| How important is it for you to respond quickly?                          | (1 = not at all important to 7 = very important) | M = 5.72 | M = 5.67 | M = 5.98 | M = 5.58 |

### Push and pull motivations

<table>
<thead>
<tr>
<th>Motivation behind completing HITs (check all that apply)</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyment</td>
<td>34.7%</td>
<td>37.2%</td>
<td>28.3%</td>
<td>38.9%</td>
</tr>
<tr>
<td>Primary income</td>
<td>30.6%</td>
<td>15.9%</td>
<td>76.4%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Secondary income</td>
<td>80.2%</td>
<td>82.3%</td>
<td>58.5%</td>
<td>91.3%</td>
</tr>
<tr>
<td>As a hobby</td>
<td>16.2%</td>
<td>32.7%</td>
<td>14.2%</td>
<td>25.3%</td>
</tr>
</tbody>
</table>

Table III.

Worker characteristics:

Study 2

(continued)
and $p < 0.05$) but were not more likely to post on these message boards than those who did not view MTurk as a primary source of income. MTurk workers who viewed it as a job were more likely to read and post on message boards ($M = 3.84$ vs $2.96$, $t(248.77) = 3.66$ and $p < 0.001$; $M = 2.20$ vs $1.73$, $t(292.09) = 2.77$ and $p < 0.01$).

Although no formal hypotheses were proposed, we also examined whether these groups of workers were more likely to take their work seriously. With respect to the self-reported quality of work, those using MTurk as a primary source of income were not more likely to report needing to respond accurately to HITs but were more likely to report the importance of responding quickly ($M = 5.98$ vs $5.58$, $t(229.47) = 2.61$ and $p = 0.01$) compared to workers not relying on MTurk as a primary source of income. Conversely, those who viewed MTurk as a job were marginally more likely to report responding accurately as important ($M = 6.79$ vs $6.64$, $t(168.82) = 1.86$ and $p = 0.06$), but no difference was found with respect to responding quickly between workers who viewed MTurk as a job and not as a job.

Taken together, MTurk workers who view their participation on MTurk as a job appear to treat it more like a job – engaging more in the MTurk community on message boards and ensuring the accuracy of work. MTurk workers who view their participation as a primary source of income may view message boards to identify high paying HITs and are more likely to place importance on working quickly. Upon closer examination, these self-reports are also reflected behaviorally. Individuals who view MTurk as a primary source of income were significantly more likely to spend less time completing our HIT compared to those who did not view MTurk as a primary source of income ($M = 9.18$ vs $11.67$, $t(333) = -4.25$ and $p < 0.001$). There was no mean difference in time spent on task between workers who viewed MTurk as a job compared to those who did not.

**Push and pull motivations**

H8 predicted that individuals reporting MTurk as their primary source of income would be more likely to report push factors (e.g. money) and less likely to report pull factors (e.g. help researchers, flexibility and enjoyment) than individuals who do not report MTurk as their primary source of income.

<table>
<thead>
<tr>
<th>Do you consider MTurk a job?</th>
<th>Is MTurk your primary source of income?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>$n = 222$</td>
<td>$n = 113$</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>To help researchers</td>
<td>$42.3$ vs $38.1$</td>
</tr>
<tr>
<td>As a challenge</td>
<td>$23.0$ vs $17.7$</td>
</tr>
<tr>
<td>Flexible schedule</td>
<td>$68.5$ vs $47.8$</td>
</tr>
<tr>
<td>To kill time</td>
<td>$18.9$ vs $31.0$</td>
</tr>
<tr>
<td>To gain self-knowledge</td>
<td>$28.8$ vs $16.8$</td>
</tr>
<tr>
<td>Other</td>
<td>$3.6$ vs $5.3$</td>
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| Would you complete HITs if you had a job that paid you enough money? |
|-----------------------------|-----------------|
| Yes                         | $49.3$ vs $54.9$ |
| Maybe                       | $40.3$ vs $39.8$ |
| No                          | $10.4$ vs $5.3$  |

**Life satisfaction**

| Past                        | $M = 5.46$ vs $5.31$ |
| Current                    | $M = 4.36$ vs $4.36$ |
| Future                     | $M = 7.05$ vs $7.09$ |

**Note:** Due to missing data, percentages may not add up to 100 percent

| Table III. | Mechanical Turk and the gig economy | 299 |
primary source of income. Consistent with our hypothesis, individuals who completed HITs on MTurk as a primary income were the least likely to endorse pull factors such as enjoyment, hobby, to help researchers and to kill time as reasons for completing HITs. Those viewing MTurk as a job or as a primary source of income both endorsed flexible schedule at a high frequency. Both groups also emphasized the push factor, primary income, as a reason for completing HITs. However, individuals relying on MTurk as their primary income were more likely to cite this as a reason (76.4 percent) compared to individuals who considered MTurk a job (30.6 percent). Notably, individuals whether they viewed MTurk as a job or not frequently indicated secondary income as a reason for working on MTurk (80.2 and 82.3 percent, respectively). Those who reported MTurk as a primary income were the least likely to endorse supplementary income as a motivation (58.5 percent). This finding is consistent with findings from Study 1, which suggested that individuals viewing MTurk as a primary income are less likely to complete HITs to make “extra” money. These results largely confirm our predictions that individuals who view MTurk as a job may have both push and pull reasons for completing HITs on MTurk, but those who rely on MTurk as a primary income are much more likely to be pushed into doing work on the platform out of economic necessity.

In this study we also asked whether the workers would complete HITs on MTurk if they had a job that paid enough money, 51.2 percent of the sample said yes, 40.1 percent said maybe and 8.7 percent said no. This is somewhat consistent with research examining whether individuals would keep their job if they won the lottery (Highhouse et al., 2010). Specifically, Highhouse et al. (2010) found that approximately 70 percent of individuals self-reported that they would continue working if they won the lottery. Individuals who view MTurk as a job were not more likely to indicate that they would stop completing HITs on MTurk if they had a job that paid enough money (perhaps because some do). Individuals who rely on MTurk as a primary source of income were more likely than individuals who had another primary source of income to indicate that they would not continue completing HITs on MTurk if they had a job that paid enough money (15.1 vs 5.7 percent); however, 40.6 percent still indicated that they would continue completing HITs on MTurk even if they had a job that paid enough money. Thus, as we note above, there appears to be a strong push factor for individuals who rely on MTurk for income; however, there may also be some pull factors such as flexibility.

**Life satisfaction**

We predicted that there would be a positive relationship between pull factors and life satisfaction (H10). This hypothesis was generally supported. Although pull motivations were mostly unrelated to self-reported past life satisfaction, reporting enjoyment, as a hobby, killing time, helping researchers and as a challenge were all significantly and positively correlated with present life satisfaction (see Table IV). Notably, flexibility and gaining knowledge were not significantly correlated with present life satisfaction.

We expected that workers relying on MTurk as a primary income would be more likely to have lower levels of life satisfaction, but the same would not necessarily be true for workers who viewed MTurk as a job (H11). In support of this notion, individuals who rely upon MTurk as their primary income reported lower levels of anticipated future ($M = 6.31$ vs $7.40$, $t(332) = -4.39$ and $p < 0.001$) and current life satisfaction ($M = 4.36$ vs $6.09$, $t(332) = -7.47$ and $p < 0.001$). The difference between past life satisfaction was not statistically significant. Individuals who view MTurk as a job and those who did not view MTurk as a job, however, did not have any significant mean differences in past, present or future life satisfaction. Thus, it appears that while viewing MTurk as a job does not have negative consequences for one’s life satisfaction, relying upon MTurk as one’s primary source of income does have negative consequences for both present and anticipated future life satisfaction.
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<td>1. Job</td>
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<tr>
<td>2. Income</td>
<td>0.20**</td>
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**Motivations**

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<tr>
<td>3. Primary income</td>
<td>0.16**</td>
<td>0.79**</td>
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<tr>
<td>4. Supplementary income</td>
<td>-0.03</td>
<td>-0.39**</td>
<td>-0.30**</td>
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<tr>
<td>5. Enjoyment</td>
<td>-0.03</td>
<td>-0.10</td>
<td>-0.06</td>
<td>0.13*</td>
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<tr>
<td>6. Hobby</td>
<td>-0.19**</td>
<td>-0.13*</td>
<td>-0.13*</td>
<td>0.04</td>
<td>0.40**</td>
<td></td>
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<tr>
<td>7. Kill time</td>
<td>-0.14*</td>
<td>-0.13*</td>
<td>-0.14**</td>
<td>0.07</td>
<td>0.26**</td>
<td>0.30**</td>
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<tr>
<td>8. Help researchers</td>
<td>0.04</td>
<td>-0.06</td>
<td>-0.04</td>
<td>0.12*</td>
<td>0.40**</td>
<td>0.24**</td>
<td>0.10</td>
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<tr>
<td>9. Challenge</td>
<td>0.06</td>
<td>-0.05</td>
<td>-0.02</td>
<td>0.03</td>
<td>0.39**</td>
<td>0.26**</td>
<td>0.20**</td>
<td>0.28**</td>
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<tr>
<td>10. Flexibility</td>
<td>0.20**</td>
<td>0.13*</td>
<td>0.17**</td>
<td>0.11</td>
<td>0.14**</td>
<td>-0.03</td>
<td>0.06</td>
<td>0.21**</td>
<td>0.13*</td>
<td></td>
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<tr>
<td>11. Knowledge</td>
<td>0.13*</td>
<td>0.10</td>
<td>0.11</td>
<td>0.09</td>
<td>0.41**</td>
<td>0.20**</td>
<td>0.07</td>
<td>0.42**</td>
<td>0.40**</td>
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**Life satisfaction**

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<tbody>
<tr>
<td>12. Past</td>
<td>-0.06</td>
<td>-0.08</td>
<td>-0.12*</td>
<td>0.13*</td>
<td>0.09</td>
<td>0.07</td>
<td>0.06</td>
<td>0.12*</td>
<td>0.09</td>
<td>0.03</td>
<td>-0.01</td>
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<tr>
<td>13. Present</td>
<td>-0.06</td>
<td>-0.38**</td>
<td>-0.35**</td>
<td>0.21**</td>
<td>0.22**</td>
<td>0.23**</td>
<td>0.13*</td>
<td>0.16**</td>
<td>0.19**</td>
<td>-0.06</td>
<td>0.04</td>
<td>0.52**</td>
<td></td>
</tr>
<tr>
<td>14. Future</td>
<td>-0.01</td>
<td>-0.23**</td>
<td>-0.20**</td>
<td>0.15**</td>
<td>0.18**</td>
<td>0.16**</td>
<td>0.01</td>
<td>0.21**</td>
<td>0.16**</td>
<td>-0.01</td>
<td>0.13*</td>
<td>0.28**</td>
<td>0.67**</td>
</tr>
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</table>

**Notes:** $n = 334–336$. Job = do you consider MTurk a job?; income = is MTurk your primary source of income?; Job, income and motivations coded 1 = yes, 0 = no. *$p < 0.05$; **$p < 0.01$
General discussion
The current research contributes to our understanding of how individuals experience and view work on crowdsourcing platforms. Past research has speculated that gig workers are not a homogenous group. Our research distinguished between two potential groups of gig workers – those that viewed the platform as a primary source of income and those that view the platform as a job. Our empirical findings support the notion that these groups differ in terms of demographic characteristics, platform utilization, push and pull motivations and life satisfaction.

Consistent with our predictions, those that rely on MTurk as a primary income tended to spend more time on the platform completing large numbers of HITs. This may be due to lower personal incomes (the majority below $20,000) and higher rates of unemployment among those considering MTurk their primary income. We speculate that the lack of income is a major push factor for engaging in the gig economy. There are likely a non-negligible number of MTurk workers who are pushed into gig work by economic necessity. Consistent with this, workers in this category were less likely to report pull factors for working on the platform (e.g. killing time and hobby). The precariousness of these workers' situations is reflected in lower levels of self-reported current life satisfaction and predicted future life satisfaction.

Study 2 found that viewing MTurk as a job is not necessarily synonymous with viewing MTurk as a primary income. Consistent with our expectations, individuals who view MTurk as a job were more likely to spend more hours on the platform and complete more HITs, though not as many as those who rely on MTurk as a primary source of income. Also consistent with our predictions, individuals appear to treat MTurk more like a job when they identify MTurk as a job – engaging in online communities by reading and posting and having a regular work schedule on MTurk. Finally, these workers were more likely to report pull factors (e.g. enjoyment, helping researchers and challenge) illustrating that the gig economy for these workers may be an attractive alternative work to more traditional jobs.

By examining how different types of workers utilize the MTurk platform, we make a number of contributions to both theory and practice. First, we examine the heterogeneity within one sector of the gig economy. Whereas the vast majority of workers in traditional work view their job as their primary source of income and a job, those in the gig economy may not even perceive their work as a job (Brainard, 2016; Kuhn, 2016). If a portion of individuals either do not consider work in the gig economy a job or do not rely on such income as a primary source of income, certain constructs typically examined in the organizational sciences may be less relevant. For example, past research on other types of alternative work arrangements (e.g. telecommuting, temporary work and contract work) often examines constructs such as organizational commitment and job satisfaction – particularly in relation to full-time employees. Such constructs, however, may not be relevant to gig work, as such workers may not consider their engagement in the gig economy a job and have limited-to-no contact with the employer, supervisors and coworkers. Other constructs or phenomenon, however, may remain important such as studying job characteristics, recruitment or turnover within the gig economy. Here still, our theories may need to be adapted to be more relevant for this new world of work. For example, turnover or job-hopping within the gig economy may not have the same antecedents or outcomes in a job market where job-hopping and turnover is commonplace.

Second, our research suggests that how workers engage in the gig economy will be influenced by whether workers view the “gig” as a job and/or as a primary source of income. While all groups of workers appear to take their work seriously (at least according to self-reports), individuals relying on MTurk as a primary source of income may have a strong incentive to complete HITs as quickly as possible. For tasks requiring more attention, it is recommended that workers be paid more to justify the effort and time expenditure. Moreover, these categories of individuals are likely to experience different outcomes in terms of life satisfaction. In particular, individuals relying on work in the gig economy as a
primary source of income may be in a precarious work situation. Indeed, we suggest that many in the gig economy fall into the second group of workers in the new world of work identified by Spreitzer et al. (2017), namely, “low-skill workers who struggle to make a living and are beholden to the needs of the organization” (p. 473). We urge organizations and individuals employing gig workers to consider ethical implications of the work completed and compensation awarded. As the gig economy continues to grow, it will be important to consider how such workers can be protected from exploitation.

Finally, our research highlights the paradoxical nature of the gig economy. On one hand, workers often report pull factors such as enjoying their work on MTurk and appreciating the flexibility provided. On the other hand, workers (especially those relying on MTurk as their primary income) may be pushed into the gig economy by a necessity to make money. Our research suggests that individuals in both groups are likely have both push and pull reasons for completing HITs on MTurk; however, for individuals who complete HITs as their primary source of income the push factors may have a stronger and more negative impact. Our findings concerning life satisfaction suggest that push factors (e.g. being motivated to complete HITs as a primary income) have a negative relationship with life satisfaction, whereas, pull factors such as enjoyment and challenge have a positive relationship with life satisfaction. Moreover, individuals who rely on MTurk as a primary source of income have significantly lower levels of both present and anticipated future life satisfaction. Thus, workers in the gig economy are likely to differ based on push and pull factors and this is likely to impact life satisfaction.

Limitations and future research
The primary limitation of the current research is we look at only one example of the gig economy. There are many other populations and platforms within the gig economy that require attention, as the gig economy is not a homogenous labor market (Howcroft and Bergvall-Kåreborn, 2018; Kuhn and Maleki, 2017; Lehdonvirta, 2018). There are likely to be different motives or reasons for engaging in the gig economy, and these reasons and motives are likely to impact how the worker views their work. Future research should examine whether viewing gig work on other platforms as a primary income and/or a job influences participation in the gig economy in similar ways.

Another interesting aspect of the gig economy not explored in the current study is the potential for what we term “gig-crafting” or the way in which workers craft their work lives within the gig economy potentially through numerous gig platforms. Unlike traditional work arrangements, gig work is well suited for having multiple “side gigs.” For example, workers may complete work for a crowdsourcing website such as MTurk as well as a ride sharing platform such as Uber or Lyft. Future research should investigate whether individuals tend to specialize with particular types of gig work or be active in the gig economy more broadly. It is possible that gig workers may find a particular gig based on individual needs or preferences and remain focused on that particular gig or platform unless it can be conveniently combined with another (e.g. Uber and Waitr). It is also possible that workers use the flexibility afforded by the gig economy to work for a variety of gig platforms. Moving forward more research is needed to understand “gig-crafting” or how workers craft their work lives within the gig economy.

Additionally, despite efforts to collect data during different days of the week and collecting a large sample size across the two studies, we have no way of knowing whether the samples collected are representative of the entire MTurk population. For example, it is unlikely that “casual” MTurk workers (i.e. workers who only complete work occasionally) are well-represented in our sample, as our sample in the first study averaged approximately 20 h per week on MTurk and completed an average of around 483 HITs per week. With that said, these are approximate estimates provided by the workers and most of the work...
completed on MTurk is likely to be completed by the most active workers suggesting our study is likely representative of a typical group of workers completing HITs. It is also possible that workers self-select into certain types of HITs limiting our ability to generalize to individuals who complete tasks for commercial organizations rather than academic institutions. It is true that past research (e.g. Horton et al., 2011; Ross et al., 2010) has speculated that MTurk workers may have a preference for completing certain types of HITs. However, research suggests that workers are most likely to sort HITs by payment amount and number of HITs available (Chilton et al., 2010). Thus, while self-selection is a possibility, it is more likely that workers were attracted to our HIT by the payment. More research is needed to replicate and expand upon our findings.

Notes
1. Items on a scale from 1 (never) to 7 (frequently).
2. Items on a scale from 1 (not at all important) to 7 (very important).

References
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Mechanical Turk and the gig economy


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Mattering in digital labor
Eliane Bucher, Christian Fieseler and Christoph Lutz
Department of Communication and Culture, BI Norwegian Business School, Oslo, Norway

Abstract
Purpose – Online gig labor platforms bring together a global and fast-growing workforce to complete highly granular, remote and decontextualized tasks. While these environments might be empowering to some workers, many others feel disenfranchised and removed from the final product of their labor. To better understand the antecedents of continued participation in forms of crowdsourced digital labor, the purpose of this paper is to explore the relationship between worker’s ability to create a narrative of their work mattering regardless, and their continued work engagement (WE) in these work setups.
Design/methodology/approach – The authors approach the relationship between individual mattering and digital WE through a longitudinal study among workers on the crowdworking platform Amazon Mechanical Turk. The authors further provide qualitative insight into individual perceptions of mattering based on essay data.
Findings – The authors develop a measure of mattering in crowdworking with four dimensions: reliance, social recognition, importance and interaction. Reliance is the most pronounced dimension, followed by interaction, importance and social recognition. In the final longitudinal model, only importance affects WE positively, while the other three mattering dimensions do not have a significant effect.
Originality/value – The findings indicate that individuals who feel that they themselves and their work "count" and "make a difference" will be more engaged in their digital labor. By clarifying the dimensionality of mattering in crowdwork and studying its differentiated effect on WE, the paper makes a contribution to research on crowdwork and the future of work. Beyond the theoretical contributions, the finding that perceived importance fosters WE has important implications for task and platform design.
Keywords Labour, Employee engagement, Temporary workers
Paper type Research paper

1. Introduction

I am doing something that truly matters. [A]lthough I don’t quite know what that is. (Participant 471)

Individuals working on online gig labor platforms are often being referred to – or refer to themselves – as “cogs in a machine,” “anonymous numbers” or “artificial artificial intelligence” (e.g. Salehi et al., 2015). These metaphors suggest a perspective on digital workers as a commodity, as an inanimate resource or as replaceable parts of a larger system. To a certain extent these perceptions may be rooted in the highly granular, modular and decontextualized nature of digitally mediated work packages: workers who are transcribing snippets of text, rating video sequences or filling out surveys are often removed not just from the requester but also from the final product of their work. On the other hand, digital workers might also perceive themselves as empowered “micro-entrepreneurs” who work independently, take charge of their own schedule and who are recognized for their talent and their results – independent of socio-economic or demographic factors.

In this paper, we are interested in the individual perception of whether or not one’s work and person matters as a key to understanding work engagement (WE) in digital labor. More to the point, we are interested in individual perceptions of mattering as a precondition for workers’ ability and willingness to participate in digital work in a sustainable manner and experience a “positive, fulfilling, affective-motivational state of work-related well-being” (Bakker et al., 2008). Here, we assume that individuals who feel that they themselves and their work “count” and “make a difference” will be more engaged and immersed in their digital labor. Instilling a sense of mattering is not just about worker dignity, but – extending
the argument put forth by Boons et al. (2015) – it may be a novel explanatory factor for long-term activity and participation in crowdworking platforms.

This contribution follows a four-step approach. We will first offer a brief literature review on the core constructs of digital labor and mattering. Second, based on a longitudinal quantitative survey among 804 (first wave) and 460 (second wave) workers on the crowdworking platform Amazon Mechanical Turk (AMT) we will introduce and establish a measurement of mattering as a multi-dimensional construct. In a third step, we use regression analysis to scrutinize the relationship between mattering and WE. Finally, in order to render our findings more tangible and lead into the discussion, we will offer qualitative insight into individual perceptions of mattering based on vignettes gathered during the second wave of data collection.

To date, mattering has predominantly been looked at from the perspective of psychological well-being and mental health (e.g. Elliott et al., 2004; Rayle and Chung, 2007; Rosenberg and McCullough, 1981) as well as marginality (e.g. Gossett et al., 1996; Schlossberg, 1989; Tovar et al., 2009). However, despite its recognized and growing importance, research on the construct has not been transferred to the context of WE or digital platforms yet. The current contribution seeks to pave the road for further inquiry into mattering – as it pertains to individual self-concepts – in digital labor by introducing key constructs, measurement and relationships.

2. Literature review

2.1 Cog or entrepreneur – concepts of self in digital labor

Increasingly more people in industrialized societies make use of digital technologies in their daily work. Even in less computer-focused work settings, large amounts of time are spent with digital technologies and on the internet. In addition to using digital media for offline tasks, progressively more individuals either make a living or earn additional income through freelance contracting via the internet (Colbert et al., 2016; Petriglieri et al., 2018; Spreitzer et al., 2017). Examples of this include the completion of “human-intelligence” tasks on digital labor platforms such as AMT, Clickworker, Upwork or 99 designs.

In this paper, we define digital labor based on Scholz (2013), Fuchs and Sevignani (2013) as well as Fish and Srinivasan 2012, as a collection of productive practices – both waged and unwaged – which are mediated through online platforms and carried out by independent actors. Practices may range from being purely digital (e.g. coding, tagging pictures and web design) to being only partially digital (e.g. Airbnb, Uber, see Howcroft and Bergvall-Kåreborn, 2018). The term digital labor may pertain to both the work practices as well as to the entirety of the labor force (Fumagalli et al., 2018). We further define crowdworking – or online task crowdwork (Howcroft and Bergvall-Kåreborn, 2018) – as a particular form of digital labor which pertains to the completion of digital tasks which are predefined by requesters (individuals, groups or organizations) and distributed through an online platform to a large undefined number of workers for some form of compensation. This definition builds on Howe (2009), Estellés-Arolas and González-Ladrón-de-Guevara (2012) as well as Kittur et al. (2013) and encompasses organizational, individual and technological aspects. Digital batches usually consist of small digital tasks such as transcribing a snippet of hand-written text, classifying an image, categorizing the sentiment expressed in a comment, rating the relevance of a search engine result or selecting the most representative frame in a video clip (Lehdonvirta and Ernkvist, 2011; Kittur et al., 2013). The literature on humans in computerized work settings is divided into several scientific disciplines. Exemplary disciplines involved in the study of such new forms of work include: sociology/anthropology (Fish and Srinivasan, 2012), communication and media studies (Irani, 2015; Fuchs and Sevignani, 2013; Paolacci et al., 2010), psychology (Brawley and Pury, 2016), organization studies (Bauer and Gegenhuber, 2015; Boons et al., 2015), and information systems and computer science (see Kittur et al., 2013 for an overview).
Across these disciplines, we can distinguish between two basic perspectives. The first perspective takes on a rather optimistic view on digital labor by emphasizing its economic and social potentials and benefits. In line with this perspective, digital labor may be framed as a productive and playful way to spend one's spare time or "cognitive surplus" (Shirky, 2010). Also, according to this perspective, digital labor is associated with high flexibility, autonomy, intrinsic motivation and even flow. Finally, through digital labor – and crowdwork in particular – individuals can leverage down time in a productive manner. This perspective assumes a concept of self on the side of the worker as an empowered and voluntary participant or "micro-entrepreneur" (empowered self) (see Table I).

The second and more critical perspective on the other hand (present in the sociology of work, media studies and critical philosophy) argues that digital work in general, and crowdwork in particular, may be alienating workers by disconnecting them from the larger intellectual product which they help to create (Aytes, 2013). In the same vein, digital labor has been deemed exploitative in the sense that crowdworkers often earn below minimum wage and are left entirely without worker protection (Fuchs and Sevignani, 2013; Paolacci et al., 2010; Scholz, 2013). Also, digital labor platforms have been criticized for putting workers systematically at a disadvantage by supporting power imbalances between requester/employer and worker (e.g. the chapters in Scholz, 2013). In summary, digital labor critics identify various themes of exploitation as key mechanisms in digital labor (Fuchs and Sevignani, 2013). This second perspective may explain worker’s concept of self as integral but replaceable parts of a larger system, or – metaphorically put – as "cogs in a machine" (disenfranchised self).

What distinguishes empowered self-concepts from disenfranchised self-concepts to a considerable extent is the question of whether or not workers perceive themselves or their work to have a significant impact on their environment. Here, we posit that in order to better understand individual notions of self in digital labor, we must look into individual perceptions of mattering.

### 2.2 Being able to make a difference – mattering in digital labor

People have a natural desire to feel needed and valued both in society and in a work context (Schlossberg, 1989, 1997; Jung, 2015). However, in work environments marked by high anonymity and isolation, where workers are quickly replaceable, it may be difficult for workers to identify with their work and to feel that they themselves or the output of their labor matter.

<table>
<thead>
<tr>
<th>Concept of self Experience</th>
<th>Player, entrepreneur Playfulness Enjoyment Absorption flow, etc.</th>
<th>Worker, Resource Powerlessness Normlessness Meaninglessness Isolation Self-estrangement, etc.</th>
</tr>
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<tbody>
<tr>
<td>Motivation</td>
<td>Intrinsic motivation Hedonic motive</td>
<td>Extrinsic motivation Utilitarian motive Exploitation Disenfranchisement Depersonalization Low (alienation)</td>
</tr>
<tr>
<td>Relational narrative</td>
<td>Empowerment Autonomy/Flexibility Entrepreneurship</td>
<td>Disenfranchisement</td>
</tr>
<tr>
<td>Identification</td>
<td>High (identification, belonging)</td>
<td>Low (low perception of personal or social significance)</td>
</tr>
<tr>
<td>Authors</td>
<td>Bucher and Fieseler (2017), Paolacci et al. (2010), Shirky (2010), Howe (2009)</td>
<td>Table I. Conceptualizations of crowdwork on a spectrum from empowerment to disenfranchisement</td>
</tr>
</tbody>
</table>
Here, individual perceptions of mattering may advance to become key constructs in assessing work experiences (Jung, 2015). Mattering may be especially relevant in the context of crowdworking where individuals complete series of micro-tasks which are very far removed from the final intellectual product of their work. While there are obvious benefits to specialization in terms of the productivity of knowledge labor (Malone et al., 2011), specialization might make individual tasks repetitive, and through their performance in a virtual environment also devoid of context, meaningful social interaction. The notion of “being a cog” in the wheel is a recurring metaphor used by workers in this environment (e.g. Fieseler et al., 2019).

Mattering has a fruitful history in clinical psychology where it is discussed in relation to mental health outcomes such as wellness (Connolly and Myers, 2003; Dixon Rayle, 2005) or – when mattering is absent – anxiety, depression and negative mental states such as hostility, aggression and irritability (e.g. Taylor et al., 2001; Rosenberg and McCullough, 1981). In social psychology and work psychology, mattering is linked to work on job satisfaction, job stress and productivity (Schlossberg, 1989; Dixon Rayle, 2005) (see Table II).

Elliott et al. (2004) built on Rosenberg and McCullough (1981), putting forth an empirical validation of the mattering concept which encompasses the dimensions’ awareness, importance and reliance as distinct but related unobserved factors. In particular, Elliott et al. (2004) distinguished mattering from related constructs such as perceived social support, self-esteem, self-monitoring, self-consciousness and alienation (antonym) but stated in their concluding remark that other related constructs could be regarded as well. There are three groups of potentially related constructs discussed in the literature. First, there are potential antecedents to mattering such as belonging, purpose, communion or self-esteem where the related construct might be fostering conditions for mattering. Second, there are potential outcomes of mattering such as wellness, depression (neg.), alienation (neg.) or marginality (neg.). Third, there are potential elements of mattering tying into a broader interpretation of awareness, importance and reliance (Rosenberg and McCullough, 1981; Elliott et al., 2004) such as perceived social support (e.g. potential element of reliance) or self-esteem (e.g. potential element of importance).

Mattering has an interpersonal dimension (I matter to my immediate environment) and a societal dimension (I make a difference in society/the world in general) (Rosenberg, 1985). Interpersonal mattering refers to a person’s perception that he or she matters to a specific group of people (Rosenberg and McCullough, 1981). The construct encompasses perceptions of being needed (reliance/dependence), being able to make a significant contribution (importance) and feeling that others are interested in what individuals say and do (attention) (Jung, 2015; Rosenberg and McCullough, 1981). Occasionally, and in line with Rosenberg (1985), the feeling of being missed as well as ego-extension is also mentioned as additional dimensions of interpersonal mattering. Interpersonal mattering has a positive impact on mental health (Amundson, 1993). Individuals who perceive themselves as having higher interpersonal mattering at work report higher job satisfaction and lower job-related stress (Dixon Rayle, 2005). In the work context, perceived mattering is linked to increased productivity and job satisfaction (Schlossberg, 1997). Societal mattering goes beyond the mattering vis à vis one’s colleagues, supervisors or other specific groups of people to encompass “the feeling of making a difference in the broader scheme of sociopolitical events – of feeling that one’s thoughts and actions have an impact, create ripples, are felt” (Rosenberg, 1985, p. 215).

To clarify the role of mattering in digital labor, we follow a two-step research design. In a first step, we investigate the dimensionality of mattering, using principal component analysis (PCA). In a second step, we look into the role of mattering in fostering WE. This serves to test the differentiated role of mattering in terms of outcomes.
<table>
<thead>
<tr>
<th>Author and Year</th>
<th>Context/Study</th>
<th>Applied definition of mattering</th>
<th>Potentially related construct</th>
<th>Definition of related construct</th>
<th>Potential relationship to mattering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenberg and McCullough (1981)</td>
<td>6,568 junior and senior high school students (survey)</td>
<td>“[…] mattering is a motive: the feeling that others depend on us, are interested in us, are concerned with our fate, or experience us as an ego-extension exercises a powerful influence on our actions” (p. 165)</td>
<td>Parental mattering</td>
<td>Student’s feeling that they mattered to their parents and that their parents held positive or negative attitudes toward them</td>
<td>Element</td>
</tr>
<tr>
<td>Schlossberg (1989)</td>
<td>24 men and women ranging in age from 16 to 80 (interviews)</td>
<td>Mattering refers to our belief, whether right or wrong, that we matter to someone else. This belief acts as a motivator</td>
<td>Marginality (ant.)</td>
<td>Feeling of not being central or not belonging in a group or place. “Feeling marginal leads us to conclude that we do not matter or confuses us about the group to which we do”</td>
<td>Outcome</td>
</tr>
<tr>
<td>DeForge and Barclay (1997)</td>
<td>199 homeless men (survey)</td>
<td>The extent to which we consider ourselves significant to others. … Our belief that significant others, e.g., family, friends, colleagues, etc., see us as important and an object of their attention, and that they depend on us and are concerned with our fate</td>
<td>Significance</td>
<td>Importance to others</td>
<td>Element</td>
</tr>
<tr>
<td>Taylor et al. (2001)</td>
<td>1,300 members of an urban community sample</td>
<td>Mattering is conceptualized as a personal resource and as perceptions of significance of the self to others</td>
<td>Intimacy</td>
<td>Referring to McAdams (1989)</td>
<td>Outcome</td>
</tr>
<tr>
<td>Connolly and Myers (2003)</td>
<td>82 employees (survey)</td>
<td>Employees’ perceptions of whether they matter to their supervisors, their organization, and other aspects of their work setting</td>
<td>Belongingness</td>
<td>Referring to Deci and Ryan (1991)</td>
<td>Antecedent</td>
</tr>
<tr>
<td>Elliott et al. (2004)</td>
<td>388 private university students (survey)</td>
<td>“[…] perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us”</td>
<td>Self-consciousness</td>
<td>Chronic tendency to be the object of one’s own attention referring to Fenigstein et al. (1975)</td>
<td>Antecedent</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Author</th>
<th>Context/Study</th>
<th>Applied definition of mattering</th>
<th>Potentially related construct</th>
<th>Definition of related construct</th>
<th>Potential relationship to mattering</th>
</tr>
</thead>
<tbody>
<tr>
<td>France and Finney (2009)</td>
<td>594 students at a midsized Mid-Atlantic University (survey)</td>
<td>Mattering is our feeling that we make a difference in the lives of other people and that we are significant to the world around us</td>
<td>Self-monitoring</td>
<td>Extent to which people observe, regulate, and control the self-presentations that they proffer in everyday social interactions referring to Snyder (1974)</td>
<td>Antecedent or outcome</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Perceived social support</td>
<td>Sense that others provide the resources (material, psychological, and emotional) that help one carry on referring to Sherbourne and Stewart (1991)</td>
<td>Element</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Self-esteem</td>
<td>Global evaluation of one’s personal characteristics and attributes referring to Rosenberg (1989)</td>
<td>Antecedent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alienation (ant.)</td>
<td>The sense that there are no rules for living, so that outcomes of interaction are unpredictable (meaninglessness) and the belief that social norms are ineffective, so that socially disapproved behaviors are necessary for success (normlessness). referring to Seeman (1959)</td>
<td>Outcome</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Belonging</td>
<td>“Having an acknowledged presence in a group. [...] developing meaningful relationships with other people who provide a sense of mattering fulfills the fundamental need to belong” referring to Maslow (1970)</td>
<td>Antecedent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Purpose</td>
<td>“Perception of individuals that [they] cognitively and affectively [understand] their meaning in life”</td>
<td>Antecedent</td>
</tr>
</tbody>
</table>
3. Methods

3.1 Questionnaire and sample

We conducted a two-wave online survey among crowdworkers on AMT. The TurkPrime platform, which facilitates participant recruitment and management for scientific purposes through AMT, was used to administer both waves of the survey (Litman et al., 2017). TurkPrime allows for sophisticated participant screening based on a wide range of attributes, including participation in previous studies. Thus, TurkPrime was deemed useful for our longitudinal survey design. We required at least 100 completed HITs on AMT to exclude participants with no substantial work experience on the platform. In total, 805 individuals started the first wave of the survey in mid-October 2016. The second wave of data collection took place one year after the first wave in October 2017. Only respondents who had completed the first wave were invited to participate in the second wave. In all, 466 individuals started this second wave survey, with six drop-outs, so that the final sample that took part in both waves was 460. Given that few workers use AMT as their full-time job (Paolacci et al., 2010) and turnover tends to be high due to the flexibility of the work (Brawley and Purv, 2016), we deem this attrition rate to be acceptable. The surveys in both waves were identical with the exception that in the first wave, we also added two open-ended essay questions pertaining to the self-concept of workers. Respondents were paid $3 for completing the survey in both waves ($2 basic and $1 bonus). The median completion time was 16 min in Wave 1 and 11 min in Wave 2, amounting to an hourly wage of $11 in Wave 1 and of $16 in Wave 2. This is well above the average wage on AMT in the USA, where crowdworkers have a median wage of $7.50 and an average wage of $8.51 (Berg et al., 2018).

In total, 51 percent of respondents are female, 49 percent male. The average age in the sample is 35.5 years and the median is 32 years (standard deviation = 10.99 years, with a range of 52 years from 18 to 70 years). In terms of education, 25.5 percent of all respondents have some college education, 38 percent have a four-year bachelor’s degree and 13 percent have a two-year bachelor’s degree. On the lower end of the spectrum, 11 percent have a high school diploma as their highest qualification and on the higher end, 1.5 percent have a doctorate degree. Thus, the sample includes a broad range of educational backgrounds.

3.2 Method

We analyzed the data with a PCA and with a linear regression analysis. The PCA was carried out in IBM SPSS Statistics (v.25). We applied the default Kaiser criterion for the extraction of components, so that components were extracted until an eigenvalue of 1 or smaller was reached. For the PCA, we relied on the sample of respondents who completed the survey at T1 but not at T2. Thus, the sample used for the PCA consists of all drop-outs for T2 ($n = 345$). This was done to then repeat the PCA with the same specifications at T2 to ensure its reliability and stability for the ensuing regression analysis (see Table AII).

In a second step, we carried out a linear regression analysis in Stata (v.15), using the “robust” command to account for potential heteroscedasticity and non-normality of the data. We also tested for multicollinearity, using the post-estimation “vif” command, but the largest variance inflation factor was 1.72, indicating the absence of severe multicollinearity. WE was the dependent variable and the mattering dimensions as well as control variables served as the independent variables. For this analysis, we used the sample at T2 ($n = 460$).

In a third and last step, we coded the essay questions along the mattering factors to provide a more nuanced qualitative understanding of the various facets of mattering in digital labor.
3.3 Measures
The dependent construct of WE was measured on a 1–5 Likert scale, using all nine items of Schaufeli and Bakker’s (2003) Utrecht Work Engagement Scale (see Table AI). Respondents at T1 who did not fill out the survey at T2, and were thus the basis for the initial PCA, scored relatively highly on WE, with arithmetic means per item ranging from 3.05 to 4.03. The overall arithmetic mean across all items was 3.50 (SD = 1.13) for this sample, showing moderate to high WE. Respondents at T2, who the regression analysis is based on, scored similarly, with an arithmetic mean of 3.57 (SD = 1.17).

We used self-developed items to measure mattering. The existing literature on the topic inspired the formulation of these items but we adapted them for the context of AMT. Elliott et al. (2004) provided the starting point for the development of our items. They distinguished three dimensions of mattering: awareness, importance and reliance. We replicated the dimensions but substantially adapted the items by “activating” them in order to stress worker’s agency and actively reaching out in achieving this trait. In the end, we included 6 items for awareness and importance and 7 items for reliance (19 items in total, all measured on 1–5 Likert scales, see Tables AI and AII). Across all 19 items, the arithmetic mean for mattering was 3.91 at T1 (SD = 1.01) and 4.01 at T2 (SD = 1.02), revealing high prevalence.

As control variables, we used age in years, gender and education in seven categories assessing the respondents’ highest educational degree, and whether respondents are working AMT full-time or part-time.

In the first wave, in order to gain a more nuanced understanding of mattering in digital labor, we added two essay questions aimed at learning more about digital worker’s self-concepts. The first question inquired about the reasons for individuals to participate in the work platform. In the second essay question, workers were asked about their opinion on the metaphor of being “a cog in a machine.”

4. Results
4.1 Dimensionality of mattering
The initial PCA with all 19 mattering items resulted in a clean structure with four components. The first component had seven items, the second one had four items, the third one had five items and the last one had three items. In total, 59 percent of the total variance was extracted through this solution and the KMO value of 0.84 indicates “meritorious” sampling adequacy (Kaiser and Rice, 1974). However, four items had high cross-loadings and were subsequently removed (see Table AI, items ma_2, ma_6, ma_7, ma_17). Table III displays the final factor structure after the removal of these four items. Again, a clean structure with four components is visible. With a KMO value of 0.81, the sampling adequacy was slightly lower than before, but the explained variance increased to 64 percent.

Component 1 has five items and is close to the original sub-dimension of reliance. It describes workers’ perception of being reliable and involved, taking care to produce high-quality output. We thus name this component reliance. The values for reliance are extremely high, with an arithmetic mean of 4.76 (SD = 0.53) at T1 and of 4.73 at T2 (SD = 0.62). Thus, workers perceive themselves as very reliable and relied upon by requesters. This is mirrored closely in the qualitative vignettes (see Table IV) as well. One worker describes himself for instance as “highly skilled, educated, and knowledgeable” and argues that requesters are dependent on his skill. Another emphasizes that she delivers particularly high-quality work which “sets [her] apart from other workers.” While most workers perceive themselves to be reliant and valuable contributors, there are also some who feel that they are easily replaceable or that “nobody would even notice if [they] stopped doing the work.”

Component 2 has four items and is different from previous conceptualizations of mattering. It related to social recognition and exchange, particularly through online forums and communities. In that sense, this component is mattering through individuals’ social context.
We term this second component social recognition. The values for social recognition are moderate to high, with an arithmetic mean of 3.39 (SD = 1.37) at T1 and of 3.41 (SD = 1.35) at T2. Social recognition can be traced as a strong theme in the qualitative essays as well. Here, workers reflect about their overall significance not just with respect to the quality of their work output, but also—and perhaps more importantly—in terms of their role and voice vis-à-vis requesters and peers. In particular, workers point to instances where they have “developed relationships with requesters” who appreciated the quality work that they did. In particular, “nice comments,” “bonuses” or “feedback” were named as marker of recognition provided by requesters. Furthermore, several workers visit online forums to “talk about the good and bad points [of digital labor],” “mentor newbies” and generally “share what they’ve learned” as digital workers. There were also some participants who did not experience social recognition in their digital labor. One participant noticed that their name was “replaced by a series of letters and numbers” and they “never see or talk with anyone” they work with.

The component of social recognition is distinct from the theoretical construct of social support (e.g. as proposed by Elliot et al., 2004; Sherbourne and Stewart, 1991) in that the latter pertains to a passive role of the individual (do I receive support within the social context?), while the latter pertains to an active role of the individual (am I recognized for my role and actions in the social context?).

Component 3 has four items and aligns with previous understandings of the importance dimension of mattering. The items describe cognitive processes how workers convince themselves that they themselves and/or the output of their work is important and valuable, so to speak indispensable. We thus name this component importance. The values for importance are moderate to high, with an arithmetic mean of 3.61 (SD = 1.10)

<table>
<thead>
<tr>
<th>Item</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requesters can rely on me to deliver good results</td>
<td>0.847</td>
<td>0.051</td>
<td>0.085</td>
<td>0.100</td>
</tr>
<tr>
<td>I take care to maintain a good rating on Amazon Mechanical Turk</td>
<td>0.836</td>
<td>0.032</td>
<td>−0.019</td>
<td>0.060</td>
</tr>
<tr>
<td>I take care to finish the tasks that I have started</td>
<td>0.790</td>
<td>0.040</td>
<td>0.096</td>
<td>0.002</td>
</tr>
<tr>
<td>I take care to continuously deliver good results in order to build</td>
<td>0.727</td>
<td>0.087</td>
<td>0.044</td>
<td>0.049</td>
</tr>
<tr>
<td>up a good reputation with requesters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a reliable worker</td>
<td>0.726</td>
<td>−0.008</td>
<td>0.191</td>
<td>0.163</td>
</tr>
<tr>
<td>Social recognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I engage with other “Turkers” online</td>
<td>−0.001</td>
<td>0.901</td>
<td>0.041</td>
<td>0.119</td>
</tr>
<tr>
<td>I find that online forums are a good place to talk to other workers</td>
<td>0.159</td>
<td>0.818</td>
<td>−0.004</td>
<td>0.091</td>
</tr>
<tr>
<td>I offer advice and support to other workers</td>
<td>0.018</td>
<td>0.814</td>
<td>0.255</td>
<td>0.140</td>
</tr>
<tr>
<td>I talk to others about my work on Amazon Mechanical Turk</td>
<td>0.010</td>
<td>0.609</td>
<td>0.183</td>
<td>0.138</td>
</tr>
<tr>
<td>Importance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a valuable resource for Amazon Mechanical Turk</td>
<td>0.238</td>
<td>0.123</td>
<td>0.731</td>
<td>0.117</td>
</tr>
<tr>
<td>I generally look for meaningful tasks that allow me to make a difference in the world</td>
<td>−0.041</td>
<td>0.036</td>
<td>0.695</td>
<td>−0.032</td>
</tr>
<tr>
<td>If they are smart, Amazon Mechanical Turk would not want to lose me</td>
<td>0.196</td>
<td>0.210</td>
<td>0.642</td>
<td>0.228</td>
</tr>
<tr>
<td>It makes no difference to Amazon Mechanical Turk if I work there or not (reverse)</td>
<td>0.026</td>
<td>0.090</td>
<td>0.611</td>
<td>−0.197</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I have a question about the rejection of the task, I contact the requester directly</td>
<td>0.155</td>
<td>0.148</td>
<td>0.050</td>
<td>0.851</td>
</tr>
<tr>
<td>When I feel treated unfairly by a requester, I try to make myself heard</td>
<td>0.104</td>
<td>0.288</td>
<td>−0.056</td>
<td>0.796</td>
</tr>
</tbody>
</table>

Note: Standardized loadings are displayed
at T1 and of 3.65 (SD = 1.13) at T2. Thus, workers perceive themselves as important and valuable. Participants who scored high on this dimension stressed their importance as an integral and crucial part of the whole. While acknowledging that they were but one of several thousand workers, one worker stressed that it is “the little work that makes the big picture vivid.” Another participant pointed out that even if they were but one “small data point” they felt “incredibly important” because they were part of the larger and meaningful project. Furthermore, many participants stressed that it was their emotions and their individuality which rendered them indispensable to requesters and superior to “machines.” While the majority perceived their personal contribution to be of importance, in some of the essays, this notion was absent. One participant noted somewhat resignedly that they were “just one of thousands of [workers] who log on every day” and that they indeed felt that they were “just a cog in a machine.”

<table>
<thead>
<tr>
<th>Reliance</th>
<th>Mattering high (self-concept of empowerment)</th>
<th>Mattering low (self-concept of disenfranchisement)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I am highly skilled, educated, and knowledgeable. The work I do helps requesters ... they depend on us! Some people may just put forth the bare minimum ... others are quick, efficient, and provide high quality responses. I like to think I'm one of the latter ... that sets me apart from other workers The requesters need us, and many academics need us ... it's in the job description I've never tailored my answers to what I believe the requester is interested in learning or predicting. At the cost of being efficient and quicker in my work, I've always answered truthfully</td>
<td>For the most part requesters don't really care who does the work I would not be missed if I did not work one day but that is the same with many jobs anymore Almost anyone else could do the work I do and the requester knows absolutely nothing about me and would never even notice if I stopped doing the work</td>
</tr>
<tr>
<td>Social recognition</td>
<td>I participate in a few small online groups of other [workers]. We talk about the good and bad points, mentor newbies, share what we've learned about turking I do have requesters tell me that they appreciate and note my efforts It's always a pleasure to get a bonus and especially the bonus with nice comments, they make me feel that my work was not worthless</td>
<td>My name is replaced by a series of letters and numbers. I never see or talk with anyone I work with Maybe someday I'll get some recognition and get more out of MTurk</td>
</tr>
<tr>
<td>Importance</td>
<td>I'm a person and my opinions matter. My feelings are important Well it's the little work that makes the big picture vivid. I feel like my work is very valuable Although you may only be a small data point, as part of the larger data set you become incredibly important to answering big questions I believe the fingerprints of my work are displayed in everything I do smeared and unique, like me</td>
<td>I don't identify myself from what I do on here It's not like the world will cease if I don't log in tomorrow [I feel that I am] a piece of the machinery that is only identified by an Id number I am just one of thousands of turkers who log on every day ... I guess I am just a cog in a machine</td>
</tr>
<tr>
<td>Interaction</td>
<td>I have developed relationships with requesters that appreciate the quality work that I have done Several times I have gotten emails thanking me for my honest feedback. Some even gave bonuses We do have a voice. I think there is a sense of community (especially with the forums) when it comes to turking</td>
<td>We really have no recourse other than to [complain] on [online forums] Amazon never responds to worker complaints and doesn't [care], as long as they get paid on their end</td>
</tr>
</tbody>
</table>

Table IV.
Exemplary qualitative vignettes on mattering
Component 4 has two items and is thus the weakest dimension of mattering. It is behavioral in nature (rather than perceptional) and relates to interactions with the requester, in the sense of making oneself heard and speaking up. We thus name this component interaction. The values for interaction are high or even very high, with an arithmetic mean of 4.21 (SD = 1.05) at T1 and of 4.30 at T2 (SD = 1.00). Thus, workers report speaking up and making themselves heard when they have a question about the rejection of a task and feel treated unfairly.

4.2 The impact of mattering on work engagement

The results of the linear regression analysis are displayed in Table V. The extracted components described in the previous paragraphs were included in this regression model as independent variables, controlling for demographic characteristics and full-time vs part-time work. The analysis was conducted at T2. Thus, only respondents who answered the survey at both T1 and T2 are included. The component structure from the analyses at T1 was superimposed to build the independent variables for the regression model, revealing a vastly similar structure (see Table AII).

The regression analysis shows that the control variables have a significant but weak effect on WE. Older, female and part-time workers are more engaged than younger, male and full-time workers. Education has a negative effect, so that more educated workers are less engaged. Turning to the mattering variables, we find that the two established mattering components – reliance and importance – influence WE positively while the social components of social recognition do not. Perceived importance of one’s contribution to the overall platform is by far the strongest predictor of WE. An increase of one standard deviation in importance leads to an increase of almost half a standard deviation in WE. The effect for reliance is much weaker but still significant at the 5 percent level.

In a final step, we ran a model that included WE at T1 as a control variable but was otherwise the same as the previous model (Table VI). This served to check whether the effects would still hold when accounting for changes in WE. Comparing Tables III and IV, we see that only full-time vs part-time and importance remained significant. The effect of importance is much weaker than before but still significant at the 1 percent level. Again, higher values in perceived importance lead to increased WE and part-time workers are more engaged than full-time workers. Taken together, the findings indicate that there is an effect of mattering on WE, but this is mostly the case for part-time workers who succeed in authoring narratives of their importance.

5. Discussion and conclusion

In this paper, we investigated the phenomenon of mattering on AMT based on a longitudinal quantitative survey study and qualitative vignettes. Our point of departure

<table>
<thead>
<tr>
<th>Unstandardized regression coefficient (robust SE)</th>
<th>Standardized regression coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.01* (0.00)</td>
</tr>
<tr>
<td>Education</td>
<td>−0.07* (0.03)</td>
</tr>
<tr>
<td>Gender: female</td>
<td>0.18* (0.08)</td>
</tr>
<tr>
<td>Full-time vs part-time: part-time</td>
<td>0.26* (0.10)</td>
</tr>
<tr>
<td>Reliance at T1</td>
<td>0.09* (0.04)</td>
</tr>
<tr>
<td>Social recognition at T1</td>
<td>0.08 (0.04)</td>
</tr>
<tr>
<td>Importance at T1</td>
<td>0.48*** (0.05)</td>
</tr>
<tr>
<td>Interaction at T1</td>
<td>−0.02 (0.05)</td>
</tr>
<tr>
<td>Constant</td>
<td>−0.18</td>
</tr>
</tbody>
</table>

Notes: $n = 438$. $R^2 = 0.28$. *$ p < 0.1$; **$ p < 0.01$.

Table V. Regression analysis of work engagement at T2 on mattering and control variables
was that common criticisms levied against online gig labor often refer to issues of job simplification, isolated working conditions and limited opportunities for feedback. This might make it rather difficult for crowdworkers to be able to experience that they matter at work (Fuchs and Sevignani, 2013; Kingsley et al., 2015; Rosenblat and Stark, 2016).

Here, we showed that the ability to positively frame one’s work as a significant contribution to – and even beyond – the crowdworking platform (importance) is key in predicting how well online gig labor is enjoyed in long term. More to the point, our research suggests that the narrative of the “empowered digital entrepreneur” may be a self-fulfilling prophecy: workers who manage to ensure their mattering – e.g. through reinforcing narratives about the larger significance of their overall contribution – will be less bothered by the disenfranchising properties of digital labor while simultaneously becoming more engaged in their work environment.

Our results further suggest that part-time workers are overall more likely to employ positive framings of their own contribution. Judging from the vignette statements, this may be due to the fact that they experience their activity on the platform as a welcome way to earn additional income, to learn new skills or to pass the time. This may also offer an avenue to explain why crowdwork can be both experienced as intrinsically motivating and fun (crowdwork as empowerment) or as alienating and potentially exploitative (crowdwork as disenfranchisement).

This subjective perspective put forth in the notion of mattering may add to better explain the paradox in the digital labor debate put forth by Fish and Srinivasan (2012) and Postigo (2016): Why is it that people seem to voluntarily and continuously work in conditions that may be exploitative and disenfranchising?

Future research may not just employ task characteristics (e.g. Saks, 2006) or job resources (Bakker et al., 2008) as a predictor of WE but additionally take the individual narrative frames employed with respect to the significance of one’s overall contribution into account as well. While our study confirmed perceived importance to be the most salient element of mattering in the anonymous context of digital microwork on AMT, it is possible that other contexts may stress other elements of mattering. For example, Boons et al. (2015) have shown that in more community-driven environments where individuals are more visible (e.g. crowdsourced innovation community), it may not be importance (own attribution of significance) but respect (others’ attribution of significance) that are key in driving perceptions of mattering and engagement. The question whether or not respect would be an alternative or additional dimension of mattering or rather a combination of attention (others are aware of my contribution) and reliance (others value my contribution) would have to be addressed in future research and measures.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized regression coefficient (robust SE)</th>
<th>Standardized regression coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work engagement at T1</td>
<td>0.60*** (0.05)</td>
<td>0.61***</td>
</tr>
<tr>
<td>Age</td>
<td>0.00 (0.03)</td>
<td>0.03</td>
</tr>
<tr>
<td>Education</td>
<td>−0.04 (0.03)</td>
<td>−0.06</td>
</tr>
<tr>
<td>Gender: female</td>
<td>0.06 (0.07)</td>
<td>0.03</td>
</tr>
<tr>
<td>Full-time vs part-time: part-time</td>
<td>0.18* (0.09)</td>
<td>0.08*</td>
</tr>
<tr>
<td>Reliance at T1</td>
<td>−0.06 (0.03)</td>
<td>−0.06</td>
</tr>
<tr>
<td>Social recognition at T1</td>
<td>−0.02 (0.04)</td>
<td>−0.02</td>
</tr>
<tr>
<td>Importance at T1</td>
<td>0.15** (0.05)</td>
<td>0.15**</td>
</tr>
<tr>
<td>Interaction at T1</td>
<td>−0.07 (0.05)</td>
<td>−0.07</td>
</tr>
<tr>
<td>Constant</td>
<td>−0.04</td>
<td></td>
</tr>
</tbody>
</table>

Table VI. Regression analysis of work engagement at T2 on work engagement at T1, mattering and control variables

Notes: n = 428. R² = 0.50. *p < 0.1; **p < 0.05; ***p < 0.01
These inherent factors such as lack of appreciation, distance from colleagues, a lack of transparency and the reification of workers may decrease feelings of mattering. However, given that these are characteristic elements of digital labor, and given that feelings of insignificance, alienation and “non-mattering” can have wide social impacts, mattering becomes a core construct in how we should examine the experience of work in the digital economy (Jung, 2015). In order to prevent marginalization and promote social cohesion, it is thus critical to design fair procedures and business models, which can support and promote experiences of mattering among its workforce.

We would argue that going forward, these forms of personal coping strategies with a form of labor that, at least from a structural perspective, seems less than ideal, are a promising avenue of research. On the one hand, they introduce worker agency into the picture, and might help explain the uptake of (and loyalty to) this kind of labor, beyond socio-economic context factors. On the other hand, the findings tie nicely into organizational scholarship on workers’ disidentification practices.

Our study comes with certain limitations that point to additional avenues for future research. First, our research, while introducing the concept of mattering to a new context, did not differentiate task types and characteristics within this work environment. Instead, we aimed at exploring the topic of mattering in crowdwork more holistically. Future research is encouraged to analyze whether different crowdwork types (e.g. survey taking, image tagging and content production) and task characteristics come with heightened or lowered levels of mattering. Ethnographic methods would be particularly suited to research how perceptions of mattering and the type of work crowdworkers do relate to each other. Second, we looked at the outcome of mattering rather than the antecedents. Future research could investigate what personal, platform and cultural characteristics can enhance mattering. For example, do crowdworkers in less wealthy countries and those traditionally excluded from the labor market (e.g. former convicts, retired professionals, women who are home-bound as a result of domestic or care responsibilities) experience higher values of mattering? Third, our measure of mattering requires refinement. Traditional measures of mattering often focus on how respondents think that others perceive them. This is extremely difficult to gauge in the highly anonymized setting of digital crowdwork. Here, it might be more meaningful to measure not the perceptions of perceptions (e.g. do I feel that others value my work?), but the perceptions of behaviors instead (e.g. do I feel that I deliver good work?). We have addressed this partially by “activating” some of the items for social recognition and interactions which were measured mostly through (self-reported) behavioral cues. Future research may refine the measurement further, for instance, by testing it in other – more or less anonymous – settings of digital work.

Fourth and finally, our research model did only incorporate one outcome and this outcome is generally seen as positive. Future research could test the effect of mattering on additional outcomes, including negative ones such as exhaustion due to overwork or overcommitment. Here, a combination of survey data with observational and trace data, for example, about individuals’ health data through fitness and self-tracking apps, would be appropriate.

Despite these limitations, we believe that our study makes an important contribution to the psychology and sociology of work in an increasingly digitized context. By pointing to the differentiated forms and functions of mattering, we not only advance the theoretical understanding of new forms of work but are also able to point to possible intervention points that could improve workers’ mattering and meaning in digital work environments. This has particular implications for the design and management of digital platforms which play an increasingly important role in facilitating collaboration, communication and task coordination – both within and outside the boundaries of traditional organizations. With the advent of increasingly specialized digital work platforms, it is
crucial for platform managers to attract and retain skilled and reliable workers. Here, designing inclusive platform experiences which emphasize mattering in the form of social recognition and reliance (e.g. through reputation and feedback mechanisms) interaction (e.g. through communication and community features) as well importance (e.g. through incentives and status badges) will be key.

References


Mattering in digital labor


## Appendix

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Wording (scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work engagement</td>
<td>we_1</td>
<td>At my work, I feel that I am bursting with energy</td>
</tr>
<tr>
<td>(WE)</td>
<td>we_2</td>
<td>At my job, I feel strong and vigorous</td>
</tr>
<tr>
<td></td>
<td>we_3</td>
<td>When I get up in the morning, I feel like going to work</td>
</tr>
<tr>
<td></td>
<td>we_4</td>
<td>I find the work that I do full of meaning and purpose</td>
</tr>
<tr>
<td></td>
<td>we_5</td>
<td>I am enthusiastic about my job</td>
</tr>
<tr>
<td></td>
<td>we_6</td>
<td>My job inspires me</td>
</tr>
<tr>
<td></td>
<td>we_7</td>
<td>Time flies when I am working</td>
</tr>
<tr>
<td></td>
<td>we_8</td>
<td>When I am working, I forget everything else around me</td>
</tr>
<tr>
<td></td>
<td>we_9</td>
<td>I feel happy when I am working intensely</td>
</tr>
<tr>
<td>Mattering (MA)</td>
<td>ma_1</td>
<td>I talk to others about my work on Amazon Mechanical Turk</td>
</tr>
<tr>
<td></td>
<td>ma_2</td>
<td>I take pride in my rating on Amazon Mechanical Turk</td>
</tr>
<tr>
<td></td>
<td>ma_3</td>
<td>When I feel treated unfairly by a requester, I try to make myself heard</td>
</tr>
<tr>
<td></td>
<td>ma_4</td>
<td>I take care to continuously deliver good results in order to build up a good reputation with requesters</td>
</tr>
<tr>
<td></td>
<td>ma_5</td>
<td>If I have a question about the rejection of the task, I contact the requester directly</td>
</tr>
<tr>
<td></td>
<td>ma_6</td>
<td>I ask requesters for feedback on my own work</td>
</tr>
<tr>
<td></td>
<td>ma_7</td>
<td>I am a valuable resource for Amazon Mechanical Turk</td>
</tr>
<tr>
<td></td>
<td>ma_8</td>
<td>I engage with other “Turkers” online</td>
</tr>
<tr>
<td></td>
<td>ma_9</td>
<td>I generally look for meaningful tasks that allow me to make a difference in the world</td>
</tr>
<tr>
<td></td>
<td>ma_10</td>
<td>I find that online forums are a good place to talk to other workers</td>
</tr>
<tr>
<td></td>
<td>ma_11</td>
<td>If they are smart, Amazon Mechanical Turk would not want to lose me</td>
</tr>
<tr>
<td></td>
<td>ma_12</td>
<td>It makes no difference to Amazon Mechanical Turk if I work there or not (reverse)</td>
</tr>
<tr>
<td></td>
<td>ma_13</td>
<td>I take care to maintain a good rating on Amazon Mechanical Turk</td>
</tr>
<tr>
<td></td>
<td>ma_14</td>
<td>Requesters can rely on me to deliver good results</td>
</tr>
<tr>
<td></td>
<td>ma_15</td>
<td>I offer advice and support to other workers</td>
</tr>
<tr>
<td></td>
<td>ma_16</td>
<td>I am a reliable worker</td>
</tr>
<tr>
<td></td>
<td>ma_17</td>
<td>I don’t shy away from difficult tasks</td>
</tr>
<tr>
<td></td>
<td>ma_18</td>
<td>I am a valuable asset to Amazon Mechanical Turk</td>
</tr>
<tr>
<td></td>
<td>ma_19</td>
<td>I take care to finish the tasks that I have started</td>
</tr>
</tbody>
</table>

Note: *Not included in the final PCA due to high cross-loadings*

Table AI. Questionnaire
## Table AII. PCA loadings at T2

<table>
<thead>
<tr>
<th>Item</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requesters can rely on me to deliver good results</td>
<td>0.852</td>
<td>0.081</td>
<td>0.083</td>
<td>0.120</td>
</tr>
<tr>
<td>I take care to maintain a good rating on Amazon Mechanical Turk</td>
<td>0.840</td>
<td>0.043</td>
<td>0.026</td>
<td>0.094</td>
</tr>
<tr>
<td>I take care to finish the tasks that I have started</td>
<td>0.778</td>
<td>0.050</td>
<td>0.110</td>
<td>0.113</td>
</tr>
<tr>
<td>I take care to continuously deliver good results in order to build up a good reputation with requesters</td>
<td>0.726</td>
<td>0.094</td>
<td>0.149</td>
<td>0.242</td>
</tr>
<tr>
<td>I am a reliable worker</td>
<td>0.810</td>
<td>0.080</td>
<td>0.062</td>
<td>0.163</td>
</tr>
<tr>
<td>I engage with other “Turkers” online</td>
<td>0.040</td>
<td>0.907</td>
<td>0.038</td>
<td>0.107</td>
</tr>
<tr>
<td>I find that online forums are a good place to talk to other workers</td>
<td>0.158</td>
<td>0.770</td>
<td>−0.043</td>
<td>0.102</td>
</tr>
<tr>
<td>I offer advice and support to other workers</td>
<td>0.030</td>
<td>0.867</td>
<td>0.099</td>
<td>0.086</td>
</tr>
<tr>
<td>I talk to others about my work on Amazon Mechanical Turk</td>
<td>0.052</td>
<td>0.713</td>
<td>0.140</td>
<td>0.136</td>
</tr>
<tr>
<td>I am a valuable resource for Amazon Mechanical Turk</td>
<td>0.296</td>
<td>0.127</td>
<td>0.697</td>
<td>0.234</td>
</tr>
<tr>
<td>I generally look for meaningful tasks that allow me to make a difference in the world</td>
<td>0.153</td>
<td>0.141</td>
<td>0.705</td>
<td>−0.095</td>
</tr>
<tr>
<td>If they are smart, Amazon Mechanical Turk would not want to lose me</td>
<td>0.191</td>
<td>0.099</td>
<td>0.526</td>
<td>0.496</td>
</tr>
<tr>
<td>It makes no difference to Amazon Mechanical Turk if I work there or not (reverse)</td>
<td>−0.100</td>
<td>−0.061</td>
<td>0.760</td>
<td>−0.023</td>
</tr>
<tr>
<td>If I have a question about the rejection of the task, I contact the requester directly</td>
<td>0.291</td>
<td>0.142</td>
<td>0.040</td>
<td>0.769</td>
</tr>
<tr>
<td>When I feel treated unfairly by a requester, I try to make myself heard</td>
<td>0.183</td>
<td>0.219</td>
<td>−0.021</td>
<td>0.820</td>
</tr>
</tbody>
</table>