

Work Precarity and Gig Literacies in Online Freelancing

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Abstract

Many workers have been drawn to the gig economy by the promise of flexible, autonomous work, but scholars have highlighted how independent working arrangements also come with the drawbacks of precarity. Digital platforms appear to provide an alternative to certain aspects of precarity by helping workers find work consistently and securely. However, these platforms also introduce their own demands and constraints. Drawing on 20 interviews with online freelancers, 19 interviews with corresponding clients and a first-hand walkthrough of the Upwork platform, we identify critical literacies (what we call gig literacies), which are emerging around online freelancing. We find that gig workers must adapt their skills and work strategies in order to leverage platforms creatively and productively, and as a component of their ‘personal holding environment’. This involves not only using the resources provided by the platform effectively, but also negotiating or working around its imposed structures and control mechanisms.

Keywords

digital labour platforms, gig literacies, gig work, online freelancing, precarious work

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Motivations and introduction

This article focuses on the critical challenges of online freelancing, and the ways in which gig workers generate creative literacies to handle these challenges. As self-employed independent workers, gig workers offer their services and products to clients on a fixed-term or project basis (Kuhn and Maleki, 2017). They are mostly independent of any one organization's sphere of control, and are often associated with increasing locational independence.

More firms are turning to independent workers to increase business flexibility and agility because these workers enable them to quickly and efficiently scale human resources up and down to meet changes in the market and a dynamic global economy (Fleming, 2017). For many workers, the lure of 'free agency', and control over time and work, reinforces the sentiment that the quality and flexibility of work life is higher outside of the traditional work setting (Wood et al., 2018). This has resulted in a marked increase of workers, particularly from younger generations entering the workforce, who adopt online freelancing because they associate it with flexibility, variety, freedom from organizational politics, and sometimes higher pay (Gandini, 2016).

In addition, the rise of new digital platforms has not only enabled new forms of work activity, but has also fundamentally transformed the way freelancers find new opportunities. Technological platforms (e.g. Upwork, Toptal, and HourlyNerd) now play an indispensable role as firms that match gig workers with clients (Spreitzer et al., 2017). In fact, what sets gig work apart from other forms of independent, contingent work is that 'gig workers' typically land jobs through online platforms (Barley et al., 2017: 111). For this reason, some have used the term 'platform workers' to refer to gig workers (De Stefano, 2015). These workers are able to choose which projects to work on, and can more effectively organize their work schedules around their lives (Donovan et al., 2016), but this administrative, temporal, and spatial flexibility can be a double-edged sword, also resulting in challenges that can be summarized as more 'uncertainty' about one's work (Selenko et al., 2018).

Alternative work arrangements and independent workers have existed for decades, and well-established research has already shed light on the uncertainty or precarity of this work (Kalleberg, 2009). Independent work is often synonymous with the absence of an 'organizational holding environment', which embodies direction, stability, and a steady stream of work and revenue (Petriglieri et al., 2018). Employment and steady income can be variable and uncertain for independent workers, forcing them to predict and plan for downtimes (Alberti et al., 2018). Working outside of an organizational hierarchy also means independent workers have to craft their own careers and handle personal learning. These workers are typically entrepreneurial, meaning that they have to rely more on their skills to 'navigate between success and failure' (Barley and Kunda, 2006), and the high uncertainty surrounding their work mandates 'self-enhancement through training, network sociality, flexibility and mobility' (Büscher, 2014: 228).

It is well documented in the literature that the structural changes in work are leading to greater precarity for workers more broadly, and that gig workers are particularly vulnerable to precarity because of the contingent nature of their work (Kalleberg, 2011). However, gig work also presents different dynamics because many gig workers have

engaged digital platforms as an organizing structure, and these platforms fundamentally reshape how flexibility and precarity are brought to bear in the work of gig workers (Kuhn and Maleki, 2017; Wood et al., 2018). For example, online freelancing platforms provide automatic management of the gig workforce and assure a minimum quality of service (De Stefano, 2015), whereas research also indicates that digital labour platforms can add to the precarity of gig work by intentionally creating information asymmetries (Rosenblat and Stark, 2016). Therefore, interactions within and with the digital platform create new opportunities and challenges that require new skills and practices. This involves a detailed understanding of the digital platform, its functions, and its affordances.

In this article, we explore the challenges of gig working in the context of the online freelancing platform Upwork. We contribute to the ongoing discourse on precarity (Alberti et al., 2018) by focusing on the enabling and constraining effects of the platform on the precarity of online freelancing, and the ways workers generate key literacies and understandings to accomplish digitally mediated independent work. We chose online freelancing from among many forms of gig work because it is understudied compared to microtasking (e.g. Amazon Mechanical Turk) and ridesharing gig work (e.g. Uber) (Howcroft and Bergvall-Kåreborn, 2019). This study broadens this focus by examining high-skilled online freelance workers, a subset of gig workers who have been understudied in the past (Howcroft and Bergvall-Kåreborn, 2019). Online freelancers present a fertile ground for studying gig work related literacies, as these workers have more agency in shaping their work outcomes and in appropriating digital platforms to their advantage (Wood et al., 2018). Of all forms of platform-mediated gig work (crowdwork, ridesharing, delivery/home tasks, and online freelancing), workers on online freelance platforms, on the whole, have the greatest level of skill and also the highest autonomy (Gandini, 2016).

Additionally, job duration and specialized skill can be seen as two key differentiators between the various types of platform-mediated gig work. The vast majority of jobs on platforms such as Upwork involve more highly specialized skills and tend to have longer engagements. These projects also often require a significant amount of communication between the client and freelancer. The combination of high skill and high autonomy makes online freelancers a unique subset of gig workers.

As such, the research questions pursued in this article are:

- How do gig workers address the general challenges of gig working as a form of precarious work?
- How do these workers generate key literacies for working on digital platforms?

We address these questions first by laying out prior work on precarity and the concept of literacy. We then present the findings from a qualitative investigation of 39 online freelancers and clients. Finally, we delineate the paths these workers have negotiated for retaining agency and stability in a precarious working environment. We focus in particular on how they maintain a personal holding environment, a concept introduced by Petriglieri et al. (2018), which we re-examine in light of the platform-mediated environment in which online freelancers operate.

Literature review and background

Precarity of gig work

The reorganization of work has evolved into a more polarized and precarious employment system, particularly for independent workers, because their legal classification exempts them from protections afforded to employees (Kalleberg, 2011; Moore and Newsome, 2018). In addition, scholars demonstrate that the consequences of precarity are more than just financial in nature (e.g. a lack of unionization rights and contrived competition) (Hassard and Morris, 2018).

Moreover, independent workers face additional stressors related to the nature of their work, including operating in an environment lacking organizational support. The absence of organizational support and a long-term relationship with an organization creates a 'liminal space' with workers facing greater uncertainty (Borg and Soderlund, 2015). Petriglieri et al. (2018) argue that independent workers develop their own personal holding environment (in lieu of organization support) to overcome various tensions and maintain their personal competitiveness in the market. Petriglieri et al. (2018) demonstrate that workers leverage personal routines, people, places, and senses of purpose to replicate the benefits of organizational support. But the set of circumstances that gig workers are facing differs from the independent workers in Petriglieri et al. (2018) in one key attribute – gig workers are operating in a new work ecosystem managed by online platforms. One implication of the new ecosystem is that gig workers have less autonomy in controlling their own work (Wood et al., 2018). D'Cruz and Noronha (2016), for example, found that platform architecture resulted in lower pay and greater uncertainty for online freelancers. Given the ubiquitous influence of digital platforms on online freelancers, it is important to re-examine Petriglieri et al.'s (2018) personal holding environment framework within the context of online freelancers to understand how platforms might moderate or amplify the effects of precarity.

Furthermore, precarity in the gig work of online freelancers may take different shapes. First, gig workers must compete with many workers on the platform offering low wages in a large, international pool of workers. Second, the algorithmic management exercised by many digital labour platforms may introduce new elements of uncertainty and precarity, such as information asymmetries (Rosenblat and Stark, 2016), which require workers to embark on new practices and literacies (Lee et al., 2015).

Work literacies and competencies

Management research has been concerned with the centrality of work literacies in work performance, and the connection between individual work literacies and organizational strategy. Developing and updating work literacies plays an even more central role when the work context undergoes constant change and requires the worker to adopt new skill sets. In particular, when organizational structures become more flexible, workers may need to dynamically foster and mobilize essential capabilities. For example, Lampel and Shamsie (2003) found that moving from integrated hierarchical organizations towards flexible hub-based organizing paradigms in the Hollywood industry made soft skills and networking capabilities a more central tenet of success.

Sandberg and Pinnington (2009) suggest the concept of work literacy can be defined in three broad ways: (1) literacy as a prerequisite, which denotes required formal education and training required before one enters a particular occupation; (2) literacy as an outcome, which focuses on performance assessment based on a set of norms and standards; and (3) literacy as a set of capabilities both generated through and applied in accomplishing specific work practices. In this article, we adopt the third, practice-centric perspective, which examines work literacy as an ongoing process rather than a set of fixed outcomes or benchmarks. This view is in line with Gherardi's (2000) conception of work literacy as a 'practical accomplishment'. Therefore, as professional competencies, work literacies are derived from situated practices that facilitate a flow of information about one's work through a range of activities and skills (Lloyd, 2014). Lloyd (2014) argues that work literacies are situational, meaning they are embedded in the everyday performance of the worker. More specifically, they are generated, updated and maintained when workers shape solutions to problems at hand and engage with new ways of knowing. Finally work literacies can be understood as absorptive capacities at the individual level, serving as a framework for evaluating and incorporating new experiences and information (Davenport and Prusak, 1998). Drawing on the concepts of precarious work and work literacies, we seek to explore specific challenges involved in the use of online freelancing platforms, how these challenges may add to the precarity of gig working, and key literacies gig workers develop to address work precarity.

Methods

The website Upwork was selected as the site for this study because it has the largest and most active user base among all the online freelancing marketplaces. Furthermore, focusing on Upwork allows us to look at the role of digital labour platforms in the context of skilled knowledge work. For the purposes of this investigation, knowledge work is characterized as complex work involving specialized skills on the part of the worker, longer engagements, and dynamic interactions between worker and client (Popiel, 2017; Schultze, 1999). Upwork facilitates work in engineering, marketing, web and desktop development, industrial design, law, translation, data analytics and many other areas. The work typically requires the worker to handle abstractions and to develop their skills continuously. Furthermore, projects in these areas are contingent and situational, rather than formulaic. Workers must deal with uncertainty, have some level of creative agency in the project, and must engage in iterative communication with clients. This aspect of Upwork differentiates it from microtasking sites like Amazon Mechanical Turk and ridesharing platforms like Uber.

Data were collected from four different sources: policy and help documents published by Upwork, semi-structured interviews with freelancers, semi-structured interviews with clients, and direct observation of the website through walkthrough analysis. Interview participants were identified through Twitter, the forum site Reddit, personal or professional websites, and Upwork itself. This process resulted in a group of 39 interview participants, including 20 freelancers, and 19 clients (see Table 1 for more information on the participants). The division between the client and freelancer groups is not clear-cut; however, most of the clients interviewed also sought work through Upwork as

Table 1. Participants' information.

Gender	Male	26
	Female	13
Age	30 and under	15
	Above 30	23
	Unspecified	1
Upwork experience	Long-time user	31
	New	8
Reliance on Upwork	Mostly get hired and hire through Upwork	28
	Some	9
	Little	2
Employment type	Full-time freelancer	22
	Business owner	7
	Business owner/freelancer	7
	Hired by larger organizations	3
Total	39	

freelancers, or had done so in the past, they were therefore able to give two-sided accounts of the platform. For this reason, the participants are grouped together, and identified as P1–P39. Points where we draw on a participant's experience as a client are indicated in the text.

All of the participants were considered digital knowledge workers, using digital technologies to perform skilled labour remotely. The participants varied significantly in their familiarity with the platform. Some were newcomers who had not yet established a reputation, and others were more experienced. Project lengths were highly variable as well. Some workers took one-time projects lasting a few hours, and only occasionally took longer projects, whereas others took projects lasting a few weeks or months, or performed occasional projects for the same client over the course of a few years.

The interviews lasted 30–60 minutes on average, and were conducted remotely by phone or Skype. Interviews were semi-structured, following a set protocol, but engaging in depth in areas in which interviewees had particular experience. Interviews with workers and clients had some overlapping topics, such as problems or breakdowns they had encountered in using the platform, and their general interactions with others on the platform. There were also some topics which were specific to those who had used the platform as a worker, such as how they secured jobs, whether Upwork was their only source of work, and how they evaluated and interacted with clients. Similarly, some topics were directed at those who had used the platform as a client, such as how they evaluated workers, how they managed workers, and breakdowns that they had encountered hiring through Upwork. Each interview was recorded and transcribed, and the transcripts were then used in the coding process.

The direct observation method followed the walkthrough method described in Light et al. (2016). Two of the authors went through the process of hiring, interviewing, and conducting a transaction on the Upwork platform, with one author acting as client, and another as a freelancer. In order to avoid intrusion into the Upwork community, the job

was kept private and no other workers were contacted. Throughout the process, both authors kept detailed notes concerning the website's layout, options, design, textual suggestions, and breakdowns. These features gave the authors direct experience with the prominence of certain features in the platform's interfaces, and how the platform governs user behaviour, assumes particular use cases, and places emphasis on certain information or actions.

Collecting data from these different perspectives created a discursive space, which allowed us to compare the representations of gig workers' literacies against each other. Workers provided accounts of not only the literacies, which were apparent in conducting their work, but also those that they used to protect their labour and ensure their own wellbeing. These literacies may not be apparent to either their clients or the platform. Clients' narratives conversely provided some verification as to which literacies or skills were in fact valued in gig workers. The walkthrough method allowed the authors to get a better sense of certain features mentioned by interviewees and forum members, as well as breakdowns or difficulties they mentioned. Comparison of the sources was therefore an integral part of the coding process, and facilitated data triangulation.

Data collection resulted in two sources of data: the interview transcripts and notes taken by the researchers during the walkthrough, which included images of the platform's interfaces. These sources were inductively analysed based on a process of open, then axial coding (Corbin and Strauss, 1990), using Dedoose, a collaborative coding application. The open coding process was loosely guided by our research questions. We observed situations in which the workers experienced breakdowns, or encountered obstacles to their specific work processes, and their responses to these breakdowns. In particular we looked for learned strategies that workers used to avoid or overcome these breakdowns systematically. The process of axial coding involved a second pass of the dataset and the codes that emerged in the open coding process. This focused on finding relationships and overlaps between codes, and a comparison of specific instances. Where codes ostensibly converged, as with the codes 'building reputation' and 'self-presentation', the authors revisited specific instances of code and discussed the relationship between them, deciding in that case that they described different phenomena.

Findings

Upwork's platform facilitated payment, and in some cases tracked time and efficiency, but otherwise left the nature of the work to be done open-ended, intentionally allowing for various and evolving projects. This is not to say that the platform was without constraints. Workers had to develop particular skills in order to navigate many obstacles and uncertainties intentionally and unintentionally imposed by the platform. These can be understood as meta skills or literacies needed by all gig workers actively engaged in knowledge-intensive online freelancing. In what follows, we outline these key emerging literacies that digital gig workers developed to address the precarity of independent freelancing work. We have organized our findings by the literacies that workers developed in response to particular obstacles, including how they build their reputation and struggle with Upwork's rating system, how they present themselves and compete for gigs on the market, how they stay productive in a flexible working environment, how they secure

transactions and avoid bad gigs or scams, and how they build professional networks in an impersonal working environment.

Building reputation

Workers on Upwork were reliant on volatile rating systems, such as the 'Job Success Score' and the 'Top-rated Badge', and developed habits for monitoring and defending them. As visible indicators of competency and parameters for ranking algorithms, these ratings became important components of the gig worker's larger reputation. P11 described trying to recover from a bad review that damaged his job success score: 'Once I finally got a couple more jobs and I completed them really fast it took me back up to like 90 or 92%. I started to have a lot of activity again'. Low job success scores could prevent a worker from finding any work at all, but workers who were able to build good ratings and acquire badges could rely largely on clients bringing projects to them, rather than having to search and bid for them.

Establishing good ratings was a complex task, however, as it required understanding the algorithms behind the platform's automated evaluation system, and constant monitoring of one's own ratings. One's Job Success Score could drop for reasons beyond client ratings, such as having open contracts without activity, or repeatedly receiving no rating at all from clients. Some details on how ratings are calculated are buried in Upwork's documentation, and workers consulted more experienced workers on forums about the rules of the platform and strategies for improving their ratings. However, workers also learned to build ratings through trial and error. P3 noticed that his Job Success Score actually went down after he received a good rating from a client, and, after some investigation, he discovered that clients can leave private feedback which is not displayed, but affects the worker's Job Success Score. By monitoring how their ratings changed in response to particular events, workers could figure out how to improve them. P5 described how he took a large number of short-term, low-paying jobs in order to accumulate reviews and recover a good rating:

That is what I did to build my reputation with low ball bidding and getting as many jobs as I could early on Upwork then same kind of premise on Fiverr was to do the low, the cheapest rate possible and the quickest turnaround time as possible.

Other participants reported taking many short-term jobs, or breaking up projects into smaller jobs in order to acquire more positive ratings. Having more ratings would buffer the effect of possible future negative ratings, thereby creating some leeway and overall professional stability for the gig worker.

One way that workers defended their ratings was by learning to placate or negotiate with clients over specific ratings. For instance, P6 gave refunds to clients in order to dissuade them from leaving bad reviews. The client perspective confirmed this dynamic. P35, for instance, related how one worker had returned completely unusable product, and so he gave him a choice of either receiving a bad rating or simply cancelling the contract without pay. The worker decided to end the contract rather than receive the bad rating. These examples suggest that, in some cases, calculated ratings

may serve to increase worker precarity by establishing power asymmetries in the interactions coordinated by the platform. Even where ratings were helpful, building reputation is a complicated process, which required not only producing quality work, but also developing the social and technical skills to handle temperamental clients and algorithms.

Upwork's semi-closed boundaries are an obstacle for a number of participants because they see Upwork as just one part of a larger reputation-building or professional development effort. Workers saw their success as independent freelancers and the development of their skillsets as a motivating purpose. While one participant did see Upwork as a place to centralize his work and reputation, thereby promoting his personal brand, he also pointed out that he was 'invested' in the platform, because his work history was codified in the calculated ratings and reviews of the platform, and not easily transferable to other platforms or websites. Many freelancers would link to their Upwork profile on their personal professional websites or blogs. However, Upwork obscured the freelancer's last name and forbade workers from putting links to personal websites on their profile, which made it very difficult to connect an Upwork profile with a worker's professional identity off-platform. P3 described his inability to merge the work history and evaluations he had built on Upwork with those he had developed elsewhere:

I think that a lot of these freelance websites are kind of gardens where they kind of treat it as we're the only place you're going to get any work . . . you can't import reviews from some other site, it has to be all reviews from within Upwork, or you can't export Upwork test results to another site.

In short, building reputation is a constant challenge for workers on Upwork, and requires an understanding of various digital platforms and channels, including Upwork itself.

Self-presentation

Working through the platform also required workers to develop some competency at presenting themselves professionally through the platform's provided communication channels. Generally speaking, online freelancers relied on a variety of different formal and informal channels for presenting and promoting themselves, such as profile pages, social media accounts, portfolios hosted online, web conference interviews, and chat conversations. Upwork facilitated this process by centralizing and simplifying these channels, but the scale of the platform and the nature of its communication channels could make it hard for a worker to get noticed.

Although good ratings were an important component of a worker's appearance to clients, the hiring procedures on Upwork often required more involved evaluations and negotiations, such as the clarity of the worker's description on their profile or short chat-based interactions. Clients related using these more qualitative evaluations because the job success scores were inflated. A number of clients also described issuing their own practical tests, which the worker would have to perform accurately, such as copying an arbitrary word from the job description in their proposal to prove that they read it. P28 described giving somewhat more involved evaluations:

I say work for one hour and I'll see what you send me and I might give the same task to four people . . . I look at the four sets of results but I pick the best one or two and I let them do the project.

Although the platform provided a number of resources for promoting oneself, it also represented a very large, international network of competing workers. During the walk-through analysis of the platform, one of the authors' profiles was rejected because there was already a large supply of the skills he was offering on the platform, suggesting that Upwork was regulating the marketplace by making sure there were not too many freelancers in the same area of specialty. Regardless, the large number of freelancers and the visibility of competitive rates made it difficult for freelancers to land projects, and workers had to find ways to specialize or improve their appearance to clients. Workers focused on skills that might set them apart, such as English-language skills, and attempted to present themselves as unique from others: 'you've got to sound different than everyone else; you can't be the same generic profile and the same generic picture' (P15).

Workers also developed sophisticated understandings of the platform's technical features and used that understanding to gain an edge over other workers. P37, who had used Upwork as both a freelancer and a client, would follow up project bids by trying to engage clients in chat conversations. As he pointed out, 'talking to somebody on the chat feature, it bumps you up to the top of their messages', thereby making him more visible in the large list of workers who had applied to do the job. P35 related an instance with a worker he had hired on Upwork in which the worker logged a four-hour job as a one-hour job so that it looked as if he were making a larger hourly pay rate on his profile. This would in turn help him negotiate for higher pay with other clients in the future. Promoting oneself in the network in these ways involved developing both an understanding of the population of clients and workers on the platform, as well as an understanding of the platform's interfaces and algorithms, and how they present the worker to clients.

Maintaining productivity

As independent workers, participants related some of the classic problems of maintaining work/life balance and staying productive. The platform provided little additional structure for workers' time or productivity, and workers, for the most part, developed their own productivity techniques or substituted third-party applications.

A central practice in maintaining productivity was determining where and when to work. P18 was fulfilling Upwork contracts in addition to a day job and both P10 and P16 were working around the hours when their children were at home. P22 similarly moved between a home studio and a coworking space in order to avoid the distractions of chores and pets. Other participants mentioned working from coworking spaces, including P1, who used a coworking space with a small team. However, others intentionally avoided office environments, preferring the privacy of working from home. Clients pointed to the absence of a workplace as a general obstacle to coordination: 'you're on the web like there's no door that you can walk into and say hey John where's that graphic or when is this site going to be done . . .' (P33). For this reason, many clients valued the ability of workers to work independently, be responsive, and provide frequent progress updates.

Upwork provided some structure for workers' time in the form of contracts and a work diary system. The work diary took screenshots of the worker's desktop every few minutes and monitored the frequency of their clicks. P11 stated that this kind of supervision helped keep her focused and on-task:

I'll put that tracker on and say okay I'm writing for this hour or however long I need and I find that helpful because I see it taking a screenshot and I'll say okay you can't be playing solitaire while it's taking a screenshot. So that's a really, really great accountability tool for me.

Many of the workers interviewed, however, actively avoided this tool, and hourly contracts altogether, in order to protect their privacy. For this reason, most of the freelancers interviewed did not rely on the platform to structure their time or establish routines.

Gig workers and clients complemented (or circumvented) Upwork's provided structures by substituting third-party task management technologies, and implementing their own organizational techniques. Workers implemented their own task management applications such as Trello, and were capable of adopting the systems used by their temporary employers, especially ticketing systems and team management software such as Basecamp or Asana. Workers integrated these systems into a project of personal self-awareness and optimization. Some sectioned working hours into short sprints using the Pomodoro technique, logged hours and evaluated productivity across different projects and times of day, and identified places where they could be more productive. P10 stated that becoming his own boss was one of the most difficult changes he had to make when he started freelancing. P15 similarly described it as a constant process of testing and revising for efficiency: 'I play around with a million different ways of managing my to do lists and my project management and I still haven't found the perfect system'. Establishing routines and managing one's time are methods for maintaining stability, which gig workers actively developed and consciously implemented.

Mitigating transaction risk

Conducting transactions with anonymous or semi-anonymous peers carried with it the risk of being 'scammed' by malicious clients, but also the risk of taking on poorly defined projects that may end up offering too little payment or unfair working arrangements. Workers learned to use the platform and other resources to mitigate or at least evaluate these transaction risks.

Relying on platform resources meant understanding and conforming closely to the platform's policies for exchange. A number of workers would not work off-platform, and would not begin work until the client had deposited money in Upwork's escrow service: 'I don't do the work until there's a funded benchmark . . . and that's all kind of kept track through Upwork because again they [Upwork] get their cut through that. So, they keep a pretty good eye on it' (P10). Upwork arbitrates payment disputes based on data that it has logged from client/worker interactions on the platform, leading some workers to intentionally log conversations through the platform: 'I always when I get off the phone just rehash it on Upwork and say hey this is just a recap that we're doing half or \$30 by Friday or something to make sure that that has been accounted for' (P11).

Because Upwork's guarantees were limited to transactions, which are documented on the platform, workers learned to leverage other means of securing off-platform payments. P11 would ask for a 20% down payment when collecting payment off-platform. Some of the participants also developed an understanding of external legal means that they can use to seek restitution for unpaid work. P1, for instance, discovered that Upwork would not provide payment protection for her work on a particular gig because she had logged the hours manually, rather than running the time-tracker, which would not run on the device where she did her work. In her case she had to seek legal assistance to pursue a client who had disappeared without paying.

Workers also learned to avoid scams by thoroughly vetting clients. Experience with the vetting process developed over time as the worker gained familiarity with the platform's norms of bidding and negotiation. P10 described the slow process of becoming familiar with how the platform worked:

Sort of understanding what the clients on Upwork were looking for, how they work, understanding that their budget is not always their budget, knowing what to look for in order to be able to spot a scammer . . .

This experience built upon direct communication and implicit evaluation of the client's intentions and credentials. P11 described how she developed a 'gut feeling' for clients when she talked to them on the phone: 'I had actually heard her, I kind of had a good sense that she was trustworthy and we had done work in the past . . . you can kind of feel out who's honest and who's not'. Because of the limited transparency of the platform, however, workers would also seek external resources in order to better assess who they would be working for. P12, for instance, would Google clients in order to determine their reputation as a firm/person.

Building relationships

In lieu of the social capital and connections a traditional worker might develop through an organization, digital gig workers put extra effort and thought into making connections with other professionals and employers through remote and face-to-face interactions. Workers discussed some skills they had developed to strengthen the typically transient relationships gig workers have with clients:

Usually I try to engage them in a little conversation and try to build a rapport and a little longer lasting relationship. I don't know if that really helps my job success score stay the same but it does get me repeat business. (P10)

P33 provided a similar view from the client perspective, stating that a worker's ability to communicate and refine the work with feedback was more valuable than the attitude of 'here's my price and like what I give you is what I give you'.

These interactions were somewhat different from the kind of emotional labour reported in Uber (Raval and Dourish, 2016), as the sociability of a worker is not manifested as friendliness in a rating or badge, but rather more closely resembles long-term,

professional networking and relationship-building. While some engagements on the freelancing platform mirrored the impersonal, on-demand character of Amazon Mechanical Turk or Uber, many freelancers on Upwork build reputations through long-term engagements, especially on more complicated projects that could stretch for a long period of time (even several months) or morph into a semi-permanent contractual relationship with the client. P39, who was unable to recover from a bad rating early in his career on Upwork, was able to continue work off-platform with client connections he had initially made through Upwork gigs. P28, using Upwork as a client, trained workers over long periods of time, preferring not to rely on transient projects and impersonal gigs, which, in his opinion, were mostly unreliable. Clients believed that workers in longer-term engagements were likely to provide more desirable results, partly because it was possible to establish rapport between the client and worker and a better understanding of their expectations and preferences. For both the client and worker, then, these networking activities were aimed at promoting professional stability by generating reliable, perennial work contracts.

Some workers also reached out to other workers in order to build a stronger community and sense of identity. Some mentioned coworking spaces as a place to socialize and network with others, as well as various Upwork related meetups and workshops. More often, participants socialized with others in their profession or trade. P10 described attempting to overcome the solitude of gig work by reaching out to others through a podcast:

. . . because gig working is such a solitary sort of job. So, I'm trying to get better about building a network of other people who do what I do, especially in my area, or if not do exactly what I do at least are also freelancers. I'm also starting a freelance podcast that I hope will build into a community.

P8 similarly identified disconnection from other workers as a major drawback of freelancing and joined a number of writing groups on Facebook in an effort to counteract this. As described by Petriglieri et al. (2018) and Selenko et al. (2018), networking and building relationships significantly contributes to identity and sense of belonging, which are often missing from gig work arrangements.

Discussion

Our findings reflect some core difficulties of precarious work, such as the difficulty of interacting directly with the market, building a personal brand, and a general inability to rely on the resources of an organization (Gandini, 2016; Petriglieri et al., 2018; Yoganarasimhan, 2013). Platforms like Upwork provide a number of resources designed specifically to address these difficulties, and workers assume a set of literacies associated with navigating and using digital platforms effectively. Ostensibly, workers develop these literacies by learning how to interact with its algorithms and procedures in order to acquire good ratings or use its escrow system to minimize the risk of getting scammed. However, the experienced gig worker learns how to navigate the particular professional arrangements that the digital platform engenders. This means knowing how to build

relationships with clients through brief encounters in video chat, messaging systems, and profile pages, or learning to fit gig work in or around other responsibilities while still making oneself available to clients and staying productive.

Gig workers develop these literacies by engaging in situated practices or experimentation with the platform to make sense of its functions, or by exchanging ideas with other more experienced workers. In particular, learning the behaviour of largely opaque algorithms is a source of competitive advantage in a platform-centric market. This requires examining input and output from ratings systems, monitoring one's own ratings, asking questions on forums, and digging through documentation. It further requires learning from mistakes and recovering from bad ratings, which can make getting started on a platform a difficult process for those without an already established freelancing practice.

Critically, in developing and exercising these literacies, workers work *with and around* the platform. The participants' interests were in addressing the problems of precarity by finding reliable work, and in ensuring compensation and professional development. Succeeding in this means not only learning how to make use of the platform's resources, but also how to strategically avoid aspects of the platform which impinge on worker autonomy. This includes leveraging work histories and profiles external to the platform, rejecting Upwork's monitoring of their work, and transacting off-platform, thereby taking on transaction risk. In short, workers develop a platform literacy, which is the know-how required to leverage platform resources in order to minimize the precarity of independent work, while retaining as much autonomy as possible from those platform structures themselves.

It is important to note that there may be differences between working with online freelancing platforms and the low-skilled work involved in ridesharing, which has become the icon of the gig economy. The 'algorithmic management' model exercised by the Uber platform plays a more dominant role, assigning workers and clients to each other based on algorithmic calculations, and leaving the gig workers with less autonomy in controlling their own work (Wood et al., 2018). The obstacles presented by Upwork parallel some aspects of these other platforms, such as the difficulty of managing volatile ratings (Lee et al., 2015; Rosenblat and Stark, 2016). However, due to the more complicated and knowledge-intensive nature of online freelancing, gig workers typically enjoy a higher level of agency in connecting with clients and determining their own work. Literacies such as self-branding or building relationships (as the foundation of longer-term engagements with clients) become essential, and work becomes more personalized and more autonomous.

In the absence of organizational support and a long-term relationship with an organization, gig workers (as independent agents) may operate in a 'liminal space' between several organizational structures with less clear organizational belongings and more uncertainty along different dimensions (Borg and Soderlund, 2015). The literacies outlined here contribute to the creation of a 'personal holding environment' that enables gig workers to navigate and deal with the precarity naturally involved in alternative work arrangements.

Petriglieri et al. (2018) argue that independent workers develop their own personal holding environment by cultivating four types of connections that help them overcome various tensions and maintain their personal competitiveness in the market. Table 2

outlines these four connections in the context of gig workers on Upwork. First, these workers develop and take advantage of personal routines to sustain functional workflows as independent workers. This includes practices aimed at maintaining one's productivity and work-life balance, which can be daunting for many freelancers. Second, gig workers rely on social ties that serve as conduits of professional knowledge and more importantly may help create a sense of work identity (and emotional support). Third, online freelancing is often flexible and can be done across different locations but is not completely location independent; places still play an indispensable role as workers benefit from certain spatial resources in places such as coworking spaces (e.g. the opportunity to build social relationships). Fourth, workers need to shape (and reshape) a sense of purpose in order to draw on gig working as a viable career choice. This is often varied and personal, but a broader purpose helps all gig workers connect their work with personal interests and motivations.

Findings from this work add to these dimensions of the personal holding environments by underscoring connections to digital platforms – which serve as moorings for workers' ideation of personalized, independent work. By providing evaluative measures, structuring contracts, and making visible a large network of clients, the platform serves as the locus for the worker's ability to choose their own work, and furthermore buffers the worker against the anxieties of finding work or being rejected. In fact, incorporating

Table 2. Connections to important elements that gave rise to a personal holding for independent workers (adopted and extended from Petriglieri et al., 2018).

Connection to . . .	Description	Evidence from online freelancing on Upwork
Personal routines	Daily routines help workers focus their working selves and remain productive.	<ul style="list-style-type: none"> • Routines for productivity and task management (e.g. use of Pomodoro technique) • Routines demarcating between personal and professional lives
People	A group of significant ties that help workers develop identity, remain creative, knowledgeable and sane.	<ul style="list-style-type: none"> • Fellow Upwork freelancers on forums • Other like-interested independent professionals
Places	Specific places, which help buffer distraction and distress.	<ul style="list-style-type: none"> • Constructing workspace • Meetups
Sense of purpose	A direction that orients work and clarifies a sense of broader impact and significance.	<ul style="list-style-type: none"> • Building a reputation and personal brand • Building a flexible workstyle
Digital platforms	Digital mediation that enables gig workers to work independently and remotely while accessing clients worldwide.	<ul style="list-style-type: none"> • Digital means of self-presentation and establishing reputation • Matchmaking affordances • Securing transactions • Maintaining and extending ties (social media) • Subverting the platform when needed

the role of digital platforms into the personal holding environments of online freelancers more effectively reflects the sociotechnical nature of digital gig work and how digital mediation sets it apart from the more traditional forms of alternative work.

It is also clear, as mentioned above, that workers will subvert or circumvent the platform's structures in order to retain autonomy over their work, or what Petriglieri et al. (2018: 133) call 'their vital working self'. An important ramification of this is that a platform's encoded procedures and evaluations are not deterministic of a worker's professional processes and identity. Rather, establishing a professional identity means using platform features selectively, and subverting or working around the platform's other established procedures for marketing oneself and conducting transactions. In instances where workers felt that the platform impinged on their self-determination, either through surveillance or overt control mechanisms, they subverted the platform's constraints and attempted to implement their own processes. It is apparent, then, that the platform is not a replacement of the organizational structures which gig workers actively avoid, but rather that it serves as a structural compromise between the mitigation of precarity, and the vital independence of gig work.

Conclusions

The findings presented here complement the existing sociological perspectives on independent and precarious work, which have long highlighted the opportunities and challenges of non-standard work conducted outside or at the boundaries of traditional organizations (Barley and Kunda, 2006; Fleming, 2017; Kalleberg, 2011). In particular, the literature on precarious work casts a spotlight on work arrangements, which involve shorter relationships with employers – more contingent engagement, and a shift of risk from employers to workers. Precarity in this context is a significant issue for independent workers because their work is variable and unreliable. Gig work shares many of these characteristics but is different from traditional contingent work in that gig workers land their jobs primarily through an online platform (Barley et al., 2017); so the platform and platform dynamics play a key role in shaping gig workers' experiences.

Digital platforms provide resources that ameliorate some precarious aspects of gig work, but also exacerbate other aspects of precarious work. Our findings highlight the dual roles played by digital labour platforms, which necessitate that online freelancers develop or adopt creative strategies and new digital literacies to work with and around the platform. We find that online freelancers simultaneously address increased precarity caused by the platform and also find avenues to increase personal agency and work flexibility. For example, Upwork provides gig workers with a framework to build an online presence, and for some the ability to centralize their identities as online freelancers. Yet it also presents significant challenges when workers are faced with opaque policies and procedures and are beholden to rigid evaluation frameworks which shape their online reputation and identity.

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