Chasing the Ideal and Making It Work:			
The Role of Background and Digital Skills in Pursuing Employment in the Gig Economy			
Floor Fiers floorfiers@u.northwestern.edu			
Dissertation Prospectus			
School of Communication			

Northwestern University

27 February 2023

# **Table of Contents**

Opportunities in the gig economy		
Labor market and digital inequality in the gig economy	9	
Precarity in the gig economy	14	
The "gig" arrangement	14	
Platforms as intermediaries	17	
Navigating and resisting platform control	21	
Cross-national comparison	25	
Research design	26	
Overview of studies	27	
Study 1: Scoping review		
Study 2: Interviews with online freelancers	29	
Study 3: Survey with online freelancers  Introduction and motivation  Data and methods		
Research context	34	
Status and timeline	35	
References		
Appendix A: Full paper of Study 1		
Appendix B: Interview protocol		
L. L. C.	· · · · · · · · · · · · · · · · · · ·	

As a collection of online labor marketplaces, the gig economy aggregates short-term employment opportunities that allow individuals, at least theoretically, to make money when, where, and how they want. This flexibility makes these opportunities appealing in a variety of situations. At the same time, pursuing short-term employment in the gig economy involves substantial risks that result from the uncertainty inherent in task- or project-based work. This dissertation examines the role of sociodemographic background and digital skills in explaining who participates, gets by, and even thrives on gig platforms. Building on digital inequality research, it explores how the opportunities provided by gig platforms – especially the ideal of making money when, where, and how one wants – might not be available to all.

This dissertation builds on my prior work that finds that those pursuing employment on gig platforms tend to come from more advantaged backgrounds than those who do not (Fiers & Hargittai, n.d.; Shaw et al., 2022). Digital skills appear to be integral to participating on gig platforms, where gig workers are more digitally savvy than those who have not entered the gig economy. This dissertation extends these findings by examining the mechanisms through which digital skills enable participation. I envision participation and success on gig platforms as a function not only of someone's access to the technology and skills requisite for participation, but also of their ability to absorb and mitigate the risks associated with the work. In doing so, this dissertation acknowledges the tension between the gig economy as a site of opportunity and a site of exploitation.

The risks associated with gig work primarily stem from the investments of time, energy, and financial resources that individuals tend to make while chasing the ideal of flexible work in the gig economy. This dissertation argues that this neoliberal ideal of flexibility is central to the power relations between gig workers, their clients, and the platforms that facilitate their interactions. The power asymmetries between gig workers, on the one hand, and their clients and the gig platforms, on the other, form the context in which

workers negotiate their engagement with the work. By examining the context of online freelancing platforms, which aggregate creative and technical jobs that require more extensive training, I aim to understand how gig workers understand and navigate their relationship with the platform. What strategies do online freelancers employ to mitigate precarious aspects of their work? What role do digital skills play in affording them varying levels of agency, enabling some to navigate their position more effectively than others?

This dissertation examines online participation beyond the point of entering the gig economy. I study the role of sociodemographic factors and digital skills in procuring jobs, adopting strategies to mitigate risks effectively, and deriving a sustainable income. Among those who enter the gig economy, how do sociodemographic background and digital skills relate to online freelancers' ability to exercise agency in their relationship with the platforms? This dissertation puts research on online labor and digital inequality in further conversation, making visible the ways that the ideal of flexible work in the gig economy becomes true for some, but remains unattainable for others.

In this prospectus, I first draw on existing literature to claim that the gig economy provides employment opportunities that may be appealing in many situations. Subsequently, I relay findings of digital inequality research (some of which are my own) that suggest that such opportunities might not be equally accessible to all. I highlight that digital skills appear integral to participation in the gig economy. Based on this finding, I pose the question of what digital skills might be advantageous to gig workers, particularly in navigating the precarious aspects associated with their work. I discuss how gig workers do not only face uncertainty that is common in short-term contracting more broadly, but that gig platforms heighten the precarious position of gig workers. This dissertation examines the role of digital skills and sociodemographic background in how online freelancers understand and exercise agency within their relationship with the platform where they pursue employment.

## **Opportunities in the gig economy**

The gig economy is an umbrella term used to describe the segment of the economy mediated via online platforms (e.g., Gray & Suri, 2019a; Woodcock & Graham, 2020). In broad terms, the gig economy includes "labor markets that are characterized by independent contracting that happens through, via, and on digital platforms" (Woodcock & Graham, 2020, p. 3). Similarly, Gray and Suri (2019a) describe the gig economy as "an ecosystem of independent contractors and small businesses driven by short-term projects that shift to meet market demands" (p. 168). While each gig tends to have clearly defined boundaries, the work can vary widely in terms of activity, length, and organization – it could be ride hailing via Uber, renting out property via Airbnb, cloud-based freelancing via Upwork, and performing so-called "microtasks" via Amazon Mechanical Turk. As a result of the diversity of online and digitally mediated work, scholars have coined an array of terms to indicate subsections of the gig economy. For example, the terms "crowd work" and "microwork" refer to a segment of online work that can be split into a set of smaller tasks (e.g., Kässi et al., 2019; Kittur et al., 2013). In contrast, the sharing economy focuses on peer-to-peer platforms, where individuals can connect to share assets or perform services for each other (e.g., Schor, 2020; Sundararajan, 2016). Other terms like "platform economy" and "platform labor" refer to the central role of the platforms that mediate economic activity, which only sometimes includes business-to-consumer platforms such as Netflix or Amazon (e.g., Doorn, 2017; Hoang et al., 2020).

Gig platforms have transformed work opportunities, expectations, and experiences for many people. As a novel, increasingly prevalent way to organize work using digital platforms, the gig economy has garnered immense attention over the last decade from academics (e.g., Kittur et al., 2013; Scholz, 2016a; Woodcock & Graham, 2020), journalists (e.g., Casselman, 2018; Miles, 2020), and governing bodies (e.g., Conger, 2021; Federal

Trade Commission, 2022) alike. The question of what impact online labor platforms have on society is a particularly popular one, and, since the emergence of the first platforms, scholars have proposed numerous hypotheses to answer this question. Hypotheses vary widely, from optimistic – seeing the platforms as providing opportunities particularly well-suited for low-income individuals (e.g., Sundararajan, 2016) – to pessimistic – describing gig workers as a global precariat (e.g., Scholz, 2016a; Schor, 2020). The variance in the academic fields (e.g., economics, communications, computer science, sociology, and marketing & business) in which the empirical research on gig workers' experiences is situated explains this diversity of perspectives.

According to Vallas and Schor (2020), gig platforms have four characteristics. First, platforms share a business model in which they "capture profits through digital intermediation, thus avoiding the encumbrances that ownership of fixed capital or the direct employment of labor usually entails" (Vallas & Schor, 2020, p. 282). In other words, platforms merely provide a digital infrastructure and, as a result, evade both costs, responsibilities, and risks that conventional companies must accept. This position as an intermediary affords platforms power, especially since the data-heavy infrastructure allows for precise measurement and control of all activities and interactions on the platform.

Second, the work facilitated by online labor platforms happens through open employment relationships. In such relationships, platforms do not aim to control processes such as the hiring, scheduling, and evaluation of workers. While the platforms do provide infrastructure for these processes, anyone can – at least theoretically – sign up as a worker and build a career. The model of open employment affords workers a new level of flexibility: they are not only free to determine their own schedules, but also to work for a competitor platform (Vallas & Schor, 2020).

Third, gig platforms employ a technological infrastructure of affordances to supervise and control workers. While platforms impose few formal rules, such as is common in more conventional firms with stronger hierarchies, they rely on "new and more distributed mechanisms to govern the performance of tasks" (Vallas & Schor, 2020, p. 283). These mechanisms include monitoring data collected by the platform, such as geolocation data in the case of ride-hailing apps or screenshots in the case of some microwork or freelancing platforms. Some scholars refer to this type of control via surveillance technology as "algorithmic management" (e.g., Lee et al., 2015; Stark & Pais, 2020) or "algorithmic control" (e.g., Weber et al., 2022; Wood et al., 2019a). Other mechanisms of control include reputation and rating systems, where a worker can be punished in various ways when a customer leaves them a poor review (e.g., Rosenblat, 2018).

The fourth and final characteristic of gig platforms that Vallas and Schor (2020) identify is the spatially dispersed nature of work and workers. In the case of in-person types of gig work, the spatial dispersion is necessary to meet the demand of the market that the platforms serve (e.g., taxi rides in a city). For remote forms of work, the pool of potential workers grows as the working sphere grows, causing an increase in the workforce and thus the demand in the market. The dispersed organization model also puts constrains on collective organizing by workers since they cannot organically form interpersonal relationships, let alone meet in person (e.g., Wood et al., 2018).

Despite the disadvantages of gig work (e.g., job uncertainty, heightened supervision), research reports that the gig economy provides opportunities for individuals in a variety of contexts. For example, gig work has served as a form of income generation during troubled times, such as during the onset of the COVID-19 pandemic (Fiers & Hargittai, n.d.) and during the collapse of Venezuelan market as a result of hyperinflation (Johnston, 2022). Similarly, gig work has extended a lifeline to individuals who struggle to secure other jobs

due to, for example, discrimination in the traditional labor market (e.g., Gray & Suri, 2019a). Research finds that people not only seek out gig work in the absence of more attractive options, but also for the high level of flexibility and autonomy it can provide. For example, some choose gig work because it gives them more control over their schedules, allowing them to pursue other lines of work or concurrently fulfill care responsibilities (Gray & Suri, 2019a). Similarly, aspiring entrepreneurs have used gig platforms as a springboard to pursue work they feel passionate about (e.g., Sundararajan, 2016). Others are drawn to the freedom of being one's own boss by, for example, working remotely from far-off locales (e.g., Woldoff & Litchfield, 2021). Thus, while gig platforms offer employment arrangements that impose risks on gig workers, these arrangements can be characterized by flexibility, autonomy, and choice, making them more accessible and desirable options to some.

People's desire to have control over their work lives despite any risks that might come with that control has been documented widely. Individuals in a variety of contexts are willing to assume risk to pursue work that they consider fulfilling. For example, in fields such as performance arts and journalism, uncertainty is considered an inevitable side effect of pursuing fulfilling work (e.g., Cohen, 2016; Paterson, 2012). Similarly, Gina Neff (2012) describes individuals seeking out jobs in Silicon Valley in the 1990s, early in the proliferation of the Internet. She calls this work "venture labor," as individuals pursued such work in the hope that it would yield worthwhile experiences and opportunities. Brooke Duffy (2017) describes aspiring influencers who take on high levels of unpaid labor with the dream of a fulfilling career "doing what they love". Other individuals place more emphasis on gaining control over when and where they work. For example, so-called digital nomads are a group of individuals, often from privileged backgrounds, who give up the security of their traditional, stable jobs to work remotely from far-away locales, such as Indonesia (e.g., Woldoff & Litchfield, 2021). By working short-term, remote, or other jobs that afford flexibility, digital

nomads can build a life that centers around community and non-lucrative yet fulfilling activities, such as travel.

In the scholarly literature, some optimistic accounts of (the future of) work have captured the desire for and focus on autonomy over one's work life. For example, the term "boundaryless career" underlines the freedom that people may experience when not being bound to one employer or even one profession (Arthur & Rousseau, 1996). Theoretically speaking, every time a contract or a job ends, a contract worker can choose to shape their next job differently. They can choose a job or task based on their priorities at that specific moment. For example, a college graduate might decide to accept jobs that pay less but that allow them to develop skills and build a portfolio. A recently divorced parent might choose to work in the evenings to fulfill care responsibilities during the day. In terms of the gig economy, research has demonstrated that the flexible nature is also one of the most appealing aspects of the work to individuals who pursue employment on such platforms (e.g., Gray & Suri, 2019a; Pew Research Center, 2016). This dissertation examines the role of sociodemographic background and digital skills in chasing the dream of flexible work in the gig economy. In other words, who can access and capitalize on the opportunities provided by gig platforms?

## Labor market and digital inequality in the gig economy

The question of who has the appropriate resources to access, use, and benefit from the Internet has been central to digital inequality research since the early days of the Internet (e.g., DiMaggio et al., 2001; Kahin & Keller, 1995). By examining the relationship between sociodemographic background and engagement with the web, this scholarship has demonstrated that the opportunities available on the Internet are not equally accessible to all (e.g., Hargittai, 2021; Helsper, 2021). Initially, the focus was on the unequal distribution of material access to the Internet, as captured in the term 'digital divide,' which divides the

population into those with and those without access (e.g., Van Dijk, 2005). Scholars have since advocated for a more nuanced approached to understanding Internet access and usage, captured in the term "digital inequality" (e.g., DiMaggio & Hargittai, 2001). Access to the Internet has, for example, been measured not only as binary indicator of connectivity, but also in terms of one's ability to maintain that connectivity (e.g., Gonzales, 2016), the devices one uses to connect (e.g., phone-only access; Marler, 2018; Newlands & Lutz, 2020), and the auxiliary technology one has access to (e.g., van Deursen & van Dijk, 2018). Internet use measures have become more precise by focusing on a specific online activity or context. Examples of online behaviors include adoption of specific platforms (e.g., Haight et al., 2014; Hargittai & Litt, 2011) and content creation or contribution (e.g., Fiers et al., 2021; Schradie, 2015; Shaw & Hargittai, 2018). Ultimately, "digital inequality captures both the variations in people's online experiences and how these replicate traditional markers of social inequality such as disparities by education and income" (Hargittai, 2022, p. 2).

In addition to sociodemographic background, digital inequality research has emphasized the importance of considering the skills necessary to navigate the Internet effectively and efficiently (e.g., Hargittai, 2002a). Digital skills is an umbrella term for the knowledge and abilities required to operate on the web effectively, which encompasses a wide range of technical but also social, creative, and critical thinking skills (Hargittai & Micheli, 2019; van Laar et al., 2020). Given the breadth of the knowledge and competencies relevant to participation online, digital inequality scholars have operationalized digital skills in a variety of ways. For example, they have focused on specific skills (e.g., downloading a file or sending an email), divided skills into types (van Deursen & van Dijk, 2010), and constructed a general measure of digital skills by asking people to rate their understanding of a collection of Internet-related terms (e.g., Hargittai, 2005). Regardless of measurement, prior literature has repeatedly found digital skills to be a resource not available to all equally (e.g.,

Correa et al., 2022; van Deursen & van Dijk, 2015) as well as a significant predictor for various forms of online participation (e.g., Bastien et al., 2020).

Despite the extensive research on digital inequality, online participation in the gig economy has garnered relatively little attention. Some studies, including work by my collaborators and me, examine who does and does not enter the online labor market in the first place (Fiers & Hargittai, n.d.; Hargittai & Shaw, 2020; Hoang et al., 2020; Shaw et al., 2022). Hoang and colleagues (2020) arguably provide the most comprehensive analysis of participation in the gig economy, covering various types of gig work. By analyzing a national sample of U.S. adults, they find that gender, age, education, and income explain participation in the gig economy. Specifically, gig workers are more likely to be male, younger, welleducated, and wealthier compared to their counterparts. In addition to reporting on an aggregate measure of gig work, the researchers differentiate between work on labor-exchange platforms and online selling platforms. Labor-exchange platforms facilitate both in-person and remote work, such as rideshare driving, delivery, and microwork, whereas people might use online selling platforms to sell second-hand or homemade items. The study shows that those on online selling platforms are more likely to be male, older, married, highly educated, higher-income, and located in the U.S. Midwest than those working on labor-exchange platforms.

In the work that I have pursued with collaborators, we reach similar findings (Fiers & Hargittai, n.d.; Shaw et al., 2022). Analyzing a national sample of U.S. adults, we find that those pursuing gig work tend to come from more advantaged backgrounds than those who do not (Shaw et al., 2022). Specifically, age, education, and digital skills predict participation on Amazon Machinal Turk (AMT) and TaskRabbit, which are platforms that facilitate remote and in-person work, respectively. Individuals who pursue work on at least one of the sites are more likely to be younger, more highly educated, and more skilled Internet users. Similarly,

examining online participation in the gig economy during the onset of the pandemic, Eszter Hargittai and I find that those who complete tasks on a piece-rate basis are more likely to be male, younger, and digitally savvy than those who do not. In summary, while prior research on digital inequality in the gig economy has led to some contradictory findings with respect to some variables, it primarily shows that people who engage in gig work come from more advantaged backgrounds. In particular, the findings that gig workers are younger (Fiers & Hargittai, n.d.; Hoang et al., 2020; Shaw et al., 2022), more highly educated (Hargittai & Shaw, 2020; Shaw et al., 2022), and more skilled Internet users (Fiers & Hargittai, n.d.; Shaw et al., 2022) than other U.S. adults are consistent across prior work. This suggest that the opportunities available in the gig economy are distributed along existing lines of inequality.

This dissertation builds on this work in two ways. First, I systematically gather, analyze, and synthesize academic literature on inequality and discrimination in the gig economy. Systematically gathering and analyzing prior research is important to get a more comprehensive picture of how unequal participation patterns might come about. Specifically, the studies described above do not directly account for the influence of the gig platform and the hiring party. Unlike other forms of online participation, becoming a contractor in the gig economy is not only a function of someone's access to the technology, motivations, and skills requisite for participation. Instead, once an individual has gained access to a gig platform and knows how to operate it, they still need to get hired. Inequality in the gig economy is thus an amalgamation of digital inequality and labor market inequality. The hiring party – whether an individual or a business – holds power over the would-be gig worker, potentially limiting their ability participate. Similarly, the gig worker depends on the gig platform to convey work opportunities or to advertise their services to potential clients. While the studies on digital inequality in the gig economy that I describe above do not account for the power of platforms and hiring party, other strands of research in the fields of economics, marketing, and

computer science examine biases of the hiring parties and platform explicitly (e.g., Edelman et al., 2017; Hannák et al., 2017). Between the various lines of inquiry that arise from these different disciplines, the research examining patterns in participation and success in the gig economy is convoluted. To untangle these lines, this dissertation includes a scoping review that systematically gathers and analyzes studies on the topic of inequality and discrimination in the online labor market. It aims to identify the approaches that these studies have taken, provide an overview of their central findings, and synthesize a refocused research agenda.

The second way this dissertation advances prior work on digital inequality in the gig economy is by examining the mechanisms through which digital skills enable participation. My prior research with Aaron Shaw and Eszter Hargittai finds that those who are more digitally savvy are more likely to have entered the gig economy (Hargittai; n.d.; Shaw et al., 2022). While this finding suggests that digital skills are integral to participation on gig platforms, how such skills contribute to one's success on the platform remains understudied. In this dissertation, I focus on the digital skills that a gig worker draws on while navigating the precarious aspects associated with the work. By doing so, I acknowledge the widespread understanding that the gig economy – like other realms of the Internet – has the potential to harm one's financial, social, mental, and physical well-being (e.g., Scholz, 2016b; Schor, 2020). As a result, to benefit from the opportunities provided by gig platforms, people need not only to overcome the barriers to entry, but also deal with the precarity associated with having an unstable income source. This dissertation explores the skills involved in mitigating the precarious aspects of gig work, specifically the uncertainty and pressures introduced by the gig platform.

## Precarity in the gig economy

## The "gig" arrangement

The main forms of risk that gig workers face arise from the structure of task- or project-based contracts. This arrangement causes a variety of responsibilities to shift from the employer to individual workers, such as employment benefits and personal development (e.g., Johnston, 2022; Scholz, 2016b). Moreover, in the "gig" arrangement, individuals are responsible for continuously procuring their next job. Gig workers must engage in considerable amounts of unpaid labor to secure paid projects, for example by building or updating their profiles, searching for gigs, and building relationships (e.g., Woodcock & Graham, 2020). They also might spend time and effort on educating themselves about the market, participating in workshops or trainings, or otherwise developing new skills that might increase their employability. The lack of job security leads to high levels of stress for gig workers (e.g., Berg, 2016; Yin et al., 2018).

Neither short-term contracts nor the inconveniences they engender for laborers are unique to the gig economy. The rise of gig platforms can be seen as the latest case in a broader shift towards precarious work (e.g., Kalleberg, 2009; Morgan et al., 2013).

Precarious work refers to "work that is uncertain, unstable, and insecure and in which employees bear the risks of work (as opposed to businesses or the government) and receive limited social benefits and statutory protections" (Kalleberg & Vallas, 2018, p. 1). Precarious work conditions have been empirically identified and examined in various contexts. For example, Paterson (2012) describes how uncertainty characterizes work in the television freelance labor market. The short-term contracts do not guarantee future work, creating careers riddled with discontinuities and preventing freelancers from planning ahead.

This uncertainty also affords employers considerable additional power, since workers must keep them satisfied to ensure continued employment. For one, content employers and

clients might be more inclined to return. Having recurring clients lowers the amount of unpaid labor that goes into searching for, securing, and acclimating to new projects (e.g., Johnston, 2022). More than enticing clients to return, freelancers report feeling pressure to satisfy clients' wishes as well as a reluctance to express dissatisfaction and criticism due to a fear of getting fired, not getting paid, or negative consequences for one's reputation. Simultaneously, freelancers experience pressure to "never say no" to job offers "because of the level of competition for jobs, the insecurities and uncertainties, and real or potential financial problems" (Peterson, 2012, p. 104).

Ironically, while the short-term contracts in the gig economy create uncertainty, it is also this arrangement that provides contractors with increased flexibility and control over their work lives. In optimistic accounts of the gig economy, gig workers are described as "microentrepreneurs" who set their own terms as they turn their time, labor, and assets into forms income generation (e.g., Sundararajan, 2016). However, this framing fails to acknowledge the risks associated with being one's own boss. Gig workers tend to invest abundant time, energy, and other resources into pursuing employment in the gig economy (e.g., Gray & Suri, 2019a; Schor, 2020) This includes investments made during the transition process, such as adopting gig platforms, acquiring the appropriate technological set-up, and discerning how to achieve one's individual goals. It also includes ongoing investments, such as relationship building as a means of securing jobs, managing one's schedule, and negotiating various priorities. Since gig workers are in the dark about the work opportunities that might or might not come their way, gig workers are taking a risk by making these various investments. The flexibility and autonomy that one might gain from pursuing work in the gig economy rather than on the traditional labor market come at the cost of increased uncertainty and potential loss of time, labor, and financial investments.

The idea that one needs to accept a certain level of uncertainty or invest unpaid labor in exchange for flexibility and autonomy is not new. Specifically, in the context of the Internet, individuals increasingly take on risks as self-entrepreneurs (Kergel & Hepp, 2020). For example, various accounts have been documented of individuals giving up a sense of security and accepting risk in pursuit of a more fulfilling job (e.g., Neff, 2012) or lifestyle (e.g., Woldoff & Litchfield, 2021). As a specific form of risk, the investment of unpaid labor in the hope of gaining control over one's income-generating activities is particularly clear in the case of aspiring influencers. Duffy (2017) describes that they "expect their investments of time, energy, and capital will yield a fulfilling, and perhaps lucrative, career" (p. 6). She calls such investments "aspirational labor" since the content creators willingly accept this unpaid labor for the sake of their aspirations. Such unpaid labor, for example, goes into self-branding practices and setting up deals, all while creating content and keeping one's audience satisfied.

In this sense, flexible work that arises from the "gig" arrangement is a double-edged sword. As Paterson (2012) points out, short-term contracting "is synonymous with occupational individualism: individuals can be seen to act as self-motivated agents negotiating their working lives through the structural impediments they negotiate" (p. 92). Dealing with such structural impediments, ranging from the need for health insurance to the changes in the market, falls on the individual – rather than on the company they work for. Arguably, this leads to less flexibility than one might expect. In Cohen (2016)'s analysis of freelancers in the field of journalism, she writes that "self-employed freelancers appear to have escaped employers' control," while at the same time, "precarious employment keeps freelancers dependent on the terms that publishers offer, as most individual writers have little power to negotiate" (p. 10). Similarly, in the context of the gig economy, research has argued that gig work is far from boundaryless due to the pressures that arise, for example, from tight deadlines (e.g., Hackl et al., 2022). As Gray and Suri (2019a) point out, "flexibility is an

empty euphemism unless workers are able to set and control their schedules on their own terms (p. 79). Indeed, Yin and colleagues (2018) find that microworkers would shape their work lives differently had they more in-task flexibility.

In summary, while the task- or project-based nature of gig work affords individuals a high level of flexibility, it also has an array of negative consequences. The arrangement of short-term contracts creates uncertainty around one's continued income. Even when one has a job now, the job might end or a contractor might be laid off – sometimes with short or even no notice and sometimes without getting paid (Gray & Suri, 2019a) – causing that income source might terminate. As a result, gig workers continuously need to invest resources to keep securing jobs while bearing at least some level of uncertainty. The lack of job security and resulting uncertainty leads to a power imbalance between the gig workers and their clients, which might cause the workers to make even more investments of time and labor to keep clients content.

## Platforms as intermediaries

Gig workers, unlike other independent and contingent workers, not only depend on their clients to provide them with work, but also on platforms to connect them to those clients (e.g., Sannon et al., 2022). For facilitating this relationship, gig platforms charge a fee. In most cases, the platforms' business models rely on charging commission on the services or products that gig workers produce, such as 20% on the freelance platform Fiverr (*Fiverr Overview*, n.d.). Beyond charging a fee, this intermediary position between the worker and their clients affords gig platforms the power to set the terms for all interactions and exchanges that occur under their auspices. Prior research suggests that through their various interferences in the labor process, platforms make the position of gig workers especially precarious compared to that of contractors in other freelance economies.

The automation of the labor process through which gig platforms are able to aggregate large numbers of laborers and organize them effectively has a range of negative consequences for gig workers. In this organization model, competition drives down the pay of gig workers and causing them to work long, unsocial hours (Wood et al., 2019a; Yin et al., 2018). Organizing such large numbers of actors, including service providers and clients, and interactions requires a level of standardization that reduces gig workers to numbers, leading to an increased invisibility and undervaluing of workers (Gray & Suri, 2019a). Ultimately, it is a set of ranking and matching algorithms that powers the platforms and makes decisions that impact labor outcomes, either by directly matching gig workers with clients or by featuring gig worker profiles based on a client's search. The exact process by which these algorithms make such decisions is partially, if not entirely, unknown to gig workers, making it harder for them to know how to improve their chances of gaining attention and being hired on the platform (e.g., Jhaver et al., 2018). More broadly speaking, platform research has described algorithms as "black boxes" to emphasize their opaqueness to the platform users (e.g., Pasquale, 2016)

Since platforms control access to employment opportunities for gig workers, changes to the platform's design might have a considerable impact on their experiences and ability to generate income. From one day to the next, gig workers might be forced to adapt to modifications to existing platform affordances, newly introduced features, or even an entirely new platform. For example, when the freelance platforms Elance and oDesk merged in 2013, all freelancer accounts were transferred to a new platform called Upwork. Elance and oDesk users could choose to either adopt Upwork – potentially requiring time, labor, and digital skills – or to let go of this income source altogether. More often, gig workers face changes in work environments that are smaller, such as an affordance added or changed in the platform design (e.g., Ravenelle, 2017).

The massive data collection on workers and their activities also allows the platforms to exercise an intensified level of supervision, surveillance, and control. As a result of the controlled environment of the platform, the precision of data collection and the associated surveillance (Zuboff, 2019) goes far beyond that previously possible in labor environments. This intensified level of surveillance then allows platforms act on the data they collect by, for example, banning individuals who do not abide by their rules (e.g., Gray & Suri, 2019a; Vallas & Schor, 2020). Surveillance and supervision performed by the platform is often referred to as "algorithmic" or "platformic" management (e.g., Jarrahi et al., 2020; Stark & Pais, 2020).

In addition, platforms rely on reputation systems in lieu of formal evaluation processes. These systems allow clients to reward or punish workers by leaving ratings and reviews, which function as markers of one's reputation (e.g., Gandini, 2016; Rosenblat, 2018). Presumably, a poor rating or review can considerably impact a gig worker's ability to obtain future work. While having a good reputation is important in freelancing beyond gig platforms, the quantification of reputation as well as the lasting records of the reviews and ratings might magnify the potential impact of any one endorsement. As a result, gig workers often go the extra mile to satisfy their clients, often doing free consultations and engaging in other unpaid work (Lehdonvirta, 2018; Ravenelle, 2017).

Even though deploying automated systems to organize the labor process causes problems for gig workers, gig platforms often fail to provide sufficient resources and support to them (e.g., Gray & Suri, 2019a). Gig workers might seek assistance when the platform does not perform according to their expectations. For example, prior research reports workers getting locked out of their accounts or not getting paid without explanation (Gray & Suri, 2019a). Similarly, contractors are often left to their own devices during disputes with clients. When this happens, they have no one to turn to. Help desks either do not exist or are not

helpful in moving cases forward. Workers then simply must accept that all the unpaid labor they put into opening and building an account has vanished along with their source of income. Gig platforms thus rely on automated, bureaucratic systems to make managerial decisions with real-life impacts for workers.

In addition to rewarding and punishing gig workers in direct ways, platforms exercise control over contractors through normative mechanisms of control "in the form of games, symbolic rewards, and other inducements that strengthen user attachment to the site" (Vallas & Schor, 2020, p. 279). Some scholars have started to investigate the ways that gig platforms gamify the work environment. Examples include the reputation systems, such as reviews and ratings (Gandini, 2016), and other metrics of success, such as different levels that gig workers can achieve on the platform. A study on the ride hailing platform Uber shows that the platforms can influence drivers to keep driving through push notifications that indicate, for example, that prices are surging (Rosenblat & Stark, 2016).

Arguably, the active promotion of the ideal of flexible work is another normative mechanism through which gig platforms exercise control over workers. Narratives of gig workers as microentrepreneurs who reach unprecedented levels of flexibility and autonomy in their work might be an inducement that not only draws individuals in, but also keeps them motivated to continue. In the more critical accounts of the gig economy, scholars describe platform firms as having deliberately marketed gig work as flexible to lure gig workers in (Scholz, 2016a). The focus on autonomy and flexibility can simply be seen as a careful framing employed by businesses to draw in independent contractors and offshore responsibility to them. This is in line with Gina Neff's account of people choosing highly precarious jobs at start-up companies during the so-called dot-com boom. Neff (2012) argues that what led to this trend was the framing of the cultural message that normalized high risks as an inevitable part of online content creation jobs. Neff (2012) argued that "the dot-com

boom created a vicious cycle – taking risks seemed to be the only way to get ahead – encouraging entrepreneurial behavior from people in the industry, which in turn signaled to others that taking risks was a good idea" (p. 10). Similar to companies in the dot-com boom, gig platform arguably encourage individuals to take risks and to chase the ideal of flexibility.

In short, while pursuing flexible employment opportunities in the gig economy, gig workers occupy a position that is precarious not only due to short-term contracts and the power they afford their clients, but also due to the ways that gig platforms interfere in the labor process. In their intermediary position, connecting workers with clients, platforms set terms and rules that users need to abide by. Subsequently, the sites rely on both intensified direct and normative mechanisms of control to enforce these rules. This dissertation asks how online freelancers understand and exercise agency within their relationship with the platform where they pursue employment.

## Navigating and resisting platform control

Despite the precarious nature of their work, scholars have continuously emphasized the agency that gig workers do exercise in actively choosing and navigating employment in the gig economy (e.g., Gray & Suri, 2019a). Gig workers tend to have actively chosen to pursue this line of work, convinced that it allows them to meet their goals. While acting within a structure that shapes their behavior and decisions, individuals pursuing work in the gig economy are far from mindless cogs in a machine. An emerging scholarship has started documenting the steps that gig workers take to reduce the various forms of risks and precarity in their work. Broadly speaking, these strategies are referred to as coping strategies (e.g., Jhaver et al., 2018) as well as resistance strategies (e.g., Anwar & Graham, 2020), where the latter emphasizes the active ways that gig workers attempt to counter the power differential with the platform.

Some of these strategies aim to increase job security in ways that might be more common in freelance and contract work more generally. For example, some gig workers aim to build resilience by, for example, diversifying skill sets (Chen & Soriano, 2022). Through these strategies, workers aim to make themselves more flexible to meet the changing demands of the market. In that way, "it appears that skills diversification is part of the workers' imaginaries of flexibility that attract them to platform labor in the first place—some begin with basic skills like data entry but believe that the relative flexibility afforded by platform work will allow them to experiment with different projects and learn skills as they go" (Chen & Soriano, 2022, p. 47). Similarly, given the lack of so-called relational spaces (Kellogg, 2009), some contractors have built and participate in online communities or tools to help them navigate their work environment (e.g., Wood et al., 2018). They, for example, collaborate to reduce overhead costs, meet work deadlines, and recreate the social aspect of work (Gray & Suri, 2019). Chen and Soriano (2022) describe how gig workers re-outsource work as a way to take on more projects and still make all deadlines.

Other coping and resistance strategies are more specific to working in the gig economy, including active attempts to understand and manipulate the algorithms powering gig platforms (e.g., Bellesia et al., n.d.; Jarrahi & Sutherland, 2018). For example, individuals renting out their real estate on the platform Airbnb have suspicions about what determines their place in the search results and attempt to exercise control over the associated ranking algorithm by increasing their response rate (Jhaver et al., 2018). Similarly, Upwork users spend time on understanding and, subsequently, manipulating the algorithm powering the platform through close observation — both of real-time and saved search results (Jarrahi & Sutherland, 2018). Beyond the gig economy, research often refers to understandings of how algorithms function as "folk theories" (DeVito et al., 2018; Eslami et al., 2016; Ytre-Arne & Moe, 2021). Defining such theories as "intuitive, informal theories that individuals develop to

explain the outcomes, effects, or consequences of technological systems, which guide reactions to and behavior towards said systems," DeVito and colleagues (2017) differentiate between two types (p. 3165). Whereas abstract theories describe a general, high-level understanding of the existence or working of algorithms, operational theories speculate on the specific details of what might determine the algorithms' output. Regardless of whether such suspicions are correct (see Hargittai et al., 2020 for challenges for research in this regard), they might function as a coping strategy because they might give a user a sense of understanding and control. Another line of inquiry has studied the awareness and understanding of algorithms as well as ability to manipulate algorithms to one's benefit as so-called "algorithm skills" (e.g., Cotter & Reisdorf, 2020; Klawitter & Hargittai, 2018). Such understandings tend to arise out of experiences with other online platforms and digital devices (Gruber et al., 2021).

In addition to navigating algorithms, gig workers have developed strategies to evade and minimize the control that platforms exercise over their work lives (e.g., Anwar & Graham, 2020; Gray & Suri, 2019a). They might, for example, attempt to avoid the platforms' algorithmic management by using external communication and payment tools, such as WhatsApp and PayPal (Jarrahi & Sutherland, 2018). Similarly, Chen and Soriano (2022) find that workers engage in what they call temporal negotiation. This means that they find ways to "to fake working time" as a way to evade the always-on mentality that the platform culture expects from them (Chen & Soriano, 2022, p. 48).

In summary, gig workers build coping and resistance strategies in an attempt to regain some control by working around or even escaping the terms set by the platform. In developing and employing such strategies, workers presumably rely on their digital skills, including their understanding of how platforms work. Knowledge of what is possible clearly factors into one's ability to think of desired outcomes and figure out how to get there. For

example, an awareness of algorithms allows workers to think more strategically about how to manipulate the ranking algorithms that power the platforms they work on, ultimately allowing them to get their profiles or work advertised in a way they deem beneficial.

Similarly, knowing about a service like PayPal is necessary for a gig worker to even think of using an external service to evade the platform's payment systems. This dissertation aims to identify the type of digital skills valuable in mitigating the risks associated with gig work, especially in exercising agency within workers' relationship with the gig platform.

As discussed earlier in this prospectus, scholars have repeatedly argued for the importance of digital skills, literacy, and competencies in accessing and capitalizing on opportunities in the twenty-first century (e.g., de Vries et al., 2022; Dijk, 2014; Hargittai, 2002b). Recently, an emerging literature has begun to explore the role of digital skills and competencies in minimizing the negative impacts of being online, for example through disconnectivity practices (e.g., Nguyen et al., 2022). I contribute to this scholarship by teasing apart the role of digital skills in navigating precarious aspects of gig work and how these skills impact one's ability to thrive in this space.

Variance in gig workers' ability to exercise agency might not only be a function of their digital skills, but of their sociodemographic background. Not being dependent on the income one gains from the platforms constitutes a position of privilege, which presumably allows individuals to take more risks as well as to set better boundaries for themselves.

Therefore, a gig worker might be more likely to resist the platform that forms their source of income when they have a social and financial safety net that they can fall back on. Similarly, Juliet Schor (2020) argues for the importance of differentiating between gig workers who are dependent on their income from the platforms versus those who have other sources of income. Ultimately, this dissertation sets out to understand whether digital skills and sociodemographic background, and the interplay between the two, might explain how some

individuals, but not others, have been able to extract worthwhile opportunities from the precarious work environment of the gig economy.

## **Cross-national comparison**

Despite being situated in a global market, gig workers exist in a local context that might impact their experiences in the gig economy and how they navigate the precarious nature of the work. Gig workers' expectations of the workplace differ substantially based on their cultural background, causing them to tolerate varying degrees of work-related uncertainty as well as platform and client control. As a result, they might perceive pressures in different ways. Besides, one's sense of cultural norms might impact one's ability or willingness to exercise agency. In navigating workplace precarity, gig workers might also draw on in-person networks (Gray & Suri, 2019; Wood et al., 2019b) as well as community-based or governmental resources, such as social security.

In order to understand how gig workers perceive and navigate the labor market conditions in the gig economy, it is thus essential to consider the local context in which the work takes place. By examining gig workers in two national contexts (i.e., the Netherlands and the United States), this dissertation takes a comparative perspective to engage actively with the socioeconomic environment of gig workers. A comparative approach is conducive to recognizing practices in their social context, as it explicitly compares "across categories, identifying what is unique or contrasting, atypical or widespread" (Livingstone, 2003, p. 483). Besides, examining a phenomenon across multiple contexts might provide insight about its generalizability.

The cross-national comparison allows for an exploration of the impact of gig workers' cultural and national contexts on their experience in pursuing work in the gig economy. Even though much of the prior literature on the gig economy focuses on the United States, gig work in other contexts might not resemble the American case (e.g., Gray & Suri, 2019a;

Wood et al., 2019b). In their analysis of "varieties of Uberization," Davis and Sinha (2021) argue at that information and communication technologies "interact with national contexts to shape crucial dimensions of organizing – variedly shaping and in turn being shaped by the salient elements of institutional configurations – to produce variations in fundamental attributes of organizations" (p. 5). They build on the idea of "varieties of capitalism" (Hall & Soskice, 2001) in analyzing how the digitally mediated ride-hailing industry looks different in several national environments. Specifically, they differentiate between these contexts based five central dimensions: their capital markets, labor markets, products markets, education systems, and social safety nets.

Following these calls for comparative work in this realm, I propose to adopt the comparable-cases strategy to comparative research (e.g., Lijphart, 1975) by examining gig workers in the Netherlands and the United States. Both are wealthy, democratic countries with mixed economic systems (i.e., private free-market system), making them comparable cases. At the same time, there are substantial institutional differences between the two, particularly in terms of their social welfare systems. The dissertation might, for example, speak to the ways gig workers might find support in their local context while navigating the precarity of gig platforms.

## Research design

Broadly speaking, this dissertation aims to understand the role of sociodemographic background and digital skills in participation and experience in the gig economy. I propose to pursue three studies that form the basis of the dissertation: a scoping review, an interview study with online freelancers, and a survey study with the same population. The scoping review has been completed (Fiers, 2023). The interview study is in data collection/cleaning stage. I have obtained IRB approval and secured funding for the survey study. For more details on the current statuses of the various studies, please see the relevant subsection below.

In the following pages, I first provide an overview of the studies, highlighting how they relate to and build on one another. Subsequently, I go into detail about their research design. In addition to describing the methods of each study, I motivate my focus – across the interview and survey studies – on individuals pursuing work on online freelancing platforms. Please note that since the scoping review has been completed, I am attaching the full published paper as Appendix A. Finally, I include a subsection on the status of each study and a plan for moving forward.

## Overview of studies

The scoping review systematically collects, analyzes, and synthesizes existing academic literature on inequality and discrimination in online labor markets. I identify three approaches across the scholarship. Subsequently, I extend the pipeline of online participation inequalities (see Shaw & Hargittai, 2018 for the original pipeline model) and map the studies across the pipeline. This demonstrates that the existing literature employs measures of participation and success at various points across the pipeline, but that most studies focus on the later stages of the pipeline. The review also reveals that few studies examine (1) participation and labor outcomes across multiple pipeline stages, and (2) the role of gig platforms in countering, facilitating, or exacerbating unequal participation patterns. I propose to use the results of the scoping review to situate the dissertation and highlight its contributions.

The interview study aims to comprehend ways that gig workers understand and navigate the precarious conditions of their work. Following the results of the scoping review, I pay particular attention to the role of the gig platform, since the presence of the platform as an intermediary between worker and client distinguishes the gig economy model from other models in the (freelance) labor market. As a result, I propose to conduct semi-structured interviews as a means to identify strategies that online freelancers employ to exercise agency

within their relationship with the platform and tease apart the kinds of digital skills that allow them to do so.

Following these interviews, I propose to design a survey that aims to understand the prevalence of such strategies and associated digital skills among online freelancers. In addition to measuring the prevalence of the strategies, I aim to explore the role of online freelancers' sociodemographic background in their experiences, specifically in how they understand and navigate their position relative to the gig platform.

In the dissertation, I will complement the three studies with an introduction, a conclusion, and bridging sections that highlight the connections between the individual studies.

## **Study 1: Scoping review**

For context, I initially pursued this project as a qualifying exam with Aaron Shaw and, since then, it has been published in New Media & Society (see appendix A for the full published paper).

#### Introduction and motivation

As online platforms mediate access to opportunities to exchange work for money, it is important to understand who is able to capitalize on the existence of these platforms. Over the last decade, multiple strands of inquiry within the scholarly, legal, and public literature have started to address (parts of) this question. By systematically gathering and analyzing studies on this topic, I conducted a scoping review to identify these approaches, provide an overview of their central findings, and synthesize a refocused research agenda. Specifically, I set out to answer the following questions:

RQ1: What characterizes different approaches to the study of inequality and discrimination in the online labor market?

RQ2: What does a participation pipeline look like in the context of online labor and how does prior literature map onto the various stages of the pipeline?

*RQ3*: What important puzzles does this leave for future research?

I propose to use the results of the scoping review to situate the dissertation and highlight its contribution. One of the findings of the scoping review is a lack of research in this space that focuses on the role of gig platforms in facilitating and possibly exacerbating unequal patterns of participation. This dissertation takes a step in that direction by actively taking into consideration one's sociodemographic background and digital skills in navigating the relationship with the platform where they pursue work.

#### Data and methods

A scoping review is a systematic literature review that examines the state of a particular research area with the aim of understanding and synthesizing research questions, methods, and approaches. It is "an ideal tool to determine the scope or coverage of a body of literature on a given topic and give clear indication of the volume of literature and studies available as well as an overview (broad or detailed) of its focus" (Munn et al., 2018, p. 2). Scoping reviews are particularly well-suited for exploring and synthesizing an emerging set of literature, such as the literature on inequality and discrimination in the gig economy. In conducting the scoping review, I followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach (Moher et al., 2015)

## **Study 2: Interviews with online freelancers**

#### Introduction and motivation

Broadly speaking, this study aims to understand ways that online freelancers mitigate the precarious aspects of their work, specifically as related to the intermediation by the gig platform. I plan to explore three parts to how online freelancers approach their interactions with the platform where they pursue work. First, I ask how they understand the role of the

platform in their work, because this might provide valuable insights into how or why participants might embrace or resist the gig platform. Second, I aim to identify strategies they employ to exercise agency within their relationship with the platform as well as with their clients. This includes coping and resistance strategies in response to (changes in) platform affordances and algorithmic management. Third, I explore the role that digital skills play in the development and adoption of such coping and resistance strategies.

RQ1: How do online freelancers in the Netherlands and United States understand the role of the platform in their work?

RQ2: What strategies do online freelancers employ to mitigate precarity in their work and exercise agency within their relationship with the platform and their clients?

RQ3: What role do digital skills play in developing and executing such coping and resistance strategies?

Building on the finding of earlier work that digital skills are integral to participation in the gig economy (e.g., Shaw et al., 2022), this study aims to tease apart the kinds of digital skills valuable in online freelancing. Since mitigating risks on gig platforms might involve navigating systems that neither participants nor I as the researcher completely understand, interviews "offer the kind of privacy that can be helpful with topics where people may not be knowledgeable" (Hargittai et al., 2020, p. 767). The interviews aim to inform the construction of the survey instrument, particularly a measure of resistance and coping strategies. By talking to a wide range of individuals (particularly in terms of age, education, and gender), I also hope to gain some initial insights about the role of one's background in mitigating possible conditions of precarity.

#### Data and methods

I aim to interview a total of approximately thirty online freelancers from the Netherlands and the United States (i.e., fifteen from each country). I recruit participants

through two prominent online freelancing platforms, Fiverr and Upwork. I use a different employment strategy on the two platforms, since their designs make it impossible to use the same strategy. On Fiverr, I search for freelancers in different "service categories" from the appropriate country using the filters on the platform and message them individually via the platform. On Upwork, I post a general call (i.e., as a "job ad") and invite freelancers pursuing work in different "talent categories" to participate. On both platforms, the recruitment message invites the freelancer to participate in the study, asking them to fill out a short questionnaire that will determine eligibility (i.e., English- or Dutch-speaking, at least 18 years of age, having pursued paid work through a freelancing platform for at least one month). Purposive sampling on the platforms allows me to ensure that the final sample represents a variety of backgrounds (i.e., in terms of age, gender, education). I compensate participants 20 USD or EUR in Amazon Gift Cards, which is funded through MTS Dissertation Funds.

In the semi-structured interviews, I ask online freelancers about (1) their general experiences pursuing work opportunities through platforms, (2) risks and challenges they encounter while doing so, and (3) strategies and skills they develop and employ to mitigate such challenges. I created an interview protocol, which I pretested on three participants. Afterwards, I improved the protocol to ensure that all questions are clear and specific (see Appendix B for the final protocol). Interviews take place on Zoom for 45-60 minutes, in either Dutch or English, depending on the preference of the participant. I audio-record interviews using the Zoom recording feature and transcribe the recordings using the transcription feature of Microsoft Word online. At the start of each interview, the respondent is asked to fill out a brief questionnaire asking about their sociodemographic background (age, gender, race, education, and nationality).

To analyze the interviews, I propose to draw on strategies from grounded theory (Corbin & Strauss, 2015). I plan to start with open, in vivo-style coding, which involves

marking up the interview transcripts and making notes connected to specific quotes of participations. Codes should come about through constant comparison of data and cover wide variety of topics. While coding, I engage in memo writing as a way to reflect on the data and to start to identify general themes. The initial round of open coding combined with memo writing then informs the construction of a flexible coding system, which forms the basis for the second round of coding. In this round, I aim to pay special attention to "rich and very descriptive" language and select excerpts as a means to grasping how different individuals understand and navigate their relationship with the gig platform (Corbin & Strauss, 2015, p. 100). Choosing excerpts, assigning codes to them, and writing memos is an iterative process through which I develop an understanding of participants' experiences pursing work on online freelancing platforms.

## **Study 3: Survey with online freelancers**

## Introduction and motivation

This study zooms in on disparities among individuals who have gained access to the gig economy. It aims to examine how sociodemographic factors and digital skills might explain variation in the experiences of online freelancers, especially as related to their ability to navigate risk and gain control over their work lives. I envision participation as a function of not only one's access and skills, but also one's ability to mitigate potential harms.

Furthermore, I intend to build on the interview study and assess the prevalence of coping and resistance strategies among online freelancers. Conducting a survey allows me to inquire about a larger number of online freelancers and detect any patterns that may exist in their experiences.

RQ1: How prevalent are the development and adoption of coping and resistance strategies among online freelancers in the Netherlands and in the United States?

RQ2: How do sociodemographic background and digital skills relate to the development and adoption of such strategies?

RQ3: How do sociodemographic background and digital skills relate to one's experience of pursuing employment on online freelancing platforms?

## Data and methods

For this section, I aim to survey ~300 online freelancers about their experiences on online freelancing platforms. I propose to recruit freelancers through a combination of convenience and purposive sampling. First, I plan to post the survey as a "task" on the prominent online freelancing platforms (i.e., Fiverr and Upwork) and invite people individually on the platforms. Then, I plan to assess the composition of the participants up to that point and compare them to benchmarks of other sources in terms of their gender and education (Freelancers Union, 2019; Pew Research Center, 2021; U.S. Bureau of Labor Statistics, 2018). These benchmarks are imperfect, since recording the number of gig workers has been systematically complicated. Nonetheless, I propose to aim to match the composition of survey participants to such benchmarks in an attempt to mirror the population of online freelancers. After determining how the sample of the first wave of recruitment might differ from these benchmarks, I plan to recruit more purposively by messaging freelancers individually on the gig platforms. I plan to compensate participants 10 USD through the platform, which is a substantial sum given the expected length of the survey (i.e., 10- to 15-minute).

The survey will measure variables in four areas: (1) online freelancers' experiences navigating online freelancing platforms, (2) coping and resistance strategies to mitigate work-related precarity, (3) Internet-related knowledge and skills, and (4) sociodemographic factors. The design of survey questions in the former two areas will draw on prior literature (e.g., Anwar & Graham, 2020; Chen & Soriano, 2022; Jarrahi & Sutherland, 2018) as well as the

aforementioned semi-structured interviews. For the design of the other survey questions, I will draw on standard measures in digital inequality research that I have applied in research before (Shaw et al., 2022).

#### **Research context**

While the scoping review examines the online labor market at large, for the interview and the survey study, I propose to focus on the segment of gig platforms that I describe as online freelancing platforms. Online freelancing platforms, such as Upwork, Fiverr, and Freelancer.com, allow individuals to generate income by performing fully remote contract work characterized by a high level of technical and creative skill. Examples of such work include application development, programming, graphic design, writing, and copyediting. Online freelancers make their "digital services" (Fiverr Help and Education Center, n.d.) available through a profile in which they introduce themselves, list their prices, and communicate their qualifications.

Within the various sectors of the gig economy, online freelancing is a particularly contradictory work environment. While online freelancing is, like other forms of gig work, characterized by precarity (e.g., large amounts of unpaid labor, a lack of employment benefits), the more complex nature of the work presumably yields greater financial rewards as well as greater intellectual and creative challenges. Additionally, it encourages individualized brand building and sustaining a roster of clients, giving online freelancers more power and agency than other, more invisible workers in the gig economy (Ahmad & Krzywdzinski, 2022; Gray & Suri, 2019a). My dissertation explores this contradictory work environment by investigating how online freelancers navigate the precarious aspects of their work in an attempt to unlock the benefits.

I plan to recruit participants from two of the most prominent online freelancing platforms, Upwork and Fiverr. These gig platforms differ significantly in how they organize

relationships between contractors and their clients. Upwork facilitates short-term jobs in a variety of categories, such as "Web, Mobile & Software Dev" and "Writing". Those with contracting needs can "post a job" to which they can invite so-called "Talent" to apply.

Freelancers can also submit "proposals" without having received an invitation. Subsequently, they can "bid" for a higher spot in the list of available proposals. While all projects involve independent contracting, the length of the projects can differ substantially. The platform allows clients to pay their freelancers either by the hour or by a project. On Fiverr, freelancers showcase their services on their profiles. The types of available services range widely from digital marketing to work-out coaching. However, most of the site appears to focus on design work. Potential clients can search through profiles and inquire to specific individuals about their services. Services can only be paid for at a per project-basis. In contrast to the hourly payments on Upwork, this encourages short-term contracts.

## Status and timeline

The scoping review (i.e., study 1 in the timeline below) is completed. The interview study (i.e., study 2 in the timeline below) is in the stage of data collection. So far, I have conducted eight interviews with Dutch online freelancers and eight interviews with American online freelancers, with four more scheduled. The interview study (i.e., study 3) is in early planning stages (i.e., I have obtained IRB).

Year	Month	Dissertation progress	Other major commitments
2023	March	Study 2: finish data collection	Teach COMM394 in SP2023
	April	Study 2: start analysis	
	May	Study 3: start survey design	
	July	Study 2: first draft	Develop materials for the job
	August	Catch up / get feedback	market
	September	Study 3: field survey	
	October	Study 3: analysis	
	November	Catch up / get feedback	
	December	Catch up / get feedback	
2024	January	Study 3: first draft	GA in Winter/Spring 2023
	February	Revise studies	
		Outline introduction, conclusion,	
		bridging sections	
	March	Get feedback / further revisions	
	April	Submit dissertation	
		Prepare dissertation defense	
	May	Dissertation defense	

## References

- Ahmad, S., & Krzywdzinski, M. (2022). Moderating in Obscurity: How Indian Content

  Moderators Work in Global Content Moderation Value Chains. In M. Graham & F.

  Ferrari (Eds.), *Digital Work in the Planetary Market*. https://direct.mit.edu/books/oa-edited-volume/5319/chapter/3800160/In-Search-of-Stability-at-a-Time-of-Upheaval
- Anwar, M. A., & Graham, M. (2020). Hidden transcripts of the gig economy: Labour agency and the new art of resistance among African gig workers. *Environment and Planning A: Economy and Space*, *52*(7), 1269–1291. https://doi.org/10.1177/0308518X19894584
- Arthur, M. B., & Rousseau, D. M. (1996). A Career Lexicon for the 21st Century. *Academy of Management Perspectives*, 10(4), 28–39. https://doi.org/10.5465/ame.1996.3145317
- Bastien, F., Koop, R., Small, T. A., Giasson, T., & Jansen, H. (2020). The role of online technologies and digital skills in the political participation of citizens with disabilities. *Journal of Information Technology & Politics*, 17(3), 218–231. https://doi.org/10.1080/19331681.2020.1742264
- Bellesia, F., Mattarelli, E., & Bertolotti, F. (n.d.). Algorithms and their Affordances: How Crowdworkers Manage Algorithmic Scores in Online Labour Markets. *Journal of Management Studies*, n/a(n/a). https://doi.org/10.1111/joms.12870
- Berg, J. (2016). Income security in the on-demand economy: Findings and policy lessons from a survey of crowdworkers. *Comparative Labor Law & Policy Journal*, *37*(3), 543–576.
- Casselman, B. (2018, June 7). Maybe the Gig Economy Isn't Reshaping Work After All. *The New York Times*. https://www.nytimes.com/2018/06/07/business/economy/work-gig-economy.html

- Chen, J., & Soriano, C. R. (2022). How Do Workers Survive and Thrive in the Platform

  Economy? Evidence from China and the Philippines. In M. Graham & F. Ferrari

  (Eds.), *Digital Work in the Planetary Market*. https://direct.mit.edu/books/oa-edited-volume/5319/chapter/3800153/How-Do-Workers-Survive-and-Thrive-in-the-Platform
- Cohen, N. S. (2016). Writers' rights: Freelance journalism in a digital age. McGill-Queen's University Press.
- Conger, K. (2021, August 21). California's Gig Worker Law Is Unconstitutional, Judge Rules. *The New York Times*. https://www.nytimes.com/2021/08/20/technology/prop-22-california-ruling.html
- Correa, T., Valenzuela, S., & Pavez, I. (2022). For better and for worse: A panel survey of how mobile-only and hybrid Internet use affects digital skills over time. *New Media & Society*, 14614448211059114. https://doi.org/10.1177/14614448211059114
- Cotter, K., & Reisdorf, B. C. (2020). Algorithmic Knowledge Gaps: A New Horizon of (Digital) Inequality. *International Journal of Communication*, *14*(0), Article 0.
- Davis, G. F., & Sinha, A. (2021). Varieties of Uberization: How technology and institutions change the organization(s) of late capitalism. *Organization Theory*, 2(1), 2631787721995198. https://doi.org/10.1177/2631787721995198
- de Vries, D., Piotrowski, J., & de Vreese, C. (2022, May 31). *Hoe digitaal vaardig zijn wij Nederlanders?* Universiteit van Amsterdam. https://www.uva.nl/shared-content/faculteiten/nl/faculteit-der-maatschappij-engedragswetenschappen/nieuws/2022/05/hoe-digitaal-vaardig-zijn-wij-nederlanders.html
- DeVito, M. A., Birnholtz, J., Hancock, J. T., French, M., & Liu, S. (2018). How People Form Folk Theories of Social Media Feeds and What it Means for How We Study Self-

- Presentation. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1–12. https://doi.org/10.1145/3173574.3173694
- DeVito, M. A., Gergle, D., & Birnholtz, J. (2017). "Algorithms ruin everything":
   #RIPTwitter, Folk Theories, and Resistance to Algorithmic Change in Social Media.
   Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems,
   3163–3174. https://doi.org/10.1145/3025453.3025659
- Dijk, J. van. (2014). Digital skills: Unlocking the information society. Palgrave Macmillan.
- DiMaggio, P., & Hargittai, E. (2001). From the 'digital divide' to 'digital inequality':

  Studying internet use as penetration increases. *Princeton: Center for Arts and Cultural Policy Studies, Woodrow Wilson School, Princeton University*, 4(1), 4–2.
- DiMaggio, P., Hargittai, E., Celeste, C., & Schafer, S. (2001). *Digital inequality: From*unequal access to differentiated use (K. Neckerman, Ed.; pp. 355–400). Russell Sage
  Foundation. https://www.russellsage.org/research/reports/dimaggio
- Doorn, N. van. (2017). Platform labor: On the gendered and racialized exploitation of low-income service work in the 'on-demand' economy. *Information, Communication & Society*, 20(6), 898–914. https://doi.org/10.1080/1369118X.2017.1294194
- Duffy, B. E. (2017). (Not) getting paid to do what you love: Gender, social media, and aspirational work. Yale University Press.
- Edelman, B., Luca, M., & Svirsky, D. (2017). Racial discrimination in the sharing economy: Evidence from a field experiment. *American Economic Journal: Applied Economics*, 9(2), 1–22. https://doi.org/10.1257/app.20160213
- Eslami, M., Karahalios, K., Sandvig, C., Vaccaro, K., Rickman, A., Hamilton, K., & Kirlik, A. (2016). First I "like" it, then I hide it: Folk Theories of Social Feeds. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 2371–2382. https://doi.org/10.1145/2858036.2858494

- Federal Trade Commission. (2022, September 15). FTC to Crack Down on Companies

  Taking Advantage of Gig Workers. Federal Trade Commission.

  https://www.ftc.gov/news-events/news/press-releases/2022/09/ftc-crack-down-companies-taking-advantage-gig-workers
- Fiers, F. (2023). Inequality and discrimination in the online labor market: A scoping review.

  \*New Media & Society\*, 14614448221151200.

  https://doi.org/10.1177/14614448221151200
- Fiers, F., Shaw, A., & Hargittai, E. (2021). Generous Attitudes and Online Participation.
  Journal of Quantitative Description: Digital Media, 1.
  https://doi.org/10.51685/jqd.2021.008
- Fiverr Help and Education Center. (n.d.). Fiverr.Com. Retrieved January 19, 2023, from https://www.fiverr.com/support/articles/360010558038
- Fiverr Overview. (n.d.).
- Freelancers Union. (2019, September). Freelancing in America.

  https://www.freelancersunion.org/about/freelancing-in-america/
- Gandini, A. (2016). *The Reputation Economy*. Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-56107-7
- Gonzales, A. (2016). The contemporary US digital divide: From initial access to technology maintenance. *Information, Communication & Society*, *19*(2), 234–248. https://doi.org/10.1080/1369118X.2015.1050438
- Gray, M. L., & Suri, S. (2019a). *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (Illustrated edition). Harper Business.
- Gray, M. L., & Suri, S. (2019b). *Ghost Work: How to Stop Silicon Valley from Building a*New Global Underclass (Illustrated Edition). Houghton Mifflin Harcourt.

- Gruber, J., Hargittai, E., Karaoglu, G., & Brombach, L. (2021). Algorithm awareness as an important internet skill: The case of voice assistants. *International Journal of Communication*, *15*, 1770–1788. https://doi.org/10.5167/uzh-204503
- Hackl, A., Graham, M., & Ferrari, F. (2022). Digital Livelihoods in Exile: Refugee Work and the Planetary Digital Labor Market. In *Digital Work in the Planetary Market*. https://direct.mit.edu/books/oa-edited-volume/5319/chapter/3800156/Digital-Livelihoods-in-Exile-Refugee-Work-and-the
- Haight, M., Quan-Haase, A., & Corbett, B. A. (2014). Revisiting the digital divide in Canada: The impact of demographic factors on access to the internet, level of online activity, and social networking site usage. *Information, Communication & Society*, 17(4), 503–519. https://doi.org/10.1080/1369118X.2014.891633
- Hall, P. A., & Soskice, D. (2001). Varieties of Capitalism: The Institutional Foundations of Comparative Advantage. Oxford University Press.
- Hannák, A., Wagner, C., Garcia, D., Mislove, A., Strohmaier, M., & Wilson, C. (2017). Bias in online freelance marketplaces: Evidence from Taskrabbit and Fiverr. *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*, 1914–1933.
- Hargittai, E. (2002a). Second-level digital divide: Differences in people's online skills. *First Monday*, 7(4). https://doi.org/10.5210/fm.v7i4.942
- Hargittai, E. (2002b). Beyond logs and surveys: In-depth measures of people's web use skills.

  \*\*Journal of the American Society for Information Science and Technology, 53(14),

  1239–1244. https://doi.org/10.1002/asi.10166
- Hargittai, E. (2005). Survey Measures of Web-Oriented Digital Literacy. *Social Science Computer Review*, 23(3), 371–379.
- Hargittai, E. (Ed.). (2021). Handbook of Digital Inequality. Edward Elgar Publishing.

- Hargittai, E. (2022). Connected in Isolation: Digital Privilege in Unsettled Times. The MIT Press.
- Hargittai, E., Gruber, J., Djukaric, T., Fuchs, J., & Brombach, L. (2020). Black box measures? How to study people's algorithm skills. *Information, Communication & Society*, 23(5), 764–775. https://doi.org/10.1080/1369118X.2020.1713846
- Hargittai, E., & Litt, E. (2011). The tweet smell of celebrity success: Explaining variation in Twitter adoption among a diverse group of young adults. *New Media & Society*, 13(5), 824–842. https://doi.org/10.1177/1461444811405805
- Hargittai, E., & Micheli, M. (2019). Internet Skills and Why They Matter. In M. Graham &
  W. H. Dutton (Eds.), Society and the Internet: How Networks of Information and
  Communication are Changing Our Lives (pp. 109–124). Oxford University Press.
- Hargittai, E., & Shaw, A. (2020). Comparing Internet Experiences and Prosociality in Amazon Mechanical Turk and Population-Based Survey Samples: *Socius*. https://doi.org/10.1177/2378023119889834
- Helsper, E. (2021). *The Digital Disconnect: The Social Causes and Consequences of Digital Inequalities* (1st edition). SAGE Publications Ltd.
- Hoang, L., Blank, G., & Quan-Haase, A. (2020). The winners and the losers of the platform economy: Who participates? *Information, Communication & Society*, 23(5), 681–700. https://doi.org/10.1080/1369118X.2020.1720771
- Jarrahi, M. H., & Sutherland, W. (2018, December 1). Algorithmic Management and Algorithmic Competencies: Understanding and Appropriating Algorithms in Gig work.
- Jarrahi, M. H., Sutherland, W., Nelson, S. B., & Sawyer, S. (2020). Platformic Management,
  Boundary Resources for Gig Work, and Worker Autonomy. *Computer Supported*

- Cooperative Work (CSCW), 29(1), 153–189. https://doi.org/10.1007/s10606-019-09368-7
- Jhaver, S., Karpfen, Y., & Antin, J. (2018). Algorithmic Anxiety and Coping Strategies of Airbnb Hosts. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1–12. https://doi.org/10.1145/3173574.3173995
- Johnston, H. (2022). In Search of Stability at a Time of Upheaval: Digital Freelancing in Venezuela. In M. Graham & F. Ferrari (Eds.), *Digital Work in the Planetary Market*. https://direct.mit.edu/books/oa-edited-volume/5319/chapter/3800160/In-Search-of-Stability-at-a-Time-of-Upheaval
- Kahin, B., & Keller, J. (Eds.). (1995). Public Access to the Internet. MIT Press.
- Kalleberg, A. L. (2009). Precarious Work, Insecure Workers: Employment Relations in Transition. *American Sociological Review*, 74(1), 1–22. https://doi.org/10.1177/000312240907400101
- Kalleberg, A. L., & Vallas, S. P. (2018). Probing precarious work: Theory, research, and politics. *Research in the Sociology of Work*, 31(1), 1–30.
- Kässi, O., Lehdonvirta, V., & Dalle, J.-M. (2019). Workers' task choice heuristics as a source of emergent structure in digital microwork.

  https://doi.org/10.31235/osf.io/ngy46
- Kellogg, K. (2009). Operating Room: Relational Spaces and Micro-Institutional Change inside Two Surgical Teaching Hospitals. *American Journal of Sociology*, Forthcoming.
- Kergel, D., & Hepp, R. (2020). Start Ups, Social Networking and Self-Tracking—The
  Neoliberal Freedom of the Entrepreneurial Self in the Digital Age. In T. Rachwał, R.
  Hepp, & D. Kergel (Eds.), Precarious Places: Social, Cultural and Economic Aspects

- of Uncertainty and Anxiety in Everyday Life (pp. 139–147). Springer Fachmedien. https://doi.org/10.1007/978-3-658-27311-8\_9
- Kittur, A., Nickerson, J. V., Bernstein, M., Gerber, E., Shaw, A., Zimmerman, J., Lease, M., & Horton, J. (2013). The future of crowd work. *Proceedings of the 2013 Conference on Computer Supported Cooperative Work*, 1301–1318.
  https://doi.org/10.1145/2441776.2441923
- Klawitter, E., & Hargittai, E. (2018). "It's like learning a whole other language": The role of algorithmic skills in the curation of creative goods. *International Journal of Communication*, 12, 3490–3510. https://doi.org/10.5167/uzh-168021
- Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers.

  \*Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, 1603–1612. https://doi.org/10.1145/2702123.2702548
- Lehdonvirta, V. (2018). Flexibility in the gig economy: Managing time on three online piecework platforms. *New Technology, Work and Employment*, *33*(1), 13–29. https://doi.org/10.1111/ntwe.12102
- Lijphart, A. (1975). II. The Comparable-Cases Strategy in Comparative Research.

  \*Comparative Political Studies\*, 8(2), 158–177.

  https://doi.org/10.1177/001041407500800203
- Livingstone, S. (2003). On the Challenges of Cross-National Comparative Media Research. *European Journal of Communication*, 18(4), 477–500.
- Marler, W. (2018). Mobile phones and inequality: Findings, trends, and future directions.

  New Media & Society, 20(9), 3498–3520. https://doi.org/10.1177/1461444818765154

- Miles, F. (2020, April 15). Gig economy: What to know about temporary jobs during coronavirus. *Fox News*. https://www.foxnews.com/us/gig-economy-temporary-jobs-during-coronavirus
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., Stewart, L. A., & PRISMA-P Group. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, 4(1), 1. https://doi.org/10.1186/2046-4053-4-1
- Morgan, G., Wood, J., & Nelligan, P. (2013). Beyond the vocational fragments: Creative work, precarious labour and the idea of 'Flexploitation.' *The Economic and Labour Relations Review*, 24(3), 397–415. https://doi.org/10.1177/1035304613500601
- Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018).
  Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18(1), 143. https://doi.org/10.1186/s12874-018-0611-x
- Neff, G. (2012). *Venture Labor: Work and the Burden of Risk in Innovative Industries*. The MIT Press.
- Newlands, G., & Lutz, C. (2020). Crowdwork and the mobile underclass: Barriers to participation in India and the United States. *New Media & Society*, 1461444820901847. https://doi.org/10.1177/1461444820901847
- Nguyen, M. H., Büchi, M., & Geber, S. (2022). Everyday disconnection experiences:

  Exploring people's understanding of digital well-being and management of digital media use. *New Media & Society*, 14614448221105428.

  https://doi.org/10.1177/14614448221105428
- Pasquale, F. (2016). The Black Box Society: The Secret Algorithms That Control Money and Information. Harvard University Press.

- Paterson, R. (2012). Working as a freelancer in UK television. In A. Dawson & S. P. Holmes (Eds.), Working in the global film and television industries: Creativity, systems, space, patronage (pp. 91–108). Bloomsbury Academic.
- Pew Research Center. (2016). *Gig work, online selling and home sharing*. Pew Research Center. https://www.pewresearch.org/internet/2016/11/17/gig-work-online-selling-and-home-sharing/
- Pew Research Center. (2021, December 8). The State of Gig Work in 2021. *Pew Research Center: Internet, Science & Tech*.

  https://www.pewresearch.org/internet/2021/12/08/the-state-of-gig-work-in-2021/
- Ravenelle, A. J. (2017). Sharing economy workers: Selling, not sharing. *Cambridge Journal of Regions, Economy and Society*, 10(2), 281–295. https://doi.org/10.1093/cjres/rsw043
- Rosenblat, A. (2018). *Uberland: How Algorithms Are Rewriting the Rules of Work* (1st ed.). University of California Press.
- Rosenblat, A., & Stark, L. (2016). Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers. *International Journal of Communication*, 10(0), Article 0.
- Sannon, S., Sun, B., & Cosley, D. (2022). Privacy, Surveillance, and Power in the Gig Economy. *CHI Conference on Human Factors in Computing Systems*, 1–15.
- Scholz, T. (2016a). *Uberworked and Underpaid: How Workers Are Disrupting the Digital Economy*. John Wiley & Sons.
- Scholz, T. (2016b). *Uberworked and Underpaid: How Workers Are Disrupting the Digital Economy*. John Wiley & Sons.
- Schor, J. B. (2020). After the gig: How the sharing economy got hijacked and how to win it back (First edition). University of California Press.

- Schradie, J. (2015). The gendered digital production gap: Inequalities of affluence. In L. Robinson, S. R. Cotten, & J. Schulz (Eds.), *Communication and information technologies annual* (Vol. 9, pp. 185–213). Emerald Group Publishing Limited. http://doi.org/10.1108/S2050-206020150000009008
- Shaw, A., Fiers, F., & Hargittai, E. (2022). Participation inequality in the gig economy.

  \*Information, Communication & Society, 1–18.\*

  https://doi.org/10.1080/1369118X.2022.2085611
- Shaw, A., & Hargittai, E. (2018). The Pipeline of Online Participation Inequalities: The Case of Wikipedia Editing. *Journal of Communication*, 68(1), 143–168. https://doi.org/10.1093/joc/jqx003
- Stark, D., & Pais, I. (2020). Algorithmic Management in the Platform Economy. *Sociologica*, 14(3), Article 3. https://doi.org/10.6092/issn.1971-8853/12221
- Sundararajan, A. (2016). The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism. The MIT Press.
- U.S. Bureau of Labor Statistics. (2018, September). *Electronically mediated work: New questions in the Contingent Worker Supplemen*.

  https://www.bls.gov/opub/mlr/2018/article/electronically-mediated-work-new-questions-in-the-contingent-worker-supplement.htm
- Vallas, S., & Schor, J. B. (2020). What Do Platforms Do? Understanding the Gig Economy. *Annual Review of Sociology*, 46.
- van Deursen, A., & van Dijk, J. (2010). Internet skills and the digital divide. *New Media & Society*, *13*(6), 893–911. https://doi.org/10.1177/1461444810386774
- van Deursen, A., & van Dijk, J. (2015). Internet skill levels increase, but gaps widen: A longitudinal cross-sectional analysis (2010–2013) among the Dutch population.

- *Information, Communication & Society, 18*(7), 782–797. https://doi.org/10.1080/1369118X.2014.994544
- van Deursen, A., & van Dijk, J. (2018). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media & Society*, 21(2), 354–375. https://doi.org/10.1177/1461444818797082
- Van Dijk, J. A. G. M. (2005). *The Deepening Divide: Inequality in the Information Society*. SAGE Publications.
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2020).

  Determinants of 21st-Century Skills and 21st-Century Digital Skills for Workers: A

  Systematic Literature Review. SAGE Open, 10(1), 2158244019900176.

  https://doi.org/10.1177/2158244019900176
- Weber, M., Remus, U., & Pregenzer, M. (2022). A New Era of Control: Understanding Algorithmic Control in the Gig Economy. *ICIS 2022 Proceedings*. https://aisel.aisnet.org/icis2022/is\_futureofwork/is\_futureofwork/1
- Woldoff, R., & Litchfield, R. (2021). *Digital Nomads: In Search of Freedom, Community,* and Meaningful Work in the New Economy. Findaway World.
- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019a). Good gig, bad gig:

  Autonomy and algorithmic control in the global gig economy. *Work, Employment and Society*, *33*(1), 56–75. https://doi.org/10.1177/0950017018785616
- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019b). Networked but commodified: The (dis)embeddedness of digital labour in the gig economy. *Sociology*. https://doi.org/10.1177/0038038519828906
- Wood, A. J., Lehdonvirta, V., & Graham, M. (2018). Workers of the internet unite? Online freelancer organisation among remote gig economy workers in six Asian and African

- countries. *New Technology, Work and Employment*, *33*(2), 95–112. https://doi.org/10.1111/ntwe.12112
- Woodcock, J., & Graham, M. (2020). *The Gig Economy: A Critical Introduction* (1st Edition). Polity.
- Yin, M., Suri, S., & Gray, M. L. (2018). Running out of time: The impact and value of flexibility in on-demand crowdwork. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 430:1-430:11. https://doi.org/10.1145/3173574.3174004
- Ytre-Arne, B., & Moe, H. (2021). Folk theories of algorithms: Understanding digital irritation. *Media, Culture & Society*, 43(5), 807–824. https://doi.org/10.1177/0163443720972314
- Zuboff, S. (2019). The age of surveillance capitalism: The fight for a human future at the new frontier of power. Public Affairs.

## Appendix A: Full paper – Scoping review

I am appending the paper, as published in New Media & Society, starting on the following page.

**Appendix B: Interview protocol**