



# Click for work: Rethinking work through online work distribution platforms

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## abstract

Online work distribution platforms such as *Amazon Mechanical Turk* or *Uber* alter how work tasks are chosen or assigned. Put succinctly, instead of the employer choosing the employee, the worker chooses the task. Responses to these new technological possibilities for distributing tasks are all deeply influenced by the contemporary historical moment, which privileges approaches to workers that take them to be neoliberal market actors. In this article, we examine how these platforms interact with current ideas about work and contemporary configurations of work by altering the ways work is accomplished both within and outside of an organization through open calls. In particular, we focus on the challenges these platforms bring to the problems of coordination ever-present in any project of designing the work, disseminating the work, and controlling the work process.

## Introduction

Work distribution platforms such as *Uber* or *Amazon Mechanical Turk* change how work is distributed, and thus encourage people to examine anew how work is defined and allocated. These platforms allow work to be distributed by ‘open-calls’ rather than by assignment or pre-defined job role requirements and commonly involve crowdwork and open source principles. They provide structures that significantly alter how work is organized, significantly enough to require that users re-examine what forms of social

organization can and should accompany work. Many view these platforms as harnessing new imaginaries of collaborative engagement. They allow participants to operate as if they do not have to subject themselves to a job position whose commitments and activities they may not wish to perform. That is, they offer a neoliberal take on an age-old question at the heart of work and organization studies: why would workers agree to subordinate themselves to others (Boltanski and Chiapello, 2007; Burawoy, 1979; Weeks, 2011)? These platforms offer workers the chance to imagine themselves as autonomous entrepreneurial selves and thus reply to Boltanski and Chiapello's question: 'I don't have to'.

Inspired by observations of several work platforms, we offer this thought piece to suggest how online work platforms operate in contexts where neoliberal logics prevail. What happens to work that is performed through these mechanisms? While there is great diversity in platform structures, in this article we provide a conceptual framework for seeing the broad commonalities underlying how these platforms transform what work can and should be. These platforms do not merely extend existing work processes through piece work, but rather indicate changes at the level of how tasks are classified, made distinct, and performed.

In what follows, we first problematize work distribution platforms as exposing a contradiction at the heart of neoliberalism – that between the entrepreneurial self and the structure of the firm. We then provide a framework for seeing the commonalities that underlie these platforms. This framework is motivated by crowdwork and open-work experiments and efforts that took place wholly *inside* the confines of a large corporation, belying the expectations that these platforms are exclusively geared towards externalizing labor. Drawing on observations of these experiments, we explore three ways in which the work may be being reshaped through use of these mechanisms: (1) the design of work, (2) the dissemination of and access to work, and (3) the control, management and authority over work. While online work distribution platforms in general change the organization of work, these work practices are informed, as we discuss in conclusion, by participants' own neoliberal perspective on work which projects a tension between autonomy and firm efficiencies.

## Problematizing work

By enabling participants to imagine themselves as entrepreneurial selves, work distribution platforms create a peculiarly neoliberal contradiction between the entrepreneurial self, as described by Michel Foucault (2004), and the benefits of the firm, as imagined by an early ordinal economist, Ronald Coase (1937), who influenced many neoliberal scholars.<sup>1</sup> Accepting the general neoliberal assumption that markets are the ideal form of social order, Coase (1937) asked: why have firms in the first place, since corporations do not operate internally according to market principles? He concluded that firms can lower transaction costs through the managerial organization of production, making firms more of an economically preferred route than the market for certain purposes (see also Benkler, 2002). In short, there is a tension between the strong appeal in not having a boss and the efficiencies of the firm. Our argument is that this tension, which accompanies online work distribution platforms, becomes visible when analyzing how these platforms re-organize work – the way work is designed, the ways in which it is distributed, and the ways in which it is controlled.

While open call work distribution is not a new phenomenon (for historical examples, see Nelson, 1990; Scholliers and Schwarz, 2003), these online platforms further validate Yochai Benkler's prescient insight that the digital has the potential to transform the firm/market distinctions Coase defined (Benkler, 2002; Coase, 1937). How is it that work distribution platforms accomplish this transformation? The appeal of work distribution platforms is grounded in currently dominant neoliberal sensibilities that encourage workers to view themselves as businesses in their own right, and thus makes subordination less desirable (Foucault 2004; Rose 1998). While these platforms align themselves well with contemporary ideological shifts in concepts of work, they also undercut many of the solutions that firms historically provided to the practical dilemmas of working with others. As we show, these platforms encapsulate a contradiction that is internal to

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1 By engaging with Coase, we depart from much of the Foucauldian scholarship on the entrepreneurial self by asking how this self operates with a corporation (for other exceptions, see Swan and Fox, 2009).

neoliberalism, counterpoising the ideal of autonomy with Coase's re-affirmation of the firms' purpose. Thus these systems force people to revisit questions of coordination, cooperation, and collaboration present whenever working with others.

### *Work distribution platforms*

Since the turn of the century, online work platforms have proliferated, enabling people to tender tasks of tremendously varied scope. Work distribution platforms allow both work requesters and work seekers to opt in to soliciting and selecting work assignments. Work assignments are made available broadly, rather than being assigned due to an organizational position. They use a range of market mechanisms as contractual forms, from fixed price bids to auctions to contests, and may include traditional hourly or salaried pay or outcome-based work (pay for results). This definition encompasses a broad range of open-call systems – we focus on those which rely on internet-based mechanisms to function. Depending on the platform, participants respond by claiming tasks, applying to be selected to perform work, or submitting results to a simple request or a contest. Some systems – such as *Mechanical Turk* or *Topcoder* – only support digital work. But not all the work performed is digital work. For instance, through *Task Rabbit* people can find others nearby to perform chores – helping cook for a party, or assembling furniture. Participatory systems common to citizen science efforts enable volunteers to use telescopes or other instruments to gather data on the skies, waters, or soil. In some systems the work is performed as a crowd, involving degrees of coordinated action. In others, any given effort can be performed singularly. Nonetheless, even when offline work occurs, the work distribution, contracting, and communication about tasks takes place online. They promise workers the freedom to work when, where, and on what they like.

These platforms vary widely in the nature of the task being distributed (Doan et al., 2011). Online marketplaces such as *Upwork* or *Freelancer.com* act as intermediaries to match work projects requiring certain skills with specific producers, such as getting legal work performed or software code written. *Mechanical Turk* is known for its decomponentization of work into tiny bits,

or microtasks such as translating ten words. Microtasks can be disseminated, claimed, and performed by people worldwide within minutes. At the other end of the spectrum, *InnoCentive* and *Kaggle* provide platforms through which other enterprises seek to solve large, complex challenges by soliciting submissions to contests. Even crowdfunding plays into these dynamics. People can identify work they would like to see undertaken, such as producing an artwork, and at the same time solicit investment in the form of others' time and money to get it done.

Work distribution platforms change how the workplace functions as a forum for facilitating connective action. Platform driven work acts to transcend and even displace forms of workplace sociality – forms that affect workers' experiences both positively and negatively – engendered by organizations. Participation in intra-organizational crowd and open work initiatives has prompted participants to reflect on their identity at work (Cefkin et al., 2014). It also puts into relief for workers the relative degree of commonality or distance from their fellow workers.

These platforms do not inherently undermine firms' boundaries, and can be used internally among full time employees. Open call work distribution is not synonymous with freelancing per se.<sup>2</sup> The cases that are used to illustrate our points here (and are described further below) are drawn from efforts inside of *IBM*. Yet while firm boundaries are in place, these platforms potentially undermine some of the benefits of firms by introducing market mechanisms for distributing the work.

#### *Firm control, platform control and the nature of work tasks*

Underlying these changes are questions of subordination and equity. Open call platforms presumably remove certain hierarchical relationships – the supervisor no longer assigns jobs, instead workers select for themselves the tasks they want to do. They may even make requests of others to do work for them. Champions of these platforms view this as providing more autonomy to workers (for a critique see e.g. Kingsley et al 2015; Rosenblat and Stark,

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2 These platforms are not inherently synonymous with shedding jobs from companies, or with the freelancer market.

2016) and allowing workers to enter into more equitable relationships with each other. In this perspective, a temporally bound contract stands in for equity (Kittur et al., 2013; Malone, 2004). That workers are continuously choosing the work they do, and may even in turn ‘outsource’ tasks to others, is seen as evidence that they are working as equals among individuals who also can select tasks and structure their time on their own terms.

Neither the temporary contract, however short, nor the technological infrastructure supporting open calls, in themselves are harbingers of autonomy or equity. Instead, freedom or equity arises from the beliefs and often routinized practices shaping the use of technologies and the implementation of contracts. A platform’s structure is too underdetermined to produce freedom or equity on its own, and thus this prevalent interpretation of why some ways of distributing tasks are improvements is linked to widespread neoliberal views that corporations must change how they have functioned previously (Gillespie, 2010).

When people use open call platforms, they often do so while surrounded by neoliberal approaches to work. Luc Boltanski and Eve Chiapello argue that a ‘market type of control’ emerges as firms increasingly attempt to create market conditions both within the context of the firm, and through various techniques for outsourcing work (2006: 82). Rather than using hierarchical relationships to discipline workers, companies turn to market competition as an effective motivating external force. They write: ‘Creating competition has replaced control of work by the directors of these units, who in return can rely on customer demand to exercise control that seems to issue no longer from them, but from the market’ (*ibid.*: 82). Open call platforms are prone to use markets to replace workplace hierarchies – relocating hierarchical processes into the technology (Irani, 2015). In some platforms, such as *99Designs* and *Topcoder*, competition determines who will get paid for the tasks that they do, and, in general, disciplines workers into performing in prescribed ways.

Open call platforms both resonate with strands of neoliberal beliefs about autonomy and work, and strengthen the intrusion of market-based interactions into firm transactions (see also Sundararajan, 2016). A long-

standing distinction between firm and markets among economists was most notably addressed by Ronald Coase in the early years of the neoliberal thought collective (Mirowski and Plehwe, 2009). Coase explores what value firms offer over and above market transactions, asking what functions firms serve. He famously argued that firms exist because they lower transaction costs, in part by supplying workers with opportunities to build long-term relationships within a workplace, and experience solving sporadically occurring problems. Firms contain routines, infrastructure, and historical knowledge that make them desirable, especially if the alternative is economic activity organized solely through market transactions. Open call work distribution has the potential to undercut benefits firms traditionally offer by re-configuring how knowledge and resources circulate within firms. It often introduces more fleeting market transactions into what were previously relatively stable forms of production organized through managerial structures.<sup>3</sup>

Susan Leigh Star and Anselm Strauss (1999) prefigured many of the shifts that these platforms potentially engender when discussing how work evolves under capitalism:

At the extreme, if corporate management chooses to break work down into component tasks and remove it from the biography, job, or career of any particular individual, then it must be fully describable and in some sense rationalized. ...The kinds of work especially affected include tacit and contextual knowledge, the expertise acquired by old hands, and long-term teamwork. (1999: 11)

They argued that these transformations risked re-inscribing social inequalities into work practices, largely by valuing some tasks and rendering others categorically invisible or putatively inconsequential.

Each work platform has a structure that might coincide with dominant approaches to determining what work is valuable, although not all platforms

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3 See also Julia Tomasetti's (2016) critique of how *Uber* inaccurately portrays its version of a work distribution platform in Coasian terms. She argues that Coasian views of the firm don't take into account the various ways in which contemporary firm organizations configure how knowledge and resources are distributed internally.

reinforce the same ideologies. For example, Irani has argued that since the microtasks of *Amazon Mechanical Turk* are so often designed to be as simple as possible, the platform becomes an infrastructure that produces:

the difference between ‘innovators’ and ‘menial’ symbolic workers. Programmers who manage thousands remain flexible tinkerers with few accountabilities. (Irani, 2015: 232)

*Amazon Mechanical Turk* functions to support emergent views of appropriate divisions of work in the knowledge economy in which innovation is linked to charisma and persuasion, and routine tasks are depreciated. Yet other platforms might structure how the tasks are organized so that the worker is chosen precisely because of their ability to perform complex and innovative work.

### **A framework for analyzing work in online distribution platforms**

In this section we outline the features of work in work distribution platforms, focusing on three general components: 1) work design, 2) dissemination and access to work, and 3) authority and control. Before we elaborate on these three components, we briefly introduce the ethnographic material that informs our analysis.

#### *Ethnographic inspirations*

This article is principally a thought piece meant to suggest a framework for analyzing online work platforms in contexts where neoliberal ideologies dominate. The framework has been informed by studies Melissa Cefkin conducted with colleagues at IBM and draws upon them to illustrate the features of these platforms.<sup>4</sup> They participated in several projects that experimented with intra-organizational crowd-work. Three projects in particular inform our narrative. One was a crowd-funding initiative run in a corporate research lab. Each lab member was granted a (virtual) sum of money that they could use to invest in projects proposed by their peers in a custom-designed platform that supported similar actions to the Kickstarter

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4 All ethnographic quotes are drawn from this fieldwork.

platform. Cefkin and her colleagues studied how the project unfolded, including people's experiences as both proposers and investors.

The second project was a crowd-work system primarily for executing technical work such as software development. The system was designed to support work components expected to take between half a day and seven days of effort. Participants responded to open requests with bids on how they would accomplish the work and naming a 'price'. Workers throughout the company could participate, along with a set of pre-vetted external contract workers. Internal workers were invited with the encouragement that it was a chance to further develop skills or fill unused time (such as during a code-freeze in a development team). External workers were paid real dollars.

The third project was a 'marketplace' designed for peer-to-peer work exchange. Any participating member could post a request and others could offer to perform the work. The system was deployed among a select community of workers in the company, those trained in organizational change management methods. In this case, Cefkin and her colleagues designed and helped support the pilot of the system through a user-centered design approach.

Cefkin and her colleagues performed both interviews and observations as part of their applied research engagements. They did over 50 interviews with individuals participating in the efforts as both work requestors and work providers (by phone or in person where possible). They also observed meetings in which the leaders of the efforts discussed plans and statuses, reviewed documentation, and followed informal exchanges about the efforts when possible. Fieldnotes and/or meeting and interview transcripts were kept by researchers and analyzed in the context of the applied research projects. The research team met regularly to discuss observations and emerging themes as regards their applied interests, noting as well themes and observations that fell beyond their immediate interests. In addition to sharing the numerous conference presentations and publications that resulted from these efforts inside IBM with Gershon, Cefkin re-examined

these data, observations and analysis in conversation with Gershon, resulting in this piece.

### *Shifting how work is designed*

The people who use these platforms to have work performed are themselves essential workers in the system. They must fashion a vision of the work so that it can be accomplished through the system's mechanisms. When people initiate tasks on work distribution platforms, they must consider how tasks are made into distinct units, as well as how to segment work, anticipating how the resulting products will travel and be recombined. The platforms are giving rise to new ways of designing work, either by componentizing work into bits and parts, or, alternatively, leaving tasks more holistically assembled in larger parts, an aspect often overlooked by critics (Anya, 2015). Contest mechanisms, for instance, enable requesters to specify desired results, freeing themselves up from identifying the parts of the work or even knowing what the parts are. The requesters leave it up to those who will perform the work to assemble or disassemble as they see fit. In engaging with this necessity to divide up tasks in new ways, workers could be understood as seeing the workplace more and more from the vantage point of a business seeking to enhance itself.

When studying a crowd-work system for software development, Cefkin et al. (2014) found that figuring out how to get quality work done was a significant challenge, partially because of dilemmas emerging from the intricacies of segmenting work. This is part of the invisible work of making crowd-work happen, and the downside of introducing market mechanisms into the firm (Anya, 2015; Cefkin et al., 2014). There is effort involved in specifying a request for unknown workers. This is particularly acute in cases where there are specific requirements for how the work is performed, such as some software development where strict standards and security protocols must be assured. In general, requesters cannot assume shared understandings about what terms mean or what typical steps to producing results would be (Suchman, 1995). As one work requester succinctly explained:

To a retained team member I can simply say, ‘scramble an egg’, whereas to a [crowd-work system] player, I have to say, ‘open the refrigerator’, ‘remove the egg carton’, ‘open the egg carton’, ‘remove one egg’, etc.

System users felt that every possible aspect of performing the tasks needed to be elaborated to get satisfactory results, forcing the worker requesting the task to perform work he himself would not previously have been required to perform.

Work at a distance, whether geographically, temporally or conceptually, often surprises participants with areas of knowledge and perception that have locally specified meanings, even where universal understandings were expected (Bailey et al., 2012; Guesling, 2013; Moore et al., 2014). For example, the seemingly straightforward task of extracting addresses from a set of data, as described by another work requester, revealed tacit assumptions she had made. She needed the data for integrating into a mass emailing. However she had not specified its purpose or preferred form of delivery in the work specs, so the results she got back were not properly formatted for her email system. They had to be significantly reworked, nearly negating any benefit she had gained in outsourcing the task. Members of her local team would have already known why she wanted this information and anticipated the best way of providing results had they performed the task rather than crowd sourced workers. A common lesson learned by new users, this example illustrates that scrambled eggs are never just scrambled eggs. Scrambled eggs could be for breakfast or for mixing into an emulsifier. They can be prepared hard or soft, plain or salted. Work activities are always already embedded in systems of meaning. The use of work distribution platforms within existing systems of work disrupt those meanings. People have to conceptualize and design work in new ways when unknown workers, with unanticipated experience and knowledge, are involved.

Segmenting tasks in new ways has some upsides as well as the aforementioned downsides. In their study of the peer-to-peer work exchange for organizational change management tasks, for example, Cefkin and her colleagues found that many participants viewed their chance to do work through the system as an opportunity to learn something new, something

outside their regular tasks as fixed by their workplaces' hierarchical and role-based division of work. This resonates with neoliberal corporate discourses advocating that workers should always be on the lookout for opportunities to enhance their skills. Yet in practice the platforms often thwart the users' hopes by not providing transportable evidence that the user has acquired a skill – to be hired outside the platform, one needs to be able to document that one has learned these skills in an appropriate and circulatable form (see also Gershon, 2017).

Workers could at times combine their existing knowledge and experience – in many instances, knowledge and experience requesters were unaware they possessed – with the work that was requested, giving rise to creative potential in designing and performing tasks. For example, a participant recognized that the task she signed up to complete, surveying people's adoption of a new program, would not be complete without a communication plan, something she felt especially excited to work on.<sup>5</sup> In consultation with the requester, she expanded her scope to include that. During the crowdfunding effort, a scientist who was also a hobbyist fruit grower attempted to bolster a proposed project to create an employee garden by suggesting technologies and practices for soil improvement and watering.

Segmenting work in new ways also potentially creates new roles in the workplace. Media scholars have long observed that new technologies are often accompanied by new professions – telephone operators in the case of telephones (Fischer, 1992), or stenographers in the case of institutional shorthand machines (Inoue, 2011; Kittler, 1990). Work platforms are no exception. Depending on how the platform is organized, these platforms can be accompanied by people specializing in forms of dispute resolution or evaluation, although they are not always remunerated (Gillespie, 2010). When tasks are distributed in new ways, roles often emerge to assist participants in coordinating these new tasks, and addressing problems that spring up throughout the process.

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5 This was only possible because of the platform's affordances, not all platforms allow this.

As these examples suggest, these work platforms encourage users to engage with what work entails as a conscious arrangement of tasks, one which can be segmented and re-combined in various ways. Determining just where a task starts and ends is work that both requesters and those performing the work face – should the task include removing the eggs from the carton or should that be a separate task for another worker? Might an adoption plan include a plan for communications too, or is that work that does not need to be done at all? When focusing on how these tasks are segmented, requesters also have to anticipate future uses of the results – some results will travel differently or combine in more limited ways than others. They have to develop new strategies for planning work and for envisioning the directions through which the work will circulate (Bailey et al., 2012). New forms of segmented tasks can also lead to unexpected consequences – previously unidentified talents might come to the fore and new work roles might emerge (Mikołajewska-Zajac, 2016). In practice, these work platforms don't simply connect work requesters and work performers in new ways, they challenge all involved to think anew about how tasks are segmented and combined in ways that transform all elements of how work is conceptualized and performed. They engage participants, in other words, as if they are in control of planning work. This brings the experience of operating as if oneself is a business into the very performance of tasks, and redefines the efficiencies a firm offers.

### *Transforming the dissemination of and access to work*

One of the defining features of work distribution platforms is the open-call approach – announcing tasks broadly for people to select or apply to do. This mechanism overtly changes how work is disseminated and who can access it. *AirBnB* allows home-owners to become hoteliers. *Uber* allows non-professional 'drivers' to work as drivers using their own cars. People are encouraged to imagine themselves as bundles of assets and skills that they can bring to the marketplace – even people who have been highly constrained in having opportunities for work. Thus *Samasource* directs work from *Mechanical Turk* to poor women, youth, as well as residents in refugee camps who are less likely to find work, and may even be barred from local work opportunities (Fish and Srinivasan, 2011).

Even within organizations, these mechanisms provide people access to work that they might not otherwise have the opportunity to do. As noted above, Cefkin participated in designing and testing a system for exchanging work among dispersed and loosely affiliated employees all interested in organizational change management, a human resource allied practice that uses principles and theories from behavioral and social sciences to guide people in organizations through transitions. Though it is an increasingly professionalizing field, few dedicated positions for change management specialists exist, and work opportunities are uneven. The work exchange platform was designed to extend opportunities for performing change management related tasks. Participation was voluntary for company members. What drove participation? Some people mentioned that they welcomed the chance to do uncommon work. A participant in China explained that change management had barely taken hold in China and the work exchange provided her a chance to work on tasks directed to other parts of the world. She saw it as a chance to advance her knowledge and experience while using her time in a way that would be viewed as productive in the process.<sup>6</sup> However, as a part of the company consulting division responsible for billable hours, she ran up against the limits of the platform which did not allow her to be compensated on par with her billable client work. When this member stopped participating, she acted from the same anxiety many consultants feel when too much ‘unbilled’ time can put them at risk of being laid off. Here bringing the market logic into the firm undercut the benefits Coase (1937) argued the firm potentially offers to develop knowledge for addressing sporadic problems.

From the perspective of those disseminating the work, work distribution platforms enable work performed that people would not know how or have the capacity to perform. This leads to more kinds of work being performed by strangers, work performed for us but by people with whom we have little or no knowledge or contact. At some level this is nothing new – few people likely know who drove the trucks that delivered food they buy at a grocery. But these mechanisms radically decrease the distance between someone and

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6 Other participants, too, referenced the resume-building skills gained by participating in the system.

that stranger. Anyone can commission a complete stranger through a crowd-work system to build a website, or arrange a travel itinerary. They may be known only by an online alias if specified at all. This puts into sharp relief questions of qualification and the adequacy of training. Can you trust your *Uber* driver? Will the worker you hired understand exactly what ‘scramble the egg’ means?

Despite being premised on stranger-interactions, sustained connections do develop over time, both among workers (Gray et al., 2016; Martin et al., 2014; Salehi et al., 2015) and between workers and requesters. Cefkin observed a particularly interesting discussion among work requesters in the crowd-work platform she studied, who met weekly to discuss successes and challenges in using the system. Workers in the system use account names rather than real names.<sup>7</sup> In one discussion, a manager raised an issue: the results she received from a crowd-worker were incomplete. Based on prior experience with this worker (known by his screen name), she felt certain that this was a simple error, the worker had uploaded the wrong document. And when she shared his account name, others agreed based on their own prior positive interactions with this worker. All became concerned as she indicated repeated messages to him through the system were going unanswered. Might something have happened to him? Might he have meanwhile gotten a full-time job and ‘left’ the platform? Might he be sick? Was there anyone who could find out who he (really) was and where he lived and check on him? Platform users quickly began to imagine a wider set of obligations because someone had begun to act in ways perceived as uncharacteristic to their previous platform-mediated interactions. They were quickly stymied in their efforts to act on these obligations by realizing

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7 A number of work distribution platforms use the approach of screen-names. One reason is an attempt to avoid identifiers that could lead to bias. Another is to ensure that all activity has to happen through the system itself. Interactions brokered by the system but which move outside the system can no longer be monitored for their acquiescence to the terms of engagement. Salehi et al. (2015) describe having to address the implied risk by designing in even additional layers of anonymity to their Dynamo system, a community system developed to facilitate collective action by Turkers to protect any Turker who participated.

how much contact only through the platform limited off-platforms interactions.<sup>8</sup>

For many, the promise of these platforms is that the distribution of work will be less biased. As a speaker in a panel discussion on work distribution platforms expressed hopefully: ‘It’s about the work, it’s not about whose ass I kiss around the water cooler’. At the same time, this introduces a level of uncertainty as well. One participant in the change management work exchange said:

I don’t know their background. They don’t know mine.... So it was kind of a leap of faith.

Later she added:

It’s very rare for me to work with someone who has no idea of who I am. That is very brave of them.

This participant was reflecting on how much courage she felt it took to work without having met directly, with only the briefest of communication, and without having been specifically selected into, and vetted by, the manager’s organization – precisely the actions that can lead to systematic biases in hiring and work distribution.

Yet here too the reality is complicated by system design elements and practices in using these systems, which can function to create new biases.<sup>9</sup> Timing, for instance, can create imbalances in terms of who gets preferred access to work opportunities. In systems with global participation, it is not uncommon for new work requests to be opened during working hours. To the extent that a large portion of requests originate from the United States, this creates an advantage to those working in the US time zones since, in many cases, there is a bias towards the first to respond. Workers in other time zones may adjust their work schedules in hopes of accessing preferred

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8 See Lampinen et al. (2015) for another example of how anonymity on a platform affected offline interactions and how people used the platform.

9 See Schor et.al. (2015) for a discussion of class bias in these systems.

gigs by working nights, thus, creating disjuncture with their local settings.<sup>10</sup> This can be addressed by changing the systems' design: systems instead could hold back some jobs for releasing at other times – which risks creating a reverse bias. As Graham and Anwar (2018) explain: 'Clients located primarily in high-income countries can force workers from around the world (in rich and poor countries) to compete with one another in a giant labor market'.

Participation is heavily guided, in most cases, through profiles and reputation systems. This too can introduce imbalances into who secures preferred participation. For instance, frequent and longer-serving performers benefit from prior experience in the system which produces greater measurable traces of activity. It can be a challenge for newcomers to gain entry, just as those with less frequently called on skills and experience may be made less visible. Algorithms guide the selection of where and how to place inputs to the system. They determine, for example, which edits to prioritize in the event of changes to an entry in a crowdsourced resource such as *Wikipedia* or which item to rank at the top of a list. While numerous factors may be used in the design of the algorithms, most include an element of frequency or density of prior activity.

These work platforms are most well-known for how the platforms transform who has access to opportunities to work. Supposedly the platforms create a form of equality – anyone willing and able to work can earn money through these platforms, anyone willing to pay has access to work. Because connections are made virtually (and thus there is little information available about the offline identities), biases based on gender, age, race, and religion are that much harder to enact. It is not only that strangers are contracting with strangers, but little is known about these strangers other than their willingness to work or their willingness to pay for work.

The fantasy is that this will be a marketplace operating without the social ways in which people fashion identity. Ethnographic research on how these

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10 See Aneesh (2006) for a discussion of the lived consequences of the 'temporal dissonance' created by efforts to create temporal integration across time zones.

platforms function in practice reveals how complicated enacting this ideal can be (Lampinen et al., 2015; Schor et al., 2015). Interactions between strangers can change rapidly as people develop relationships through working together, relationships that, as our example shows, the platforms' structure can end up thwarting. In addition, the platforms might provide new paths towards connecting work requestors and work providers, but the work still needs to be performed and evaluated as work that was done well or not. Here the objective promise of a metric reputation can be at odds with how workers interact with each other to build up a history through common, intersubjective experiences. As platforms encourage evaluations to accrue, added barriers to newcomers emerge. Some workers also begin to feel tied to the platform, anchored because they have accrued a metric reputation that does not transfer easily to other platforms, a contrast with resumes that enable workers to transfer to another job. Stranger-interactions come with their own social conundrums, and even the solutions to these conundrums have complicated and unpredictable social consequences. While neoliberal ideals of a relatively unconstrained free market of business-to-business relations dominate, undercutting the advantages of a firm makes trying to operate through purely transactional norms of business hard to realize and sustain.

#### *Reorganizing control, management, and authority*

Open call work platforms potentially enable a wider range of participants to engage in tasks than traditional forms of hierarchical control allow. These platforms also engage a diverse range of contractual terms. In doing so, they change how work is controlled and managed.

In many ways, work requesters maintain strong control over what the work is and how it is performed. This is supported by a number of mechanisms designed into the systems. The platforms may enable specifying a given set of highly detailed procedures that workers must, in turn, ensure were followed. The smaller the task, in many cases, the more specified and constrained the means of performing the task. They may even include built-in tracking systems for monitoring time-on-tasks, as *UpWork* does. Indeed, comments in the discussion forums that commonly accompany any of these

platforms have historically referred to its big-brotherly presence. Another means of retaining control is by determining the terms by which final results are accepted. One risk to workers in contest and micro-task work sites is that people will perform work, but their work is rejected. There may be little or no explanation as to why nor a means of disputing these decisions (Irani and Silberman, 2013). Other systems, such as the technical crowd-work platform Cefkin and her colleagues (2014) studied, are designed to encourage clear acceptance and rejection policies and provide processes for appeal. While potentially increasing fairness, these elements also significantly increased the effort required of work requesters to manage work through the system. They demand that requesters specify all potential aspects of the work that could affect acceptance ('whoops, I failed to indicate that the egg needed to be removed from the carton before scrambling...') and the criteria for evaluation, exceeding the taken-for-granted understanding workers develop in person.

These risks are not absent in work outside these systems. It is not uncommon offline to have a breach of contract, to have to chase clients for payment, or to face never getting a sufficient explanation as to why work was rejected. Indeed the often short duration and/or limited scope of work common to many work distribution platforms may be felt by participants as a means to mitigate the risks of agreeing to any one job by spreading out opportunities. This ability to select and assemble a range of opportunities is considered one of the upsides to these systems. Workers claim a sense of control over how their work is evaluated by avoiding excessive lock into any specific client.

Workers regain authority, further, to select their own work. This may be of particular significance within organizations, with threats to managerial regimes of authority being one of the potentially more profound consequences of intra-organizational work platforms. Management is largely a system for commanding resources, including employees' time and efforts. Having systems that invite employees to choose freely what work they want to spend time on risks up ending that regime. Questions of authority and control emerge even in the seemingly simple question of whether and how a work distribution platform should involve managers in the work of their staff

in the system. In what way should a manager participate in their staff members' time and selections? This was a question Cefkin and her colleagues (2014) faced in helping design the work marketplace for change management professionals. Should a manager be asked to give explicit approval per work task, and if so, should the system be designed not to move a bid forward without manager approval? Should a manager be notified of their employee's participation, but lack a means to voice support or disapproval of the employee's effort within the system? Or should a manager not be notified at all?<sup>11</sup>

Reputation mechanisms are one of the most direct forms of control built into these platforms. Reputation mechanisms are used to identify participants, and to measure their activity. A large number of reputation mechanisms are used across the platforms, from subjective evaluations of approval, such as the styles of ratings or 'liking' on sites such as *Yelp*, to measured participation rates. For workers, these ratings can signal the number of tasks applied to, selected for, completed, on-time work, and so on. Echoing what Cefkin found to be true in the crowd-work system for technical work, Martin et al. argue that reputation mechanisms often create hidden work for those completing tasks on *Amazon Mechanical Turk*:

Reputation management tactics are often defensive and the Turker shoulders the potential cost of the practice. These practices include ensuring they can do the work before accepting it, specialising in known tasks for specific requesters, getting training on tasks from coworkers, ensuring the completion code would load and so on. (2014: 10)

Currently, in *Mechanical Turk* workers bear the brunt of negotiating that reputation mechanisms work smoothly. This is not, however, a necessary feature of these platforms. On a number of platforms, it is possible for work

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11 Cefkin and her team, together with their stakeholders, chose the second option, notification, expecting that it would force an on-going direct line of communication between employees and their management.

requesters also to be rated based on their responsiveness, effectiveness in specifying work, and so on.<sup>12</sup>

Reputation mechanisms are the most blatant of several ways in which work distribution platforms use market demand and competition to discipline workers (Rosenblat and Stark, 2016). As other scholars have pointed out, workers are still being controlled and disciplined, but because this occurs through technological platforms that re-allocate and often obfuscate where the source of control might be located, workers have trouble determining who is responsible for what, and thus need to develop strategies when they want to change the working conditions or payment system enabled by these platforms (Crawford, 2016; Irani 2015; Irani and Silberman 2013). The autonomy these platforms seem to promise becomes elusive in the process. These shifts in how work is controlled and how it is harnessed through the shape and design of the work distribution systems raise concern for fairness, and can re-center debate on the relationship of workers to their work.

## Conclusion

Open call work distribution platforms have entered the scene at a moment in which neoliberal logics dominate how many people understand ideal work relationships. The developers thus often promise that these platforms will encourage work relationships based on the imagined autonomy and equity that one supposedly has when the employment contract is viewed as a business-to-business contract. Some platforms such as *Uber* or *Lyft* notably make this central to their legal defense when workers sue them for misclassification. They have argued that they are not a firm providing transportation services, but rather a technology company enabling small business-owners, their drivers, to connect to customers (Tomasetti, 2016). These neoliberal takes on autonomy and equity are not inherent to the platforms, rather, these platforms are underdetermined enough that many different practices around distributing work exist. Yet these possibilities are all too often limited by organizational infrastructures already in place, and

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12 See Arvidsson (2014) for a discussion of ethical potential for workers through reputations through these platforms.

widespread neoliberal understandings of how collaboration and work distribution should occur. This results in a tension between the promise of workers' autonomy and the efficiencies that a firm promises. This tension then shapes how these platforms are integrated into established work processes, influenced by users and companies' beliefs, organizational routines, and material infrastructures surrounding appropriate work relationships.

This neoliberal framing can obfuscate the multiple ways in which these platforms re-organize work both within and outside of firms. In particular, these new platforms lead users to return to age-old questions about authority, control, and the nature of tasks. As these platforms re-shape the social organization of work, they bring the market into the firm in ways that undercut what neoliberal theorists themselves understand to be the benefits of managerial controlled production. This creates social dilemmas for participants that must be resolved – dilemmas such as: how should one best segment or re-combine a set of tasks, or how does one evaluate the work or the worker? Many of the solutions that have emerged to address these dilemmas end up re-inscribing older problems that people have had with work, although in slightly newer packages (Suchman and Bishop, 2000). We specifically explored how discipline, surveillance, and competition still shape how workers are controlled in these systems, albeit now enabled through marketplace interactions that frame competition as a means to discipline and define workers, rather than through internal firm dynamics such as organizational hierarchies.

As new ways of distributing work become possible, people have to develop new skills for coordinating with strangers, and new techniques for circulating information and arranging tasks to accommodate a greater fluidity in who participates in work projects. This often involves erasing the benefits that Coase (1937) argued firms offered. As getting work done shifts away from a work contract that revolves around command and obedience, people will still have to address the problems of coordination ever-present in any project of planning the work, disseminating the work, and controlling the work process. Since this is a fundamentally social task, when the principle conceptual resources people have for thinking about these

processes are variants of a neoliberal logic, the solutions developed often encourage a belief that all engaged in this work process should be treated as businesses in their own right.

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